SCIENTIFIC RESEARCH OF THE SCO COUNTRIES: SYNERGY AND INTEGRATION

上合组织国家的科学研究：协同和一体化

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这些会议文集结合了会议的材料 – 研究论文和科学工作者的论文报告。 它考察了职业化人格的技术和社会学问题。一些文章涉及人格职业化研究问题的理论和方法论方法和原则。
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ECONOMIC SCIENCES

PEDAGOGICAL SCIENCES

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数字经济中的金融科技基础设施发展
DEVELOPMENT OF FINANCIAL TECHNOLOGY INFRASTRUCTURE IN THE DIGITAL ECONOMY

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摘要：本研究旨在探究数字经济背景下金融科技基础设施发展的趋势。

本文探讨了金融体系改革背景下，影响公共行政部门金融科技产品基础设施建设的主要因素及其对金融科技基础设施建设的影响。此外，本文还明确了金融科技基础设施建设的构成要素。此外，本文还论证了下一代金融服务正在以生态系统形式呈现的趋势，并在此基础上提出了金融科技市场未来发展的主要方向。

本研究的科学意义在于，在俄罗斯金融体系改革背景下，制定了基于公共行政体系的金融科技基础设施建设路线图。通过对金融体系改革背景下金融科技基础设施发展特征的研究，我们明确了此类基础设施建设的关键趋势。实践证明，金融科技的发展以及创新产品或服务的创造速度取决于生态系统的形成及其有效运作，而生态系统是需求、数字平台、技术、融资渠道、人力资本和人才、监管和程序等相互关联的因素的结合。通过定义评估金融科技基础设施发展公共治理生态系统的标准，确定了旨在支持俄罗斯金融科技基础设施发展公共治理生态系统的关键举措。

关键词：数字化转型、金融科技、金融服务体系、金融基础设施、生态系统。

Abstract. *The purpose of this study is to substantiate trends in the development of financial technology infrastructure in the context of the digital economy.*

The main constructive and destructive factors in the formation of the infrastructure of financial technology products for key public administrations amid financial system reform are identified. The components of financial technology infrastructure development are identified. The current trend of next-generation financial services taking on the form of ecosystems is substantiated, and the main directions for the further development of the financial technology market are presented based on this.

The scientific significance lies in the development of a roadmap for the creation of financial technology infrastructure based on the public administration system in the context of financial system reform in Russia. The study of the specific features of financial technology infrastructure development amid financial system reform has identified key trends in the creation of this infrastructure. It is proven that the development of financial technologies and the speed of creation of innovative products or services depend on the formation and effective functioning of an ecosystem, a combination of interrelated factors such as demand, digital platforms, technologies, access to financing, human capital and talent, regulation, and procedures. By defining criteria for assessing the public governance ecosystem for financial technology infrastructure development, key initiatives aimed at supporting the Russian public governance ecosystem for financial technology infrastructure development were identified.

Keywords: *digital transformation, fintech, financial services systems, financial infrastructure, ecosystem.*

Globalization processes around the world have accelerated the transformation of existing financial technology infrastructure, as well as the development of Industry 4.0 and the digital economy. Over the past two decades, the fintech industry has been shaped by the growth and rapid adoption of transformative technologies and the applications they enable. Key to success on this path has been the ability of fintech companies to identify and alleviate friction points that customers often encountered in their relationships with traditional financial institutions. Many fintech companies have provided high-quality digital services, accessed unserved and underserved customer segments, and implemented cost-effective ways of operating through more efficient infrastructure and simplified processes. To understand the direction of the fintech industry and its significance for a wide range of stakeholders, it is crucial to analyze how financial technology infrastructure is evolving in the context of the digital economy.

One of the trends in the development of the global financial system is the global expansion of financial technologies and the digitalization of financial services. Fintech originated in financial services markets. However, its tools are now being successfully applied in other areas of both the financial system and public administration. At the same time, fintech is rapidly transforming under the influence of changing social needs, resulting in a ambiguous understanding of its essence [1, p. 95].

Over the past few years, the fintech industry has developed rapidly, changing our understanding of financial services. In recent years, a fintech infrastructure market map has become an important tool for understanding the fintech ecosystem and identifying potential investment opportunities. [2].

Financial technologies are rapidly becoming part of everyday life. Two-thirds of adults worldwide, for example, use digital transfers at least occasionally. And every second client of a large financial institution expects their interactions to be fully digitalized within three to five years. Today, there are approximately 26,000 fintech startups worldwide. By comparison, in 2019, the pre-pandemic year, there were only 12,000. The fintech industry is growing at approximately 20% per year.

The creation of a technological infrastructure for the administration of financial technologies is characterized by the following vectors in accordance with stakeholder theory:

1. Specialized teams/stakeholders – ensuring continuous alignment across different departments/stakeholders [3, p. 705].

2. Conductors/administrators of financial technologies services, managed at the public level, for the development and promotion of common platforms that contribute to the efficiency of the financial technology administration system.

3. Financial technology regulations/standards to ensure the appropriate administration of financial technology business models, primarily for crowdfunding, P2P lending, and e-money.

4. A financial technology regulatory sandbox – to allow economic entities to test modern services, products, business models, and delivery schemes in a controlled environment agreed upon by stakeholders.

Regulatory sandboxes neutralize the limitations related to innovative financial technologies. They become a platform created during the implementation of the public governance system for testing innovative products and financial services with greater flexibility [4]. Consequently, sandboxes are one element of the technological infrastructure of fintech products and should facilitate:

– reducing the time and cost of introducing innovations to the market;

– greater financing opportunities by mitigating customer acceptance risks and increasing investment returns;

– stakeholder collaboration to ensure the development of fintech and business models.

The public governance system for fintech is often accompanied by restrictive barriers, such as the level of innovation, business size, contributions to the public sector, or the feasibility of the business model.

However, not all sandboxes are designed according to the following criteria. Key distinguishing features of sandboxes include the level of development of financial systems, the boundaries of public governance, and risk perception [5, p. 137].

The fundamental prerequisite for these processes is the real possibility of forming an optimal infrastructure for fintech products (Fig. 1).

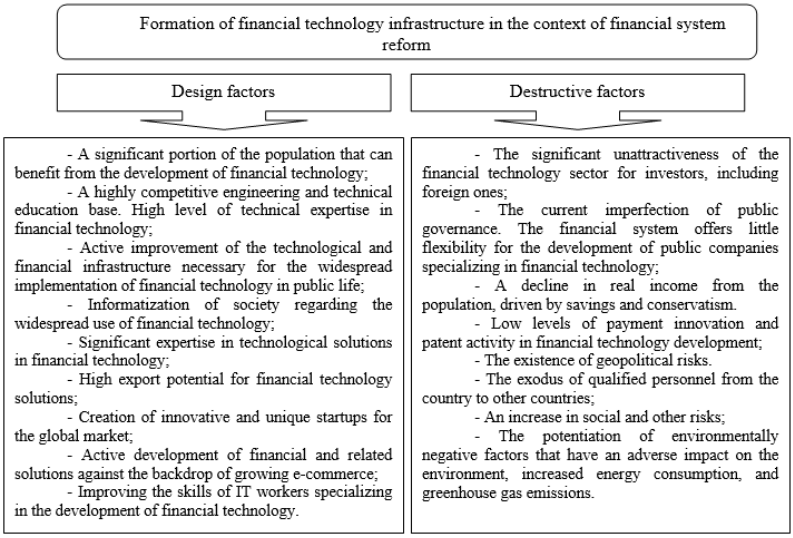

Figure 2. *Trends in creating financial technology infrastructure in the context of reforming the financial system (compiled based on [6-9])*

The formation of the infrastructure of financial technology products in the context of the reform of the financial system is stimulated by three main factors:

- increased demand, manifested in the growing need to implement financial technologies in everyday public life for both the population and business. The main reasons for this increased demand are the current availability of financial technologies that increase the accessibility of basic financial services for both the population and business, as well as the fact that financial technologies increase the speed of receiving financial services [10]. Furthermore, financial technologies, in their current form, have the potential to significantly improve living conditions for the population and pave the way for competitive growth in the domestic business sector;

- the level of activity and influence of the regulatory body, demonstrated in events carried out by public authorities, resulting in the formation of a unified national financial and technological space and the corresponding infrastructure. The main reasons for the increased regulatory activity of public authorities is the active development of financial technologies, which are a powerful tool for improving the level of business transparency and the overall state of the national economy. Furthermore, financial technologies and the existence of their powerful infrastructure are a prerequisite for the reform and development of the country's financial system;

– the dynamism of supply, which is reflected in the high sensitivity of companies specializing in the development of financial technologies to growing demand. The reasons for this increased dynamism include the growing trend toward digitalization of all spheres of public life and business, which significantly alters the needs of individual companies for financial technologies that would significantly facilitate their business processes.

Furthermore, the financial technology market is characterized by rapid development and a high level of competition, as a result of which representatives of companies specializing in the development of financial technologies are sensitive not only to current characteristics of demand but also to the behavior of competitors in the market [11]. Another reason for the significant influence of this factor is that the financial technology market has a real opportunity to borrow and adapt foreign experience in developing financial technology infrastructure in the context of financial system reform, resulting in the dynamism of supply in this market significantly higher than similar indicators in other sectors of the country.

Given this, the financial technology market is a powerful tool for developing the socio-economic state of the state.

The development of the innovative technology sector, both in our country and worldwide, is gaining significant momentum. In this regard, business entities specializing in innovative technology products face uncertainty regarding the status, methods, and means of their future production. The use of rapidly developing financial technologies is the foundation for further improvements in production. Given this, it is important to study the readiness of future production, as well as the factors and conditions necessary for the transformation of production systems in the context of financial system reform, as well as to investigate the functioning and development of financial technology infrastructure.

According to the results of the study, the biggest challenges facing the financial technology sector in the context of reforming our country's financial system are:

– Insufficient development of financial technology clusters;

– Public organizations and institutions lack genuine interest in large-scale purchases of financial technology products or lack sufficient funding for this;

– The small proportion of companies that can adopt and implement innovative financial technologies in their own production processes [12].

However, the main prospects for the development of financial technology infrastructure in the context of financial system reform are the following:

– In the context of promising technologies: artificial intelligence, machine learning, predictive analysis of big data;

– In the context of promising areas of activity: digital banking, lending, scoring, development of an optimized marketplace, and attracting additional investment in innovative products.

The situation regarding the effectiveness of the financial technology infrastructure in the context of financial system reform is somewhat ambiguous and characterized by negative forecasts. This situation is caused by its systemic nature and several factors. Firstly, in the financial technology market, startups and relatively small companies have virtually no chance of competing with large, established companies. Another possible reason is that, despite large companies officially declaring competition with each other, in practice such competition is virtually nonexistent, which becomes yet another obstacle for startups to offer their innovative technologies to customers.

A second obstacle is the complete or partial closure of financial institutions that might be interested in financial technology. Given that domestic financial institutions are struggling to independently adapt all innovative financial technologies, and startups can survive in the market for no more than two or three years, they will be forced to close due to a lack of clients.

Another factor negatively impacting the financial technology infrastructure in the context of reforming the country's financial system is the difficulty of companies specializing in the creation of innovative technologies entering international markets. This complexity is due to both domestic factors and the fact that domestic start-up companies lack a clear business model, as well as strong support and regulation from public authorities.

The financial technology infrastructure is constantly evolving in line with changes in the financial regulatory framework and the emergence of new traditions and rules of business ethics and financial culture. The evolutionary development of the financial system is achieved through ongoing efforts to thoroughly study and justify the need to improve the conditions for interaction between financial entities, ensuring better financial and economic performance. Externally, financial interactions take the form of various transactions, and the magnitude of transaction costs for their implementation largely reflects the sophistication of financial institutions and their standards.

The success of the fintech ecosystem and its potential for sustainability will depend on the capabilities of its participants:

- adopt and promptly implement progressive policies and regulations aimed at fintech growth;
- find sources of capital and invest them transparently, understanding the security of their own rights;
- create demand for fintech products and stimulate the growth of the innovative sector;
- have access to and develop talent.

Key elements of sustainable fintech ecosystems: regulation and policy, digital technologies, demand, and talent. These elements form two hemispheres (the left

– regulatory and investment, the right – acceleration and personnel). Together, they create a closed loop – from the emergence of innovation and its acceleration to the regulation of innovative products, services, and capitalization. At the same time, the model is open and integrated with global ecosystems.

Regarding the areas of public governance regulation for the creation and implementation of financial technology products at the global level, we can note positive experiences that can be adapted to Russian practice of public regulation of the formation and development of financial technology infrastructure in the context of financial system reform:

1. Formation and delegation of powers to specialized bodies or divisions of government agencies of the Russian Ministry of Finance implementing public governance in the field of the formation and development of financial technologies.

2. Regulatory and legal solutions to issues of trust in innovative financial technology products, as well as legislative consolidation of the conceptual framework of innovative financial technologies.

3. Establishing regulatory and legal frameworks for developing financial technology, such as regulatory sandboxes and innovation centers specializing in the implementation of innovative, low-risk forms of financial technology infrastructure development.

4. Establishing minimum standards and criteria for companies developing financial technologies to join the regulatory sandbox system, with preference given to those companies developing financial technologies that are beneficial for the development of the country's financial system at a specific stage of reform.

5. Continuously assessing the impact of financial technology infrastructure on the country's financial system, promptly identifying competition issues with institutions using traditional financial technologies, and further developing a regulatory framework for optimizing and regulating financial technology infrastructure.

6. Establishing an optimal tax system for companies developing financial technologies, as well as introducing a mandatory tax system for financial institutions and business entities that use financial technologies in their activities. 7. Forming a public support buffer for financial technology infrastructure and specialized companies in the context of adopting the necessary regulatory standards and decisions.

The above study demonstrates that financial technologies have now permeated all areas of public and business life in the country. It has been established that the development of financial technology infrastructure faces a number of challenges and obstacles due to many factors, the main ones being the imperfection of public regulatory mechanisms, as well as the unpreparedness and outdated principles of the financial system.

Therefore, for the further development of the financial technology sector, it is important to create powerful regulatory mechanisms within the context of public

governance, and the country's financial system must adapt to the new conditions of domestic and global markets, which is only possible through its comprehensive reform.

As a result of the study of the specific features of financial technology infrastructure development in the context of financial system reform, the main trends in the development of this infrastructure were identified.

A roadmap for creating a financial technology infrastructure based on a public governance system has been developed in the context of reforming Russia's financial system. Currently, the financial technology infrastructure can be characterized in two ways: the production structure, which reflects the current state of a company's technical and production capabilities; the development of financial technologies; and production drivers, which include indicators of the fintech company's future functional state.

It has been proven that the development of financial technologies and the speed of creating innovative products or services depend on the formation and effective functioning of an ecosystem and a combination of interrelated factors such as demand, technology, access to financing, human capital, and regulation. By defining criteria for assessing the public governance ecosystem for financial technology development in Russia, key initiatives aimed at supporting the public governance ecosystem for financial technology development have been identified.

The formation of an effective public governance ecosystem for financial technology development takes this process to a new level. Furthermore, given the amounts invested in new technologies and the interaction of new participants—specialized startups, businesses, citizens, and the government—financial technologies have the potential to transform the financial system into a wide range of products and services.

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经济增长理论的起源：早期领域
THE GENESIS OF THE THEORY OF ECONOMIC GROWTH: EARLY AREAS

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摘要：本文对早期经济增长理论进行了梳理和梳理，强调了这些理论的特点及其思想对于理解众多现代经济增长理论和模型的内容和要素的重要性。作者界定了重商主义、生产与资本理论以及重农学派代表人物（他们代表了现代经济增长理论的起源）的著作中经济增长的内容、特征和主要因素。并从经济增长理论的演变角度分析了这些理论的优势和不足。

关键词：经济增长理论、重商主义、生产理论、重农学派、再生产模型、劳动分工、净产品、国民财富、国民收入。

Abstract. *The article examines and systematizes early theories of economic growth, highlighting their features and the importance of their ideas for understanding the content and factors of many modern theories and models of economic growth. The author defines the content, characteristics, and main factors of economic growth in the works of the representatives of mercantilism, the theory of production and capital, and the physiocrats — who stood at the origins of modern theories of economic growth. The strengths and weaknesses of these theories are identified from the standpoint of the evolution of economic growth theory.*

Keywords: *theory of economic growth, mercantilism, production theory, physiocrats, reproduction model, division of labor, net product, national wealth, national income.*

In the evolution of the theory of economic growth in Western economic thought, two stages can be distinguished: from the 16th to the mid-20th century — **early theories of growth**, and the second half of the 20th century — **modern approaches**.

At the first stage, representatives of early schools focused mainly on defining indicators of short-term economic growth, selecting its factors, and ensuring growth through the quantitative increase of these factors, especially sources of labor. This direction of economic growth theory includes the following schools: mercantilism, production theory, physiocrats, the English classical school, and the followers and opponents of the classical school.

At the second stage, representatives of modern directions focused on **models of long-term economic growth,** its factors and conditions, often using mathematical tools. They paid special attention to the factors of physical and human capital, technological progress, the institutional environment, property rights, and transaction costs, among others. This group includes the Keynesian, Neo-Keynesian, Neoclassical (exogenous growth), Neoclassical (endogenous growth), intersectoral model, and both "old" and "new" institutionalism schools.

Mercantilism

Among the economic currents, the first in the world where the problems of the growth of the wealth of nations were studied was the school of mercantilism (from Italian *mercante* – merchant) [2].

The representatives of this school defined the wealth of a country by the amount of monetary metal – gold and silver – it possessed. The main factor of its growth in the country was considered to be trade, and specifically foreign trade – the only channel for increasing the inflow of gold and silver.

Proceeding from this logic, the inflow of money into the country had to be encouraged in every possible way, and the outflow – restricted. Many prominent representatives of mercantilism (J.J. Becher, P.W. von Hornick, E. Misselden, John Law and others) [4] saw the solution to this problem in state economic policy. The state was obliged to:

- export more goods than it imported;
- regulate foreign trade in order to increase exports and reduce imports;
- prohibit or strictly limit the import of raw materials;
- forbid any trade of the colonies with countries other than the mother country [6, p. 82].

Among the mercantilists there were also those who supported the stimulation of production growth. At the same time, they placed the main emphasis on the active role of money and trade and on the acceleration of the circulation of income, i.e. on the expansion of the factor of domestic demand.

Thus, according to T. Mun, the inflow of money into the country is needed not at all in order to serve as a source of its accumulation in the treasury, but in order to set it in motion, primarily in trade. He noted: "Money begets trade, and trade multiplies money" [7, p. 161].

Hence, the more money is put into circulation, the better. Following him, D. Defoe drew attention to the expansion of domestic demand by reducing the

amount of savings of the rich through increasing the wages of the poorer strata of the population [4].

The mercantilists were the first to propose a coherent theory of international trade, both in the form of systematized external factors of the economic growth of countries and individual factors of production growth related to the sphere of circulation or demand: external and internal trade, the turnover of income, as well as the administrative factor – strict state regulation of the export and import of goods, the use and exchange of precious metals, etc.

Some of the ideas proposed by them are still used by many countries today, in particular, they are implemented in the so-called balance of payments.

The shortcomings of mercantilism are the actual non-recognition of produced goods and services as the wealth of nations, i.e. of the main factors of production – labor, capital, and land; and the attribution of a decisive role to state regulation of foreign trade and to monetary metal – gold and silver.

The Theory of Production and the Nature of Capital

Supporters of this direction rejected the main view of mercantilism — that wealth is money and its source is trade — and argued that material goods are created in production, and therefore, the basis of the nation's well-being is the development of production.

The pioneer of this view was W. Petty. Including in the composition of a country's wealth as its most important component "material things, useful and valuable to society," he defined in his famous formula the factors of wealth growth as follows:

"Labor is the father and active principle of society, and land is its mother" [9, p. 54].

Highlighting labor as the main factor in the growth of national wealth, Petty distinguished between productive and unproductive labor. Productive labor, in his view, was the labor of persons producing material things useful and valuable to society, and unproductive labor — the labor of persons not producing these things. According to Petty, the latter "do nothing, but only eat, drink, play, and dance…" [10, p. 173]. In this regard, he proposed to reduce the number of workers employed in unproductive spheres and, on the contrary, increase their number in the productive sphere.

Using his statistical method, Petty was the first to calculate the national income and national wealth of England — indicators that are still the main measures for assessing the economic growth of countries and regions. It is worth noting that he included in national wealth not only material wealth but also a monetary valuation of the population itself, thus attempting to evaluate human capital (its labor skills, dexterity, qualification). Unlike modern understanding, he calculated national income exclusively as the sum of consumer expenditures of the population, neglecting the share of national income going into savings [1, p. 17].

The merits of Petty in the development of economic thought are great — he laid the foundations of the theory of production, revealed the nature of national wealth, identified the sources of its growth, and founded the theory of the factors of production. According to this theory, labor and land are independent sources of the growth of material goods; their owners receive only what is created by the corresponding factors, i.e. the owners of labor receive wages, and the owners of land — rent.

Another representative of the theory of production was P. Boisguilbert. Like W. Petty, he sought the wealth of the nation and the source of its growth not in the sphere of circulation, but in the sphere of production.

Wealth, according to Boisguilbert, consists of material goods in the form of products created in production (in particular, in agriculture), and their "true value" is determined by labor.

In the economic life of society, he noted, a necessary condition is the division of labor and exchange. Despite the deepening of the division of labor and the complication of economic relations, exchange must nevertheless occur in accordance with labor costs. The first requirement, he stated, is that "all people should live in abundance by their own labor and that of their ancestors," and also that "every craft must feed its master." To satisfy this requirement, goods and all commodities "must constantly be in equilibrium and maintain a price proportional to the relations between them and the corresponding costs necessary for their production" [3, p. 438].

By this statement, **Boisguilbert** affirmed that the most important condition of economic equilibrium and progress is proportional or normal prices, which ensure the coverage of production costs and profits (net income) on average in each branch, maintaining the process of sale of goods and stable consumer demand. In his opinion, achieving and maintaining equilibrium through proportional (or, in modern terms, optimal) prices is possible only if free competition prevails in the market.

Thus, the main contribution of Boisguilbert to economic science, and in particular to the theory of economic growth, should be considered:

- the definition of the wealth of countries and nations as the totality of material goods created in the sphere of production;
- the identification of the main factors and conditions of production growth — labor, proportional prices, free competition, consumer expenditures, and the reform of the tax system.

The limitations of his economic views consist in:

- the underestimation of the role of industry and trade in the creation of wealth;
- the idealization of the peasant economy;
- the recognition of the sole function of money as a means of circulation, and hence, the incompleteness of their connection with commodity production;

- the merging of the consumer function and the purpose of production into consumption, i.e. the exclusion of the role of goods intended for production;
- the underestimation of capital as one of the main sources of the growth of production and national wealth.

Physiocrats

(from French Phiziocrates, Greek physis — nature and cratos — power, domination) — a group of French economists of the 18th century who formed an entire economic school in history [2, p. 1138].

The founder of this school was **F. Quesnay**, who formulated not only the basic theoretical propositions but also the economic program of physiocratism.

The wealth of a nation, according to Quesnay, was defined as the constantly reproduced annual product of agriculture, since this is the only branch of material production where the "net product" or income of the people is created.

By the net product, Quesnay understood the surplus of production obtained in agriculture over the costs of production. He wrote that the net product is "the annually created wealth which constitutes the income of the nation and represents the product that, after deducting all expenses, forms the profits extracted from land holdings" [5, p. 223].

Thus, he believed that the net product arises only in agriculture, since it is precisely there that the creation of new wealth takes place and labor produces more than is necessary for its own reproduction; and the higher productivity of agricultural labor is determined by nature itself.

Such an understanding of the net product by Quesnay is explained, first, by the participation of the "factor of nature" in the creation of agricultural products, and second, by the greater clarity and visibility of the process of product increase in agriculture compared with other sectors of material production.

Closely connected with the doctrine of the net product in Quesnay's work is his concept of productive and "sterile" (or unproductive) labor. His merit in solving this problem lies in the fact that he was the first in economic science to define the criterion of productive labor. He stated quite definitively that productive labor is labor which creates a net product.

One of the errors of the concept of the net product followed from its limited interpretation of productive labor — as labor engaged exclusively in agriculture, whereas in other fields of activity — industry, crafts, trade, etc. — it is unproductive, or "sterile".

Research on the renewal of the annual product based on production costs allowed Quesnay to reveal the nature of capital and distinguish its main parts, although the word capital itself does not appear in his works. He used the terms "original advances" and "annual advances".

The expenditures made annually for agricultural work — seeds, barn maintenance — he called annual advances, and the long-term expenditures — for land drainage, buildings, horses, plows — original advances. As we can see, this division by Quesnay refers to productive rather than monetary capital, and it corresponds to the modern distinction between fixed and circulating capital.

In his famous Economic Table, Quesnay considered economic processes by analogy with the circulation of blood in a living organism. He demonstrated that the foundation of economic life is the constantly recurring circulation of the social product and monetary income, in other words, the continuous repetition of production and sales — reproduction. The product produced by different classes of society is exchanged and distributed among them so that each class possesses everything necessary to continue its activity again and again.

However, certain "deficiencies" of Quesnay's Economic Table do not cancel out its outstanding merits. Its exceptional importance for economic science was noted by Academician V.S. Nemchinov, who called the *Economic Table* "a brilliant flight of human thought." He wrote: "If we describe Quesnay's Table in modern economic terms, it can be regarded as the first attempt at macroeconomic analysis, in which the central place is occupied by the concept of the aggregate social product...

Quesnay's *Economic Table* is the first macroeconomic grid in the history of political economy, representing the natural (commodity) and monetary flows of material values.

The ideas embedded in it are the germ of future economic models. In particular, when creating the scheme of expanded reproduction, K. Marx paid tribute to the genius of Quesnay's creation" [8, pp. 175–177].

The contribution of Quesnay to economic science — or, more precisely, his main additions to the theory of economic growth — consists in:

- discovering the nature and causes of the growth of national wealth directly in the sphere of production, particularly in agriculture;
- explaining the process of the formation of the net product or net income of agriculture;
- identifying the net income as the main source of the increase of all forms of wealth;
- defining labor and land as the main factors of production growth;
- defining the criterion of productive labor as labor that creates a net product;
- revealing the structure of productive capital by distinguishing between annual and original advances;
- introducing into economic circulation the new concept of "reproduction" as the continuous repetition of production and sales.

The most capable disciple of F. Quesnay was **A. Turgot**, who went further than his teacher and introduced significant corrections and additions to the doctrine of physiocrats.

A. Turgot interpreted the wealth of a nation as the annually reproduced product of agriculture, seeing in it the only branch of the economy where the "net product" is created. However, unlike Quesnay and other physiocrats, he attributed the creation of the net product in agriculture primarily to the labor of the farmer and hired workers, and not to the "gift of nature."

In his work *"Reflections on the Formation and Distribution of Wealth"* (1766), Turgot emphasized that the net product is not merely the gift of nature, but the result of a special productivity of labor in agriculture, obtained by landowners (theses 1–28) [10, pp. 94–110].

Like Quesnay, A. Turgot distinguished between productive and "sterile" labor. Similarly to him and other physiocrats, he recognized Quesnay's three-class structure of society — productive (farmers), landowners, and sterile (all others).

However, Turgot made a remarkable addition to this scheme. The sterile class, in his system, "splits" into two groups. The first group consists of entrepreneurs — manufacturers and factory owners who possess large capitals and use them to obtain profit by employing labor through their advances. The second group consists of simple artisans, who have nothing but their hands, who advance to entrepreneurs only their daily labor, and whose profit amounts merely to the receipt of wages [10, p. 129].

Similarly, "the class of cultivators, like the class of manufacturers, divides into two groups of people: entrepreneurs or capitalists, who make advances, and simple workers, who receive wages" [10, p. 131].

Thus, with the addition of two classes, Turgot not only improved the class structure of society, but, along with the factor of labor, distinguished capital as one of the independent main sources of production, and also showed that these factors are the main mechanisms of income distribution in the economy.

A. Turgot did not limit himself to defining the genesis and nature of capital but tried to reveal the properties of its self-increase. He considered the first use of capital to be the purchase of land, which ensures rent; the second — investment in large-scale agricultural production guaranteeing farm profit; the third — acquisition of industrial enterprises bringing profit; the fourth — investment in trade providing commercial profit; the fifth — credit operations for obtaining interest [10, pp. 145–146].

He, as noted above, distinguished between money and capital and emphasized that money entering the market is not lent; only money set aside as reserves — that is, capital — can be lent [10, p. 142].

Turgot identified five forms of self-increase of capital, linked them to the mechanism of income distribution, and although he clearly understood the pos-

sibility of the independent existence of industrial and commercial profits, as well as interest, he still did not reveal their real source. In this case, physiocratism prevailed in him, since he considered agricultural capital as the main form of capital and land rent as the main form of income.

Turgot clearly understood the role of money in accelerating the exchange of goods, deepening the social division of labor, increasing the capital of entrepreneurs, and thus in the growth of production and national wealth. He stated that the use of money largely ensured the division of various kinds of work among members of society, thereby "greatly accelerating social progress" [10, p. 121].

"Capitals," Turgot emphasized, "are the inevitable foundation of every enterprise, and money is the chief means for saving small profits to accumulate gain and enrich..." [10, p. 136].

Therefore, the accumulation of money or savings is the main factor in the formation and self-increase of enterprise capital.

The theoretical ideas and practical proposals of A. Turgot were not without shortcomings, among which are:

- the exclusion from the productive sphere of industry, trade, crafts, etc., declaring them "sterile" branches;
- the identification of the net product solely with agricultural output;
- the reduction of agricultural capital to the main form of capital and land rent to the main form of income;
- the recognition of agricultural labor as the only kind of labor that produces more than its own remuneration;
- the definition of profit and interest as parts of the net product, i.e. of rent;
- the treatment of the function of money as a means of circulation, only as a technical instrument ensuring exchange;
- the definition of the essence of money as exchange value from the standpoint of the subjective theory of utility, i.e. value established solely by the agreement of desires.

Thus, the early theories of economic growth served as the foundation for the formation of a comprehensive understanding of the phenomenon of economic development and laid the groundwork for most modern models of economic growth.

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人事和人力资源管理
PERSONNEL AND HUMAN RESOURCE MANAGEMENT

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摘要：任何组织都由使其运转的人组成。人是任何组织最重要的资源。人力资源将他们的知识、经验、技能和才能带入工作流程，帮助组织实现其目标。没有人，组织就无法正常运作并实现其目标。组织的成功取决于在那里工作的员工。

有效的人力资源管理可以优化工作流程并创造一个促进成长的环境。员工的积极性和满意度直接影响他们的生产力。

关键词：人、组织、员工、企业、流程、管理。

Abstract. *Any organization is made up of the people who make it work. People are the most important resource of any organization. Human resources bring their knowledge, experience, skills, and talents to the work process, which helps the organization achieve its goals. Without people, an organization cannot function properly and achieve its objectives. The success of an organization is determined by the people who work there.*

Effective management of these human resources allows for the optimization of work processes and the creation of an environment that promotes growth. The motivation and satisfaction of employees directly impact their productivity.

Keywords*: people, organization, staff, enterprise, process, management.*

Any organization or enterprise is primarily about people, since it is the person (and then the employee of the organization) who is its main resource and asset, allowing the organization to achieve its long—term and short–term goals outlined in the strategy. However, like all processes, the team of any organization needs to be managed. Therefore, without personnel management, it is impossible to fully disclose and further use this resource, therefore, it is not possible to bring the organization to a leading position in the market. The implementation of the personnel management process helps to organize competent and effective work of

employees, motivate them to achieve the goals of both an individual department and the entire organization as a whole, develop their professional skills and improve their qualifications, as well as create a favorable microclimate in the team. By missing the implementation of these stages at the personnel management level of the organization, it will be impossible to create a successful enterprise capable of competing with other enterprises in the market.

Management (in general) is a professional activity focused on organizing and coordinating the work of both a group and individual employees during the performance of tasks: the production of goods or the provision of services. It is important to emphasize that management is related to streamlining the collaboration of people, establishing coordinated actions within the organization, and also includes regulating the interaction between an individual employee and the organization itself.

If we are talking about the personnel management of an organization, then this is a process that is associated with the planning, organization, management and control of the personnel workflow in order to achieve the goals of the enterprise and fulfill the tasks outlined in the strategy. This activity with employees includes the development and implementation of a human resource management system, as well as HR planning and assessment of the company's human resources potential. The functionality of the organization's personnel management service includes a fairly wide range of items: from hiring people and their adaptation in the workplace to the dismissal of personnel[1].

The purpose of the organization's employee management process is to meet the needs of the organization's production process and work activities in human resources of the planned quantity, quality and in a limited time, to meet the socio-psychological needs of the organization's personnel.

The essence of personnel management in an organization is a focused and systematic approach that includes interrelated organizational, economic and social measures. These measures are aimed at the formation, distribution and redistribution of labor resources within the company, as well as at creating conditions conducive to the effective use of employees' labor skills to achieve high results and comprehensive employee development.

In recent years, the organization's personnel management has become increasingly relevant and important due to the fact that when implementing and putting into practice management methods, misunderstandings and problems often arise that each of the organization's leaders wants to solve. The main tasks of personnel management can be as follows, they are presented in Figure 1[2]:

[1] Gasanova, A.A. Personnel management in the organization management system / A.A. Gasanova // Innovative science. – 2019. – No. 11. –pp. 50-53.

[2] Gasanova, A.A. Personnel management in the organization management system / A.A. Gasanova // Innovative science. – 2019. – No. 11. –pp. 50-53.

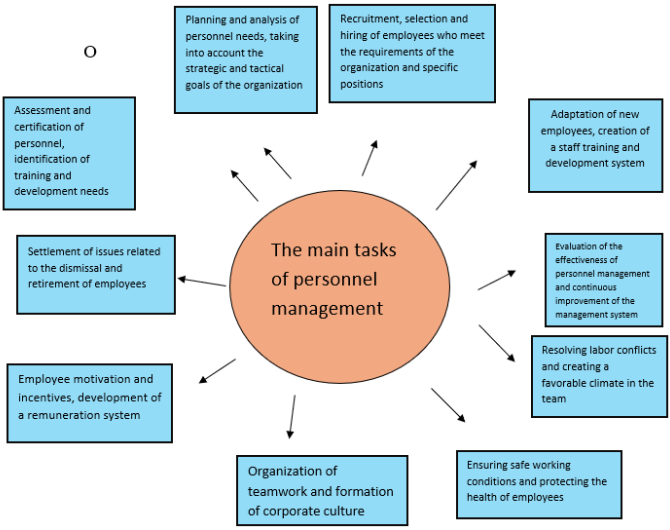

Figure 1. *The main tasks of personnel management*

Human resource management in an organization is one of the key areas of its activity, since the success and stability of the company in the market, as well as its competitiveness, largely depend on the efficiency and productivity of employees.

It should be emphasized that the term "personnel management", which we discussed earlier, has similarities with the concept of "human resource management" (HRM). In both concepts, employees are the object of management, but the differences are in approaches and attitudes towards the employee, his skills and work opportunities as a resource.

The concept of "human resource management" differs from the approach of "personnel management" in that it is based on the principles of "scientific management" and "human relations". These principles emphasize the importance of the economic feasibility of investments related to attracting and retaining potential employees, training them, and creating conditions conducive to the full disclosure of each employee's individual capabilities (Figure 2)[3].

If we are talking about the concept of "human resource management", then it is a concept applied in practice. This concept arose in response to the transformations taking place in various fields of economic activity, such as manufacturing, technology, and the socio-economic sphere. These changes resulted from the increased importance of human labor and its contribution to the production process.

[3] Akindinova, M. A. Evolution of approaches to personnel management [Text] / M. A. Akindinova // Business strategies. - 2021. — No. 8. — pp. 232-235.

One of the priority factors in supporting competitiveness in various fields is the availability of qualified labor (from senior managers to line managers), the level of motivation of this workforce, as well as organizational forms and other circumstances that determine the effectiveness of using personnel in the workflow[4].

Further, the concept of "personnel management" began to develop into the concept of HRM or "human resource management" as an integral part of production resources (along with, for example, financial, material, technological). This suggests that, combining with a development strategy, an organization as an economic and production system can either increase the number of human resources (an extensive path), or, if necessary, optimize, focusing on the most rational use of the remaining resources (an intensive path).

The policy of introducing the concept of "human resource management" in the organization changes the tasks of the management plan, makes adjustments to the list of functions and the structure of relevant services in the organization. Therefore, the most important function in the personnel management process of an organization, due to the increasing role of the human factor in modern production, is the development of hired personnel, and not only their hiring in accordance with the availability of vacancies.

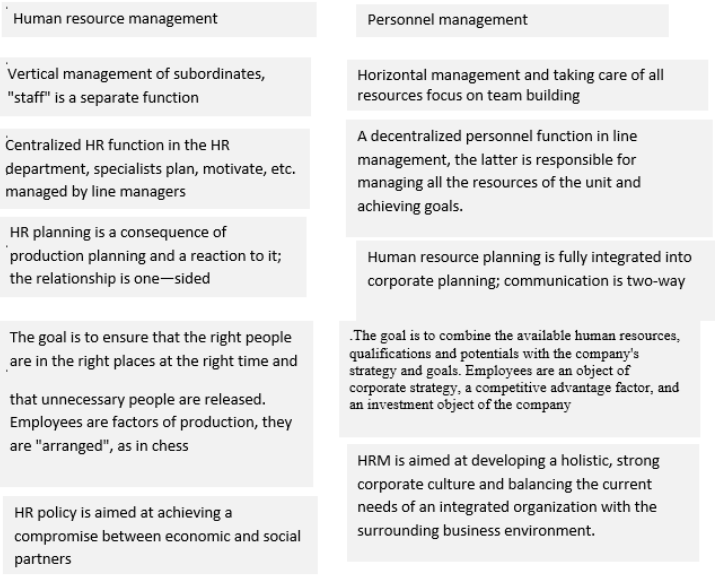

Figure 2. *Differences between human resource management and traditional personnel management*

[4] Watch it in the same place

Thus, personnel management is one of the leading success factors of any organization. The management process includes all the steps related to hiring, adaptation, development, motivation, and employee evaluation. Effective and efficient personnel management enables an organization to achieve its strategic goals, increase productivity and employee satisfaction, while creating a pleasant atmosphere in the work team. In general, the management process of an organization's employees can be considered as a complex and multifaceted task that requires constant attention, control and improvement on the part of the organization's leaders. When applying the right approach to human resource management, an organization is able to achieve high performance and ensure its success in the market.

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广告对消费者意识形态形成的影响
THE INFLUENCE OF ADVERTISING ON THE FORMATION OF CONSUMER IDEOLOGY

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摘要：本文探讨了广告现象，将其视为一个直接影响消费者意识形态形成的复杂系统。作者认为，广告不仅是一种营销工具，更是一种社会经济制度，它通过符号、价值观和图像系统构建新的现实和行为模式。本文深入探讨了广告的分类、其战略和战术目标，以及其影响消费者需求的机制。文章特别关注了广告支出及其有效性的分析。文章最后得出结论，广告具有双重性质，既是经济催化剂，也是社会文化转型的推动者。

关键词：广告、消费者意识形态、需求形成、广告成本、广告分类、品牌、操纵、价值观和消费者行为。

Abstract. *This article examines the phenomenon of advertising as a complex system that directly influences the formation of consumer ideology. The author analyzes advertising not only as a marketing tool, but also as a socio-economic institution that constructs new realities and behavioral models through a system of symbols, values, and images. The paper thoroughly investigates advertising classifications, its strategic and tactical objectives, as well as the mechanisms of its influence on consumer demand. Special attention is given to the analysis of advertising expenditures and their effectiveness. The article concludes with findings on the dual nature of advertising as an economic catalyst and an agent of socio-cultural transformations.*

Keywords: *advertising, consumer ideology, demand formation, advertising costs, advertising classification, brand, manipulation, values, and consumer behavior.*

In the context of globalisation and the oversaturation of markets with goods and services, advertising has transformed from a simple informational message into a powerful system for shaping consumer ideology. *Consumer ideology* refers to a system of ideas, values, and beliefs that places consumption at the centre of

personal and social life, defining status, success, and individual identity through the possession of material goods [1, pp. 63–67].

Advertising has become a key instrument for promoting not merely products, but a particular lifestyle, "proper" models of behaviour, and worldview attitudes. The aim of this article is to comprehensively analyse advertising as a multifaceted system, revealing its economic (costs, demand formation) and socio-cultural (formation of ideology) aspects. Let us consider advertising in various contexts of social and productive activity.

1. Advertising as a Tool for the Formation of Consumer Ideology

Advertising has long transcended the boundaries of merely "informing about a product." Its modern role is the construction of reality. It creates symbolic meanings of goods, linking them with profound human needs — for love, recognition, safety, and self-realisation.

- Creation of mythologies: Advertising creates myths around brands. For example, a car is not just a means of transport but "freedom", "status", or "power". Cosmetics are not a set of chemical compounds but "a key to self-confidence" and "natural beauty".
- Normalisation of consumption: By constantly depicting the act of purchase as a solution to problems and a source of positive emotions, advertising makes consumerism a social norm. It instils the idea that happiness requires the continuous acquisition of new things.
- Formation of values: Advertising promotes values such as individualism, hedonism, and success measured by material wealth.

Thus, it participates in the formation of collective consciousness, offering ready-made cultural codes for self-identification [3, pp. 88–90].

2. Classification and Objectives of Advertising

The diversity of advertising messages allows them to be classified according to several criteria:

By object:

- *Commercial* (goods, services, brands)
- *Non-commercial* (social, political)

By channel of dissemination:

- ATL (Above-the-Line): Mass channels (TV, radio, press, outdoor advertising).
- BTL (Below-the-Line): Targeted channels (merchandising, direct mailings, promotional events, sponsorship).
- Digital (Through-the-Line): Internet advertising (contextual, display, social media, SEO).

By purpose:

- *Informative:* Providing information about a new product and its features.

- *Persuasive:* Creating brand preference, convincing the consumer to buy.
- *Reminding:* Maintaining awareness and loyalty.
- *Reinforcing:* Convincing those who have already made a purchase of the correctness of their choice.

Strategic objectives of advertising within the framework of ideology and demand formation include:

- Creating and strengthening the brand as a symbolic value.
- Differentiation against competitors.
- Establishing long-term relationships with the consumer.
- Shaping public opinion in favour of a certain lifestyle.

3. Advertising Expenditures: Investments in Ideology

Advertising expenditures are not costs but investments in demand formation and perception management.

The structure of the advertising budget includes:

- Production costs: Creation of layouts, video clips, slogans.
- Media budget: Payment for placement in mass media and digital space.
- Research costs: Market analysis, testing of advertising concepts, and monitoring of effectiveness.

The effectiveness of expenditures is measured through Key Performance Indicators (KPI) such as audience reach, brand awareness, loyalty, conversion into purchase, and, ultimately, Return on Investment (ROI).

The large-scale budgets of major corporations allow them to dominate not only the market but also the information space, setting trends and consumption standards.

4. The Role of Advertising in the Formation of Consumer Demand [4, pp. 249–251]

The impact of advertising on demand is complex and multi-level:

- Generation of primary and secondary demand: Advertising can create demand for a new product (primary demand) and stimulate demand for a specific brand within an already existing category (secondary demand).
- Shifting the demand curve: Effective advertising can shift the demand curve to the right, which means that consumers are willing to purchase a larger quantity of goods at the same price, or the same quantity at a higher price.
- Managing elasticity: The unique emotional advantages created by advertising make demand for a brand less price-elastic. The consumer becomes willing to pay more for the “idea” embodied by the brand.
- Stimulation of impulse purchases: Bright, emotionally charged advertising, especially at the point of sale (BTL), provokes unplanned purchases.
- Equalising consumer demand: Consumer demand often depends on the seasonality of goods or services; to equalise demand, such tools as pop-up (reminder) advertising may be applied.

Conclusions

Based on the research conducted, the following conclusions can be drawn:

Advertising can be viewed as an economic function that simultaneously acts as a socio-cultural system. Through advertising, it is possible to shape consumer demand by offering alternative variants of identical products and thereby ensure the manufacturer's success.

The ideological function of advertising is inseparable from its economic one. The creation of a symbolic value of a brand directly influences its market value and its ability to generate profit. Advertising expenditures are strategic investments in a company's intangible assets.

Considering the multichannel classification of advertising, it becomes possible to exert personalised influence on the formation of consumer demand.

For managing perception and consumption, it is necessary to create stable neural associations between the brand and the experience of positive emotions.

Given the inherent characteristics of advertising, it can be concluded that advertising is capable of increasing needs, stimulating competition, and encouraging economic growth.

Thus, advertising can be regarded as a tool that should be critically applied not only by economists and marketers but also by ordinary consumers. Understanding its mechanisms is the key to developing media literacy and sustainable consumer behaviour in the modern world.

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金融素养评估的加法模型：理论与方法论
THE ADDITIVE MODEL OF FINANCIAL LITERACY ASSESSMENT: THEORETICAL AND METHODOLOGICAL ASPECT

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摘要：本文提出了一种评估金融素养的加法模型，克服了传统方法的局限性。该模型将知识、技能和行为三个方面整合为一个指标。并根据功能和方法论标准对评估体系进行了分类。研究结果为改进金融教育项目提供了方法论基础。

关键词：金融素养，加法模型，评估，综合指标，分类，金融行为。

Abstract. *This article proposes an additive model for assessing financial literacy, overcoming the limitations of traditional methods. The model integrates knowledge, skills, and behavioral aspects into a single index. A classification of assessment systems based on functional and methodological criteria is developed. The results provide a methodological basis for improving financial education programs.*

Keywords: *financial literacy, additive model, assessment, integral index, classification, financial behavior.*

Financial literacy, defined as the ability to understand and effectively use financial skills, including personal finance management, budgeting, and investing, is not a monolithic concept. It is a multifaceted construct influenced by cognitive abilities, personal experiences, socioeconomic status, and cultural norms. Therefore, effective assessment of financial literacy requires a comprehensive approach that extends beyond simple multiple-choice questionnaires and accounts for these interconnected factors. Hence, the development of an additive approach to financial literacy assessment is essential for gaining a complete understanding of the

population's financial capabilities. Such an approach can aid in designing effective financial education programs, consumer protection policies, and retirement savings schemes, ultimately contributing to enhanced financial well-being and economic stability.

Current approaches to assessing global financial literacy vary in scope and methodology. The most common approach involves standardized questionnaires, which typically use multiple-choice questions to test knowledge of basic financial concepts (interest rates, inflation, diversification). Increasingly, these are also used to evaluate financial decision-making processes in simulated scenarios. Large-scale studies, such as the OECD/INFE International Survey of Adult Financial Literacy, enable comparisons of financial literacy levels across different countries and demographic groups.

It should be noted that the use of digital assessment tools is growing, with online platforms and mobile applications gaining popularity for evaluating financial literacy and providing personalized feedback [1, p. 68]. Interviews and focus groups help to understand the context and challenges faced by various population groups in managing their finances.

An analysis of contemporary approaches to assessing public financial literacy [2, pp. 66-84; 3, pp. 172-179] allows for the conclusion that long-term evaluation of the effectiveness of financial literacy enhancement measures remains a complex task. Diverse assessment tools and methodologies hinder cross-country comparisons, assessment questions may be irrelevant or incomprehensible in certain cultural contexts, and further research is needed to understand the financial literacy needs of specific population groups.

In the Russian segment of financial literacy research, one of the most relevant studies is that conducted by the RWB Research service (Wildberries & Russ), dedicated to assessing the cyber literacy of Russian consumers on e-commerce online platforms. Two waves of surveys ($n > 2000$, age > 18 years, all regions of the Russian Federation), conducted in December 2024 and June 2025, showed a 15% increase in the cyber literacy index over six months. High importance of information security for respondents (70%) was noted, as well as a strong interest in specialized training (35%), primarily in the format of articles/instructions (52%), short videos (44%), and visual materials (44%). The greatest interest lies in questions of recognizing fraudulent schemes (75%), protecting accounts (73%), and action algorithms in case of account compromise (71%). Despite positive dynamics, 62% of respondents reported personal or indirect experience of encountering cyber threats, with 13% facing fraudulent activities mimicking communications from Wildberries (fake messages – 37%, fictitious promotions with payment outside the platform – 32%) [4]. The obtained data indicate an increase in the maturity of the Russian e-commerce market in terms of cybersecurity, characterized by growing consumer awareness and a desire to use secure platforms.

By implementing a comprehensive assessment system, policymakers and aid organizations can move beyond understanding financial literacy as a knowledge deficit and recognize existing coping mechanisms and community-level financial practices. This fosters the development of contextually relevant programs that enhance financial resilience, restore trust in formal institutions, and contribute to economic recovery [5, p. 17]. Furthermore, a comprehensive assessment can aid in designing tailored financial products and services aimed at addressing the unique challenges faced by populations in conflict zones, thereby promoting sustainable economic development and social stability.

The use of individual socioeconomic indicators to interpret any process is limited, as they do not fully characterize specific parameters of that process. To rationally utilize the toolkit of indicators for effective assessment of financial literacy of the population, it is necessary to select them carefully. This can be achieved by constructing a system of indicators—a set of interconnected indicators based on certain calculated interdependencies of individual variables. Thus, the implementation of the analytical process of assessing financial literacy of the population of a particular subject of the Russian Federation is impossible without the use of an effective system of indicators [6, p. 418].

In this context, scientific developments that result in logically constructed systems of indicators, providing concise and structurally organized information on key societal targets, become highly relevant. The limitation of using individual socioeconomic indicators to interpret a process is due to their inability to fully reflect the specifics of its key parameters [7, p. 93]. In this regard, for the effective development of a comprehensive approach to assessing the level of financial literacy of the population of the Donetsk People's Republic and the rational use of the indicators' toolkit, it is necessary to carefully select and aggregate them. This can be achieved by creating a system of indicators, representing a set of interconnected indicators based on calculated dependencies between individual variables.

It is worth noting that Russian scientists, when developing economic models and methods, strictly differentiate between the terms "indicator" and "index," based on their functional purpose, construction methodology, and role in analysis.

The term "indicator" is used as a basic measure of economic phenomena, a "primary quantitative characteristic directly measuring a specific property of an object" (e.g., number of unemployed, volume of exports in dollars). In the methodology of Rosstat (Federal State Statistics Service) and the Central Bank of the Russian Federation, the indicator is used as an input parameter for models, while the index serves as an aggregated tool for comprehensive assessment. In Russian economic models, this distinction is critical: indicators serve as input data, while indices are the result of calculations for decision-making. Modern criticism emphasizes the need to supplement index-based assessments with qualitative regional adjustments.

The main criteria by which systems for assessing financial literacy are usually classified are functional orientation and research and formation methods. Such an understanding is crucial for selecting the most appropriate assessment tool for a specific purpose, whether it be program evaluation, conducting research, or tracking progress in financial literacy at the regional level.

Table 1

Classification criteria for the assessment system of financial literacy of the population

Criteria	Types of assessment of financial literacy	Characteristic
Functional orientation	diagnostive	aimed at measuring the current level of financial literacy, allows you to identify strengths and weaknesses, as well as get an idea of the knowledge, skills and attitudes of the population towards personal finance
	formative (developing)	aimed at improving financial literacy, often integrated into educational programs and provide feedback to both students and teachers to guide the learning process and adapt teaching methods
	predictive	aimed at predicting future financial behavior or results. For example, they can predict the likelihood that a person will incur excessive debt obligations or fail to plan retirement properly
	impact assessment	allows you to evaluate the effectiveness of financial literacy programs or strategies, and shows whether the activities have actually improved financial knowledge, skills, and behavior
The research method	quantitative	involves the use of numerical data and statistical analysis to assess financial literacy. Common methods include surveys, questionnaires, and financial knowledge tests with multiple choice questions. The results are often presented as scores or indexes
	qualitative	aimed at collecting detailed descriptive information about financial literacy. The methods include interviews, focus groups, and case studies. High-quality data allows us to better understand people's experiences and views
	mixed methods	a combination of quantitative and qualitative methods to gain a more complete understanding of financial literacy
The method of formation	based on knowledge	test your factual knowledge of financial concepts such as interest rates, inflation, investing, and budgeting
	based on skills	aimed at testing practical skills related to financial management, such as calculating interest, budgeting, or comparing financial products

Continuation of the table 1

Criteria	Types of assessment of financial literacy	Characteristic
The method of formation	based on the behavior	aimed at identifying attitudes, beliefs, and behaviors related to financial decision-making. This may include an assessment of risk appetite, planning horizons, and savings habits. These indicators are often estimated using surveys or simulations
	complex (multidimensional)	combine elements of knowledge, skills, and attitudes/behaviors, which allows for a more holistic understanding of financial literacy. They often use weighted estimates reflecting the relative importance of the various components
Scope of application (breadth of coverage)	narrow (specific)	relate to a specific aspect of financial literacy, such as debt management, retirement planning, or insurance
	broad (comprehensive)	aimed at assessing financial literacy in a wide range of areas
Target audience	general population	intended for use among the general population
	demographic groups	tailored to specific groups such as youth, the elderly, low-income people, or members of certain cultural groups. They may take into account the cultural specificities and specific financial challenges faced by the target group

Based on the conducted research, the following conclusions can be drawn:

1. Financial literacy represents a complex, multidimensional construct influenced not only by knowledge but also by cognitive abilities, socioeconomic context, cultural norms, and behavioral attitudes. This necessitates the application of comprehensive, rather than fragmented, approaches to its assessment.

2. Existing approaches to financial literacy assessment, including standardized questionnaires and international comparative studies, possess significant diagnostic potential but have limitations related to insufficient consideration of contextual, behavioral, and digital aspects of financial activity.

3. As a methodological solution, an additive assessment model is proposed, the essence of which lies in aggregating diverse indicators (knowledge, skills, behavior, digital security) into an integral index. This allows for obtaining a holistic and structured measurement of financial literacy, overcoming the limitations of narrowly focused tools.

4. A classification of assessment systems has been developed based on key criteria: functional orientation, research methods, formation, and scope of application. This classification serves as a practical guide for selecting or developing appropriate tools relevant to specific goals and target audiences.

5. The promising nature of the proposed additive model lies in its flexibility and adaptability. It allows for considering regional and demographic specifics, integrating new components (e.g., cyber literacy), and serving as a basis for developing targeted financial literacy programs and public policy measures aimed at improving the financial well-being of the population.

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评估俄罗斯北部地区人力潜力的系统方法
THE SYSTEMATIC APPROACH TO ASSESSING THE HUMAN POTENTIAL OF THE RUSSIAN NORTHERN REGION

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摘要：本文探讨了俄罗斯北部地区人力潜力评估的独特之处，并分析了其发展的历史、自然和气候特征。本文分析了2011年至2020年期间，俄罗斯典型的北部地区马加丹州人力潜力形成的关键趋势。

关键词：北部地区；人力潜力；系统评估；发展管理。

Abstract. *This article identifies the unique aspects of assessing human potential in Russia's northern regions, and identifies the historical, natural, and climatic characteristics of its development. It examines the key trends shaping human potential in the Magadan Region, a typical northern region of Russia, from 2011 to 2020.*

Keywords: *northern territories; human potential; systemic assessment; development management.*

The relevance of the problem of systemic assessment of human potential of the Russian North, as well as the development of measures to manage its development, are defined in strategic plans for the development of the Russian economy and are a priority area for the economic development of the northern territories.

Due to the specific natural and climatic factors and established economic practices, Russia's northern regions can be identified as a separate group for studying the formation and development of both the regional economy [2] and human potential. The economy and spatial distribution of productive forces in this group of regions developed in the last century and have changed little to date. Population distribution within the northern regions was most often determined by the locations of natural resource development in these areas or the convenience of infrastructure communications. These factors were and are linked to the development of the region's human potential.

Most authors who have studied the theoretical and practical foundations of human potential development also agree that the concept itself and approaches to its interpretation and assessment must take into account regional specifics. Russia's northern regions, in this regard, have distinct characteristics.

Russia's northern regions lack a sufficiently developed education and healthcare system. In these areas, specialists are often acquired "ready-made," recruited from other regions of the country and abroad [3]. Other sectors also rely on outside the northern region to fill the gap. The attractiveness of a given northern region to its population determines the human potential it generates.

The ongoing population outflow, which began during the years of market reforms and continues to this day, has had a significant impact on the ability of northern regions to create and realize human potential. This is highlighted by researchers studying the economies of Russia's northern regions in their works [1, 2, 3, 4].

The bulk of the migration flow consists of people of retirement age, who have completed their working lives in the extreme regions of the Far North and are moving to more comfortable, warmer regions of the country. This historical tradition of labor turnover in Russia's Far North persisted throughout the second half of the 20th century. However, in the final years of the 20th century and the first decades of the 21st century, there has been a steady outflow of young people, both those who have completed their schooling and are migrating to the central regions of the country for further education, and young, skilled workers of working age, who are moving to follow their grown children or due to other circumstances, particularly the greater appeal of living in the central regions of the country, which have developed infrastructure and offer more comfortable living conditions.

The outflow of youth and skilled professionals from northern regions is leading to a decline in human potential. This situation has not only short-term negative consequences for the regional economy, such as reduced availability of skilled labor, lower productivity, and deterioration of human capital, but also long-term consequences, such as a reduction in the regional economy's ability to further generate human potential due to a shortage of reproductive-age and working-age populations living in the northern territories.

As a result, regional businesses face difficulties finding the necessary personnel, which limits their opportunities for growth and development, and the region's economic development declines or stagnates. Thus, population decline creates a vicious cycle: deteriorating living conditions contribute to further population outflow [1] and a decline in human potential.

Another characteristic of our country's human potential development is the concentration of human capital in the country's central regions and large cities,

which negatively impacts the human potential of Russia's northern regions with low population density and a small number of large urban settlements.

According to research by Russian Far Eastern scientists, the highest concentration of the Russian population in cities is found in the northern regions: Magadan Oblast – 96.1%, Khanty-Mansi Autonomous Okrug – 92.7%, and Murmansk Oblast – 92.1% [4]. Thus, historically, the sites of generation and concentration of human potential in the Far Northeast of our country have been northern cities. Consequently, the developmental characteristics of large population centers – cities – may largely determine the specifics of the formation of human potential in the northern region.

The Magadan Region is one of the largest territories in the Far East region of our country. The entire territory of the Magadan Region is considered part of the Far North. All of the aforementioned characteristics of human development in the northern region are typical of the region. This is confirmed by long-term monitoring of changes in both quantitative and qualitative indicators of the constituent parts of the region's human potential [5].

Thus, a qualitative assessment of the human potential of the Magadan Region was conducted for the period 2001-2020. According to the methodology presented in the UN Development Program in 1990, three components were analyzed: educational level, life expectancy, and real per capita gross regional product. As a result, positive dynamics were revealed in the Human Development Index of the Magadan Region (an increase of 65% from 2001 to 2020). The Life Expectancy Index in the region grew until 2015 (by 88.6%), but from 2015 to 2020, a decrease of 24.3% was already noted. The Education Level Index showed a constant negative trend (a drop of 1%). The Per Capita Income Index, on the contrary, showed a constant upward trend (more than 900% over the period).

The quantitative indicators of human potential in the Magadan Region show negative trends. Most indicators (resident population, working-age population, migration, and natural population change) show a loss of human potential. All indicators showed negative trends from 2001 to 2020.

As a result of the conducted analysis, it can be concluded that, in general, there is a gradual decline in the human potential of the Magadan Region in quantitative terms (in terms of the permanent population: in absolute terms by 55 thousand people and in relative terms by 28.3%; in terms of the working-age population: by 9.5 thousand people and by 13.7%, respectively), but its growth in qualitative terms (an increase in the Human Development Index by almost 65% over 20 years).

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2018–2024年马加丹州交通运输系统评估
ASSESSMENT OF THE TRANSPORT SYSTEM OF THE MAGADAN REGION FOR THE PERIOD 2018-2024

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摘要：本文对马加丹州的交通运输系统进行了评估，并指出了区域交通运输发展的优势和劣势。本文运用链式替代法对公路货运周转量进行了因子分析，找出了影响其增长或下降的关键因素。此外，本文还分析了马加丹州交通运输系统的主要发展领域。

关键词：交通运输、区域、货物运输、货运周转量、公路、燃料、柏拉图系统。

Abstract. *An assessment of the transport system of the Magadan region is given. Both the strengths and weaknesses of regional transport development are identified. The article conducts a factor analysis of road freight turnover using chain substitution and identifies key factors influencing its growth or decline. The main development areas of the Magadan Region's transport system are examined.*

Keywords: *transport, region, freight transportation, freight turnover, highways, fuel, Platon system.*

Introduction. Automobile transport is one of the main modes of transportation in the Magadan Region, providing connections between settlements and delivering freight and passengers. The Magadan Region's transportation system is still developing, with key challenges related to the lack of rail service and dependence on sea and air transport. The region's main advantage is its large port, which serves as a key logistics hub for the region. Automobile transport is the primary mode of transport for connections with other regions, although it also faces challenges due to climate conditions and road conditions. Below, we will assess the transportation system's role in terms of road freight transport.

The following are key strengths: 1) the port of Magadan, the largest in northeastern Russia and open year-round, making it vital for the region's logistics; 2) air travel – providing connections to other regions, which is critical for remote areas; 3) roads – there is a core road network connecting populated areas, but their condition can be poor.

Unfortunately, there are also some weaknesses, including: 1) the lack of rail service—a major drawback that limits freight transportation and hinders communications with the mainland; 2) climate dependence—harsh climatic conditions (cold summers, long winters) create challenges for all modes of transport, especially road transport; 3) the length of roads—the region's vast territory and low population density hinder the development of transport infrastructure.

In this regard, it is necessary to resolve fundamental issues in the development of the transport system of the Magadan Region.

Materials and methods of research. The total length of the public road network in the Magadan region is 2,689 km, including 834 km of the federal road R-504 "Kolyma" from Yakutsk to Magadan, 1,167 km of regional and inter-municipal significance and 688 km of local significance, which is presented in Table 1 [4].

Table 1

Length of roads (at the end of the year, km)

Indicator	2019	2020	2021	2022	2023	2024
Motorways, total	2918	2892	2822	3195	3514	n/a
including:						
public use1)	2738	2713	2713	2698	2689	n/a
non-common use	180	179	109	497	825	n/a
Of the total length of motorways, roads with hard surfaces	2796	2787	2717	2850	3350	n/a
including:						
public use1)	2618	2608	2609	2584	2575	2520.28
non-common use	178	179	108	266	775	n/a
Of the total length of paved roads, roads with improved surfaces						
including:						
public use1)	504	504	505	516	531	534.83
non-common use	503	504	505	516	531	534.83
	1	0.0	0.0	-	-	-

[1)]Including street lengths

According to the Passport [5], the target indicator for bringing the network of regional and inter-municipal roads into a standard transport and operational condition for 2024 corresponds to the standard of 72.1%.

Federal Highway R-504 "Kolyma" is vital for the Far East: it connects Yakutia with the Magadan Region and leads to the Pacific coast, crossing permafrost, mountain passes, taiga, and swamps, making its maintenance significantly challenging. Reconstruction of one of the most dangerous sections was completed in 2024. The work was financed, in part, by the Platon system, which collects tolls from trucks over 12 tons. Since its launch, this system has transferred over 345 billion rubles to the Federal Road Fund; in 2024 alone, over 52 billion rubles were received, allowing 485 km of federal highways to be repaired and another 384 km to be resurfaced. The funds raised have made it possible to build and reconstruct hundreds of bridges and tens of thousands of kilometers of roads across the country.

It's worth noting that 886,000 carriers and 1.95 million trucks are registered in the Platon system, of which more than 79,000 operate in the Far East. Primorsky Krai (approximately 17,000), Khabarovsk Krai (11,000), Amur Oblast (10,000), Yakutia (9,000), and Zabaykalsky Krai (8,000) lead in the number of 12-ton trucks [2].

Since 2015, the Platon toll collection system has been responsible for heavy-duty truck traffic on federal highways. It tracks vehicle movements using GPS/GLONASS data and automatically calculates tolls. Since the system's inception, some carriers have been looking for loopholes, and one of the most dangerous has been the installation of so-called "jammers"—compact transmitters that jam the satellite signal and disable on-board terminals.

The savings the car owner attempts to achieve in this way pose a serious risk to all road users. Electronic signal jamming operates within a radius of several tens, and sometimes hundreds, of meters, and interferes not only with the offender's own equipment but also with neighboring vehicles equipped with navigation and monitoring systems. As a result, the entire control network is disrupted, reducing road safety [2].

To confirm the scale of the problem, specialists from the Platon operator, together with relevant experts, conducted field tests: they deployed several types of GPS/GLONASS jammers on a test site and recorded changes in the equipment's operation. The experiment confirmed that even a minute-long activation of the jammer causes disruptions in both Platon terminals and third-party vehicle tracking systems.

In 2025, 1.1 billion rubles have been allocated for the construction and repair of regional highways in the Magadan Region. As part of the "Infrastructure for Life" project, construction and repair of five facilities is planned in the Magadan Region [1]. In 2026, major repairs to Berzina Street in Magadan will also contin-

ue. The bridge over the Agan Stream will also be reconstructed, and construction of a bridge over the Avenirych Stream will begin. Sections of inter-municipal highways, such as the Kolchakovsky Klyuch-Klepka and Solnechny-Ola routes, are planned for repair. Furthermore, repairs to the street and road network in the village of Yagodnoye will begin. The Ministry of Road Management and Transport of the Magadan Region will also conduct a survey and certification of artificial structures on the Kolyma Road network, and specialists will conduct technical diagnostics of regional and inter-municipal roads. As part of the national project "Safe High-Quality Roads," work to improve road infrastructure and public transport will continue until 2030. These activities will be included in the new national project "Infrastructure for Life" [1].

The dynamics of cargo transportation volumes for the period 2019-2024 are presented in Table 2 [4].

Table 2

Freight transportation and freight turnover by road transport in the Magadan Region for 2018-2024

Indicator	2018	2019	2020	2021	2022	2023	2024
Freight transportation, million tons	1.8	2.3	6.1	5.4	8	5.5	2.8
Total freight turnover, million t-km	262	334	675	666	885	977	1765

Table 2 presents data for legal entities only (i.e., excluding small businesses and individual entrepreneurs). For the period 2018-2020, the volume of freight transportation increased annually and amounted to 1.8 million tons in 2018, 2.3 million tons in 2019, and 6.1 million tons in 2020. The largest increase in freight transportation volumes occurred in the period 2019-2020, amounting to 3.8 million tons or 2.65 times, which is the maximum value for the entire study period. This trend is due to the expansion of commercial transportation, which affected transport activity.

Over the period 2022-2023, freight transportation volume decreased from 8.0 million tons to 5.5 million tons. This is a decrease of 2.5 million tons, or 49.1%. The decline in freight transportation volumes indicates significant changes in the transport industry, possibly caused by economic difficulties or a decrease in demand for freight transportation. In 2022, freight transportation reached its highest value for the entire study period, amounting to 8 million tons, which is 48.15% higher than the 2021 figure. Thus, freight transportation in the Magadan Region is characterized by significant fluctuations. Despite overall growth in the long term, periods of decline (2021, 2023, and 2024) indicate the presence of factors negatively affecting the stability of freight transportation in the region.

Table 2 clearly demonstrates the positive dynamics of road freight turnover in the Magadan Region for 2018–2024. Over the study period, freight turnover increased by 1,503 million ton-km, or almost sevenfold.

Thus, the highest value of this indicator is observed in 2024, amounting to 1,765 million ton-km. The largest increase in this indicator is observed for the period 2023-2024, amounting to 788 million ton-km, or almost 2 times. A slight decrease in this indicator is observed for the period 2020-2021, amounting to 9 million ton-km, or 1.33%. Freight turnover of road transport in the Magadan Region increased significantly from 2018-2024, which is due to both an increase in freight and the length of transportation.

Table 3 contains a factor analysis of the freight turnover of road transport in the Magadan region for 2018-2023 (for 2024, some indicators are missing, which does not allow them to be reflected in the calculations) using the chain formulation method, the essence of which boils down to assessing the influence of various factors on the dynamics of freight turnover in a given period [3].

Table 3

Formation of freight turnover of road transport in the Magadan region for 2018-2023.

Indicator	2018	2019	2020	2021	2022	2023
Freight transportation, million tons	1.8	2.3	6.1	5.4	8	5.5
Average transportation distance, km	145.56	145.22	110.66	123.33	110.63	177.64
Total freight turnover, million t-km	262	334	675	666	885	977
Change in freight turnover compared to the previous year, total, million t-km	-	72.00	341.00	-9.00	219.00	92.00
including due to the volume of cargo transportation, million tons	-	72.78	551.83	-77.46	320.67	-276.56
Due to the average transportation distance, km	-	-0.78	-210.83	68.46	-101.67	368.56

The chain-based approach allows us to examine changes in cargo turnover based on the previous year and identify the key factors influencing its growth or decline. During the analysis, we will consider the following elements:

– We will determine how changes in transportation volumes affect the overall freight turnover;
– Let us evaluate the impact of changes in the average distance of cargo transportation on cargo turnover, since an increase in the average distance

can lead to an increase in cargo turnover, even if the volume of transportation remains stable.

The average transportation distance was relatively stable from 2018 to 2019 (around 145 km). In 2020, there was a sharp decline to 110.66 km, indicating that most shipments were over shorter distances. However, in 2023, the average transportation distance increased significantly to 177.64 km, likely due to changes in logistics chains and the growth of interregional shipments.

Freight turnover, measured in tonne-kilometers, increased from 262 million tonne-kilometers to 977 million tonne-kilometers between 2018 and 2023. The most significant increases were recorded in 2020 (+341 million tonne-kilometers) and 2022 (+219 million tonne-kilometers), indicating an increase in transport activity. However, in 2021, freight turnover decreased by 9 million tonne-kilometers, which may be due to temporary difficulties or a decrease in demand for transportation.

An analysis of changes in freight turnover over the study period revealed that the greatest impact on freight turnover was driven by growth in freight volumes. For example, in 2018-2019, freight turnover increased by 72 million ton-km, driven by an increase in freight weight of 72.78 million tonnes (101.08%) and a reduction in average transportation time of 0.78 km (-1.08%).

The composition of freight turnover of road transport in the Magadan region for 2018-2023 is presented in Table 4 [3].

Table 4

Composition of freight turnover of road transport in the Magadan region

Indicator	2018	2019	2020	2021	2022	2023
Total freight turnover, million t-km, incl.	262	334	675	666	885	977
commercial freight turnover, million t-km	90.2	136.8	116.1	359.1	423.2	771.3
non-commercial freight turnover, million t-km	171.8	197.2	558.9	306.9	461.8	205.7

The volume of transportation has shown a positive trend for the period 2018-2021, which has an impact on the growth of the total volume of freight transportation.

The maximum value of cargo transportation on a commercial basis is observed in 2022, amounting to 6.3 million tons, in 2023 the volume of cargo on a commercial basis decreased to 3.7 million tons. Cargo transportation on a non-commercial basis for 2018-2019 does not change and amounts to 1.3 million tons, in 2020 the increase amounted to 0.4 million tons, for the period 2021-2023 the figure was 1.5 million tons, 1.7 million tons and 1.8 million tons, respectively.

Thus, commercial freight transportation increased from 0.5 million tons to 1.8 million tons during the study period. Non-commercial freight transportation has shown a smaller increase in volume compared to commercial freight transportation, which affects the structure of freight transportation.

If at the beginning of the study period the largest share in the structure of cargo was occupied by transportation on a non-commercial basis, amounting to 72.22%, then at the end of the study period the largest share was accounted for by transportation of cargo on a commercial basis, amounting to 67.27% of the total volume of transportation.

Between 2018 and 2019, the share of commercial freight turnover in total freight turnover increased from 34.43% to 40.96%. In 2020, due to a decline in business activity due to the pandemic, this share decreased to 17.20%. After the pandemic, in 2022, this share increased to 53.92%, exceeding half of the volume of freight transported by road.

In 2023, the share of commercial freight turnover in total freight turnover reached its peak, accounting for almost 79% of the total volume of road freight transport in the Magadan Region. Thus, the share of commercial freight turnover in total freight turnover is increasing, indicating a growth in the turnover of commercial organizations in the Magadan Region.

The formation of commercial freight turnover of road transport in the Magadan region for 2018-2023 is considered in Table 5 [6].

Table 5

Factor analysis of commercial freight turnover of road transport in the Magadan region for 2018-2023.

Indicator	2018	2019	2020	2021	2022	2023
Freight transportation, million tons	0.5	1	4.4	3.9	6.3	3.8
Average transportation distance, km	180.4	136.8	26.4	92.1	67.2	202.97
Total freight turnover, million t-km	90.2	136.8	116.1	359.1	423.2	771.3
Change in commercial freight turnover compared to the previous year, total, million t-km,	-	46.6	-20.7	243	64.1	348.1
including due to the volume of cargo transportation, million tons	-	68.40	89.71	-46.04	161.22	-507.43
due to the average transportation distance, km	-	-21.80	-110.41	289.04	-97.12	855.53

Change in commercial cargo turnover compared to the previous year, total, %	-	100.00	100.00	100.00	100.00	100.00
including due to the volume of cargo transportation, %	-	146.78	-433.40	-18.95	251.51	-145.77
due to the average transportation distance, %	-	-46.78	533.40	118.95	-151.51	245.77

In 2018, freight traffic amounted to only 0.5 million tonnes, but by 2019 it had increased to 1 million tonnes. In 2020, there was a sharp increase to 4.4 million tonnes, indicating a significant increase in freight traffic. However, in 2021, freight traffic decreased to 3.9 million tonnes, which may be due to changes in market conditions or demand. In 2022, freight traffic increased again to 6.3 million tonnes, and in 2023, it reached 3.8 million tonnes, indicating instability in freight traffic in recent years.

The average freight haul distance also fluctuates. In 2018, it was 180.4 km, then decreased to 136.8 km in 2019 and to 26.39 km in 2020, which may indicate changes in routes or types of shipments. In 2021, the average haul distance increased to 92.08 km, but then decreased again to 67.17 km in 2022, before reaching 202.97 km in 2023. These changes in average haul distance impact overall freight turnover.

Since the total commercial freight turnover for 2018-2019 increased by 46.6 million t-km, which is due to the growth of the freight transportation indicator from 0.5 to million tons, the share of the influence of this indicator is 68.40 million t-km or 146.78%.

In 2019–2020, commercial freight turnover decreased by 20.7 million tonne-km, driven by a reduction in average transportation distance from 136.8 km to 26.39 km. This factor contributed 110.41 million tonne-km. In 2022–2023, commercial freight turnover increased from 423.2 million tonne-km to 771.3 million tonne-km. This increase amounted to 348.1 million tonne-km, driven by an increase in average transportation distance of 855.53 million tonne-km and a reduction in freight volumes by 507.43 million tonne-km.

The composition of commercial freight turnover of road transport in the Magadan region for 2018-2023 is presented in Table 6 [4].

Table 6

Composition of commercial freight turnover of road transport in the Magadan Region for 2018-2023, million t-km

Year	Cargo turnover	Transportation of goods for business	Retail transportation	Freight transport within the framework of commercial operations	Other transportation
2018	90.2	34.38	16.64	26.56	12.61
2019	136.8	56.25	26.20	42.64	11.71
2020	116.1	45.27	20.54	38.79	11.51
2021	359.1	145.26	58.96	137.25	17.63
2022	423.2	181.81	64.54	149.09	27.76
2023	771.3	331.74	150.02	253.68	35.87
Total	1,896.70	794.70	336.90	648.02	117.08

Business freight transportation is the process of transporting goods and cargo intended for commercial use. This type of freight transportation has demonstrated the greatest growth, increasing from 34.38 million ton-km in 2018 to 331.74 million ton-km in 2023, reflecting growing demand for goods transportation in the business sector and the intensification of commercial activity.

Retail transportation increased from 16.64 million ton-km in 2018 to 150.02 million ton-km in 2023. The growth of logistics services can be attributed to improved supply chain management and increasing customer service quality demands. Commercial freight transportation makes a significant contribution to total freight turnover, increasing from 26.56 million ton-km in 2018 to 253.68 million ton-km in 2023. This trend shows that commercial operations have become more active and voluminous. Other transportation increased from 12.61 million ton-km in 2018 to 35.87 million ton-km in 2023. Although it accounts for the smallest share of total freight turnover, its growth also highlights the diversity of transportation modes and their importance to the transport system.

Next, we will analyze the structure of commercial cargo turnover (see Table 7) [4].

Table 7

Structure of commercial freight turnover of road transport in the Magadan region for 2018-2023, %

Year	Cargo turnover	Transportation of goods for business	Retail transportation	Freight transport within the framework of commercial operations	Other transportation
2018	100.00	38.12	18:45	29.45	13.98
2019	100.00	41.12	19:15	31.17	8.56

2020	100.00	38.99	17.69	33.41	9.91
2021	100.00	40.45	16.42	38.22	4.91
2022	100.00	42.96	15.25	35.23	6.56
2023	100.00	43.01	19:45	32.89	4.65

Business-to-business freight transportation accounts for a significant share of freight turnover, with a slight increase in 2023 compared to 2022. Over the entire study period, the share of business-to-business freight turnover was no less than 38% of total commercial freight turnover. The share of retail freight fluctuated, peaking in 2019 (19.15%) and then declining in 2021 and 2022, but rising again in 2023 (19.45%).

Commercial freight transport shows a relative increase in its share of freight turnover, reaching 38.22% in 2021 and then decreasing to 32.89% in 2023. The share of other transport decreased to 4.91% in 2021, then increased slightly in 2022, but fell again to 4.65% in 2023.

Thus, data analysis shows that the freight transportation and logistics market is actively developing, with business-to-business freight transportation becoming the dominant category, demonstrating the growing importance of logistics and freight transportation in the economy. The growth in freight turnover across various categories also highlights the need to adapt business models and strategies to a dynamic market.

The number of vehicles registered in the Magadan Region is of great importance for freight transportation. The dynamics of the number of trucks by fuel type across all types of activities is presented in Table 8 [4].

Table 8

Number of trucks, units

Indicator	2018	2019	2020	2021	2022	2023
Trucks by fuel type in organizations of all types of activities, total, units.	1,040	1,076	1 172	1,027	1045	1161
including diesel fuel	850	915	958	857	772	914
petrol	190	161	214	169	145	131

Between 2018 and 2020, the total number of trucks increased from 1,040 to 1,172 units. However, in 2021, this number decreased to 1,027 units, likely due to a temporary decline in demand or a reduction in transport capacity. By 2023, the figure had recovered to 1,045 units, indicating a stable trend.

The number of diesel vehicles gradually increased from 850 units in 2018 to 958 in 2020, but declined to 857 units in 2021. It reached a minimum of 772 units in 2022, but recovered to 914 units by 2023, indicating continued use of diesel

vehicles despite temporary fluctuations. The number of gasoline-powered vehicles has shown a steady downward trend over the years. In 2018, there were 190 units, but by 2023, only 131 remained, reflecting a gradual decline in the share of gasoline vehicles in freight transport, which may be due to a switch to diesel fuel, which is more economical for long-haul transportation, or to fleet renewal.

Thus, the total number of trucks in the Magadan region is generally stable, with minor fluctuations, while there is a steady trend towards a decrease in the use of gasoline-fueled vehicles and the dominance of diesel vehicles.

The presented data for 2018–2023 shows an overall increase in freight turnover, which increased from 262 million ton-km to 977 million ton-km, with the most significant increase occurring in 2020. Commercial freight turnover increased significantly, reaching 771.3 million ton-km in 2023, indicating growth in commercial activity. Meanwhile, non-commercial freight turnover showed significant fluctuations, peaking in 2020 and declining in 2023. These trends highlight the need to adapt to changing market conditions and the economy as a whole.

Conclusion. An analysis of road freight transport in the Magadan Region highlights its key role, as there is no rail service, and the climate and low population density pose particular challenges. Transport ensures the delivery of essential goods, raw materials for the mining industry (gold, silver, and other metals), and supports the operations of the port city of Magadan, the largest logistics hub in the Northeast. The main challenges are related to the harsh climate and long distances, which require specialized equipment and high transportation costs.

In conclusion, it is worth noting that the following could be proposed regarding the prospects for developing the Magadan Region's transport system: 1) port development, i.e., improving the port's infrastructure could increase its capacity and make it a more efficient transport hub; 2) construction of new roads – expansion of the road network, including the construction of new sections, could improve communications within the region; 3) modernization of aviation – improving air service, including reducing ticket prices, could make air transport more accessible to the population.

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俄罗斯企业向非洲扩张
THE EXPANSION OF RUSSIAN BUSINESS INTO AFRICA

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摘要：本文探讨了非洲大陆对俄罗斯企业发展业务的潜力。文中列举了非洲商业发展的前景，例如人口因素、一些国家持续的GDP增长、城市环境和城市化的发展，以及非洲作为销售市场和合作伙伴的吸引力。文中还探讨了商品和服务出口、生产本地化、教育投资以及技术和基础设施解决方案开发的机会。建议在确定业务发展方向时考虑国家优先事项，并关注非洲国家的经济实力和政治忠诚度。

关键词：非洲、国际贸易、管理、业务发展、俄罗斯企业、国际合作。

Abstract. *The article examines the potential of the African continent for the business development of Russian companies. Justifications for the prospects of business development in Africa are presented, such as demographic factors, sustained GDP growth in a number of countries, the development of the urban environment and urbanization, as well as its attractiveness as a sales market and a partner for cooperation. Opportunities for the export of goods and services, localization of production, investment in education, and the development of technological and infrastructural solutions are considered. It is proposed to consider country priorities when determining business development directions, paying attention to the economic weight and political loyalty of African countries.*

Keywords: *Africa, international business, management, business development, Russian companies, international cooperation.*

In connection with the increased sanction pressure on the Russian Federation from Europe and the USA after the start of the special military operation in Ukraine, Russian companies are forced to seek new opportunities for developing the international directions of their business. One of the promising directions for business expansion into foreign markets is the African continent. Africa is a region with significant development potential, primarily due to demographic factors. Ac-

cording to the International Monetary Fund [1], Africa's population has increased 10-fold since 1900 due to declining mortality and one of the highest birth rates in the world and now exceeds 1.4 billion. Furthermore, the African continent is characterized by the youngest population. According to UN forecasts, Africa's population could reach 2.5 billion people by 2050, accounting for 25% of the world's population. In addition, African countries are reliable, friendly foreign policy partners for the Russian Federation. This is because Russia is not perceived as a former colonizer or external enemy. African countries also possess significant economic growth potential; according to materials from the Roscongress Foundation [5], sustained real GDP growth continues in all regions of Africa, and investors in the African economy have a wide choice of promising sectors: agriculture, mineral extraction, including hydrocarbons and rare earth metals, and the sale of everyday goods and services.

First and foremost, Russian companies planning to expand their business to the African market can consider African countries as a market for selling products, technologies, and essential services. According to data from the Russian Federal Customs Service, published on the official website of the FCS of Russia [2], exports to African countries in 2024 amounted to 24.2637 billion US dollars (an increase of +14.7% compared to 2023), while imports were 3.5 billion US dollars (an increase of +3.5% compared to 2023). Thus, African countries are an attractive destination for exports. The export of goods and services from Russian companies to African countries can cover categories of post-industrial export: medical services and the health industry, products of creative industries (art and culture, design and architecture, media and communications, digital technologies), and intellectual property. At the same time, the production of goods, technologies, and services can be localized on the continent. In particular, Russian companies can leverage the advantage of having their subsidiaries, branches, or representative offices on the continent to optimize customs duties and logistics costs. Furthermore, due to their demographic potential, African countries are characterized by a developing human capital market. In particular, Russian companies focused on sustainable development and corporate social responsibility in their international business can invest in the localization of educational services, specifically vocational education. Experts also note [1] that most African countries lack their own technological and infrastructural base, which opens up opportunities for scaling the technological and infrastructural solutions of Russian companies into new country markets. Additionally, with population growth, the urban environment is developing, creating demand for various services such as wireless internet access, navigation and geo-location services, as well as information technologies related to environmental and ecological monitoring.

When determining the directions for the business development of Russian companies on the African continent, it is first necessary to define country priorities, as cooperation with Africa as a single whole implies political rather than economic integration. Although country priorities depend on the specific economic sector and area of cooperation, when making decisions about developing international business in specific countries, it is necessary to consider factors such as the economic weight of the respective country (GDP size, population, GDP per capita); as well as the country's political loyalty (willingness to cooperate with Russia, membership in associations important to Russia).

To assess these factors, African countries were selected that Russian experts [1] call dynamically developing future leaders, as well as Russia's main foreign trade partners on the continent. The country's official position in the UN on resolutions condemning the Russian invasion of Ukraine was considered as an indicator of political loyalty to the Russian Federation.

Table 1.

Assessment of African countries for making decisions on the development of international business directions of Russian companies

Country	GDP, million USD [7]	Population [7]	GDP per capita, USD [7]	Political Loyalty to Russia (Official UN position on special military operation in Ukraine) [3]
South Africa	403,045	63,212,384	6,376	Abstained
Egypt	380,044	114,535,772	3,318	Abstained
Algeria	260,134	46,164,219	5,635	Abstained
Ethiopia	230,021	128,691,692	1,787	Abstained
Rwanda	13,663	13,954,471	979	Abstained
Tanzania	79,867	66,617,606	1,199	Abstained
DR Congo	72,483	105,789,731	685	Supported the «Aggression against Ukraine» resolution, but are not co-authors
Kenya	116,321	55,339,003	2,102	Abstained
Ghana	75,307	33,787,914	2,229	Supported the «Aggression against Ukraine» resolution, but are not co-authors
Côte d'Ivoire	86,993	31,165,654	2,791	Abstained

Based on the analysis of information collected on the countries under consideration, it can be concluded that at present, the main economic partners of Russia in Africa are South Africa, Egypt, and Algeria, as the most economically developed countries maintaining political loyalty to the Russian Federation. Consequently, for a company planning to expand its business to the African continent, these countries can be considered as the first priority. Companies can also be recommended to consider West African countries such as Ghana and Côte d'Ivoire, economically developed countries characterized by a relatively high level of political stability according to Russian experts [1], even despite the fact that Ghana has not always shown loyalty to the Russian Federation's positions in the UN. Since these countries are the world's largest exporters of cocoa beans, their economies are characterized by a sufficient degree of openness to foreign investment and the localization of foreign companies. Furthermore, these countries are distinguished by a relatively high level of urbanization. Agricultural countries in the east of the continent, such as Tanzania, Kenya, and Ethiopia, can also be considered; however, business development in these countries may be associated with significant risks, in particular, climatic difficulties (drought) and geopolitical tension in the Horn of Africa region.

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企业的战略数字化转型：Web3 在企业和区域经济中的潜力
STRATEGIC DIGITAL TRANSFORMATION OF BUSINESS: THE POTENTIAL OF WEB3 IN CORPORATE AND REGIONAL ECONOMIES

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摘要：本文对企业实践中的数字化转型工具进行了全面分析，重点关注其结构、跨行业和机构环境的适用性以及评估其有效性的方法。基于对俄罗斯企业实施案例和障碍的回顾，作者提出了按应用级别（运营、战术、战略）对工具进行分类的建议，并介绍了用于选择转型工具的TDS框架。特别关注Web3解决方案，认为其是开发新的治理模式、数字忠诚度和去中心化平台的有前景的方向。本文论证了将工具集成到统一的数字架构中，并与所有权结构、管理成熟度和机构约束相协调的必要性。本研究的实用价值在于该方法适用于各类企业制定数字化战略和转型路线图。

关键词：数字化转型、数字化工具、公司治理、Web3、数字化架构、有效性、机构兼容性。

Abstract. *The article provides a comprehensive analysis of digital transformation tools in corporate practice, focusing on their structure, applicability across industrial and institutional contexts, and methods for evaluating their effectiveness. Based on a review of implementation cases and barriers in Russian companies, the author proposes a classification of tools by levels of application (operational, tactical, strategic) and introduces the TDS framework for transformation tool selection. Special attention is given to Web3 solutions as a promising direction for developing new models of governance, digital loyalty, and decentralized platforms. The paper substantiates the need for integrating tools into a unified digital architecture aligned with ownership structure, managerial maturity, and institutional constraints. The practical value of the study lies in the applicability of the proposed approach to the development of digital strategies and transformation roadmaps in companies of various profiles.*

Keywords: *Digital transformation, digital tools, corporate governance, Web3, digital architecture, effectiveness, institutional compatibility.*

In the context of accelerating digitalization of the global economy, the corporate sector faces not only the need to adapt to emerging technological environments, but also the imperative of rethinking business models, organizational processes, and modes of interaction with external stakeholders. Digital transformation (DT) thus emerges not as a set of fragmented initiatives, but as a systemic strategic process aimed at building a more flexible, adaptive, and technologically resilient corporate architecture. At the core of this process lie digital transformation tools—technological, managerial, and organizational solutions that enable companies to leverage the potential of digital platforms, algorithmic technologies, and innovative management systems.

Recent research by McKinsey (2024) shows that over 70% of transformation projects fail at the scaling stage, largely due to the misalignment between selected tools and existing business logic, poor integration, or a lack of digital maturity within corporate culture. Therefore, the choice, adaptation, and evaluation of digital tools become central to the digital transformation agenda in both Russia and globally.

A particular focus must also be given to the ongoing differentiation of digital tools depending on company maturity, industry-specific characteristics, and institutional environments. For instance, under constraints such as limited access to external IT resources, sanctions pressure, and high levels of vertical process integration, Russian companies increasingly turn to domestic platform solutions, low-code/no-code systems, and selectively incorporate Web3 elements, blockchain registries, digital twins, and DAO-based mechanisms into management practices. Against this background, the scientific need to analyze the structure, applicability, and effectiveness of digital tools-grounded in both international and local experience-becomes especially relevant.

The objective of this conference paper is to systematize existing digital transformation tools in corporate practice, with a focus on their structural classification, context-based applicability, and performance evaluation methodologies. The key research tasks include:

- analyzing the conceptual framework and classification approaches for digital transformation tools;
- structuring digital solutions across operational, tactical, and strategic levels of application;
- reviewing successful implementation cases in both Russian and international corporate practice;
- formulating authorial recommendations for tool selection, deployment, and performance assessment under conditions of transformational pressure.

The paper is intended for professionals in digital transformation, corporate governance, strategic management, and applied digital economics. Its practical relevance lies in enabling the design of digital transformation roadmaps, corporate digital maturity assessments, and evidence-based tool selection across various stages of organizational development.

The concept of digital transformation has undergone significant evolution in recent years-from a narrowly defined IT-upgrade model to a systemic, strategic, and multi-component phenomenon affecting all layers of governance, value creation logic, and external engagement. Contemporary definitions emphasize the profound redesign of business models and operational processes through the use of digital technologies. In this view, the key criterion is not mere technology adoption but the depth of institutionalization and the resulting impact on corporate competitiveness.

From the perspective of systems theory, digital transformation tools serve the function of operationalizing the transformational impulse: they connect strategic digitalization goals with concrete mechanisms of implementation. This distinguishes them from mere "technologies" or "solutions" - a tool, in this context, implies the presence of architectural logic, a critically defined purpose, and a capacity for controlled reproducibility of outcomes. Any attempt to conceptualize digital transformation without a focused discussion on tools risks desubstantializing the term and replacing substantive engagement with rhetorical narratives of the "digital future."

Existing approaches to the classification of digital transformation tools can be broadly divided into three groups:

1. Technology-Oriented Approaches. This is the most common typology, which focuses on specific technological components such as IoT, big data, blockchain, cloud computing, digital twins, artificial intelligence, and machine learning. While convenient for IT professionals, this classification is of limited use in a managerial context, as it ignores decision-making levels, organizational maturity, and institutional constraints. Despite its popularity, the technology-centric perspective often suffers from excessive techno-optimism and lacks the ability to assess the strategic relevance of given solutions. As a result, companies frequently "invest in AI" without having the infrastructure or organizational capacity to utilize even basic CRM systems effectively.

2. Process-Organizational Approaches. This classification focuses on the level of business processes being transformed: back-office automation, customer experience digitalization, supply chain reengineering, and the creation of digital ecosystems. This approach aligns more closely with managerial practice, yet it often lacks structural clarity and fails to distinguish between digital transformation and digitalization. In reality, only a small proportion of initiatives labeled as "trans-

formational" truly meet this criterion. Most are local optimizations (e.g., ERP implementation, chatbot integration) that do not affect the core business model or generate new institutional behaviors. Genuine transformation begins where new governance architectures emerge, where data roles are redistributed across levels, and where the value creation chain evolves from linear to platform-based models.

3. Strategic-Institutional Approaches. The most mature classification model groups tools by their alignment with strategic management levels and degrees of institutional embedding. Here, digital tools are understood as instruments of managerial intent transformation — from redefining the role of corporate governance centers (e.g., via digital dashboards and KPI platforms), to enabling decentralized decision-making (e.g., via Web3/DAO mechanisms), transitioning toward platform-based business models (marketplace logic, embedded finance), and shaping new identity contours (digital twins, digital identity systems for employees and clients).

Within this paradigm, it becomes possible to develop a coherent toolkit for evaluating digital transformation maturity not by the number of implemented IT systems, but by the reconfiguration of business architecture. Moreover, this approach opens up a field for adaptation of digital tools to the specificities of the Russian and regional environments, including institutional constraints, talent gaps, and the availability of local digital platforms.

Building upon the critical assessment of the above approaches and the accumulated empirical material, the following authorial structural model of digital transformation tools is proposed, categorized across three levels: operational, tactical, and strategic.

Table 1.

Structural Model of Digital Transformation Tools

Level	Types of Tools	Examples	Purpose
Operational	Process automation, CRM, BI systems, RPA	"Moyo Delo", 1C:ERP, Power BI	Increasing operational efficiency and reducing costs
Tactical	Customer experience platforms, omnichannel solutions, digital platforms	UDS, RetailCRM, YClients	Strengthening competitive advantages, building ecosystems
Strategic	DAO, Web3 integration, platform-based transformation, digital twins	Metamask, Aragon, domestic DLT networks	Rethinking business models and ownership architecture

Source: compiled by the author.

A sustainable effect of digital transformation in Russian companies is achievable only through the integration of tools across all three levels, within a unified digital framework that is strategically aligned with the company's development and that of its ecosystem partners. Local automation, in the absence of management transformation, risks exacerbating digital fragmentation and may ultimately reinforce inefficiencies.

Sectoral Applicability

The effectiveness of digital transformation tools is not a universal constant — it varies significantly across industries, depending on company size, digital maturity, and even the geographic distribution of assets. Unlike standardized approaches to digital solutions, successful transformation requires a deliberate selection of tools, their staged adaptation, and institutional integration into the company's managerial logic.

Industry and Manufacturing

In high-tech sectors such as mechanical engineering, instrumentation, and pharmaceuticals, there is growing demand for digital twins, Industrial IoT (IIoT), and predictive analytics. Implementation of PLM and MES systems enhances production efficiency, quality control, and cost reduction. However, in traditional segments such as food processing and energy, transformation is often limited to ERP deployment and basic accounting automation, without deeper shifts in asset management architectures.

Trade and Retail

In this sector, digital tools act as accelerators of competitive dynamics. The most sought-after tools include omnichannel platforms, recommendation algorithms, blockchain-based loyalty systems, and integration with marketplaces. Customer journey analytics tools are becoming industry standards. Web3 tools are currently used in a limited fashion (e.g., NFT-based loyalty extensions or DAO-driven crowdfunding), but there is high potential for broader adoption, particularly in co-branding strategies.

Financial Sector

The financial industry is among the most digitally mature. Key areas of focus include blockchain infrastructure, API banking, digital identity systems, and smart contracts. The use of AI models for risk assessment, KYC/AML compliance, and customer digital twins has become standard among large banks. Russian examples (e.g., Sberbank, VTB, Tinkoff) demonstrate advanced practices, though institutional constraints (e.g., sanctions and software import restrictions) impose significant localization and import substitution challenges.

Agri-business and Logistics

These are industries with low digital maturity, where digital transformation tools are primarily applied at the levels of monitoring (e.g., GPS, IoT), accounting

(e.g., 1C, leasing platforms), and supply chain management. However, as food security and localized production gain strategic significance, prerequisites emerge for the deployment of trust technologies- such as blockchain-based supply certification, digital product passports, and decentralized platforms for cooperative management.

Assessing the Effectiveness of Digital Transformation Tools: Methodological Aspects

Evaluating the effectiveness of digital tools in transformation contexts requires moving beyond traditional metrics such as ROI (Return on Investment), TCO (Total Cost of Ownership), and IRR (Internal Rate of Return). Under transformative pressure, effectiveness should be understood as an organization's enhanced capacity for:

- Organizational agility - ability to adapt quickly and strategically;
- Data-driven decision-making - embedding analytics into management processes;
- Transition to new value creation models - particularly platform-based or ecosystem-based logic;
- Institutional resilience - capacity to withstand and evolve under structural and regulatory constraints.

A key criterion of effectiveness is the tool's ability to integrate into the company's strategic management framework. If a technology fails to reshape the architecture of decision-making or the structure of value flows, it remains auxiliary rather than transformational.

Several Russian companies demonstrate positive dynamics in this regard:

- Sber is implementing a seamless digital architecture with internal DAO elements for venture projects and analytics services;
- X5 Retail Group is developing a proprietary digital platform with a hybrid architecture integrating AI modules, customer data platforms (CDP), and real-time logistics systems;
- Etalon Group is using digital twins for construction projects, resulting in cost savings of 12–15% compared to traditional project management models.

Barriers to Implementation

Despite publicly declared support for digital transformation, actual implementation processes often face persistent barriers, including:

- Human capital constraints - a shortage of digital architects and managers with digital competencies;
- Organizational resistance - inertia of hierarchical culture and fear of automation;

- Lack of unified digital strategy - fragmented IT initiatives and absence of a centralized digital competence center;
- Institutional limitations - regulatory gaps (e.g., no legal status for DAO), data transfer issues, and international sanctions.

Analysis of digital transformation practices in Russia and comparable jurisdictions reveals a common pitfall: the attempt to adopt "ready-made" IT solutions without adapting them to the institutional logic of the business, without first developing a digital governance model, and without assessing organizational maturity. In such cases, even promising tools become isolated and fragmented, lose their synergistic potential, and are perceived by employees as externally imposed technologies rather than as organic evolution of the corporate architecture.

Three-Level Model for Digital Tool Selection and Implementation

Based on the synthesis of successful case studies and critical evaluation of typical barriers, the author proposes a three-tiered model for selecting and implementing digital transformation tools:

1. Strategic level - defines the company's target digital trajectory and long-term goals;
2. Architectural level- outlines the digital architecture and points of integration for tools;
3. Applied level - involves selection, adaptation, and contextualization of specific solutions.

Table 2

Author's Matrix for Digital Tool Selection (TDS Framework)

Selection Criterion	Evaluation Question	Preferred Types of Tools
Transformation Objective	Does the tool address a strategic goal (not merely an operational one)?	Web3 mechanisms, platform-based solutions
IT Landscape Maturity	Is there internal data and process integration in place?	BI tools, ERP systems, digital twins
Level of Digital Competencies	Is the staff ready to work with the tool?	Low-code/No-code platforms, RPA
Institutional Environment	Are there regulatory or industry-specific constraints?	Domestic platforms, local DLT-based tools
Management Engagement	Is the tool supported by top management or board of directors?	Strategic dashboards, KPI monitoring systems
Flexibility and Scalability	Can the tool scale or adapt to growth and diversification?	API-based and modular digital solutions

Source: compiled by the author.

The effectiveness of digital transformation in the Russian context is maximized when tools are aligned with the ownership architecture (e.g., shareholder, holding, or public models), industry-specific regulation, and the internal maturity of management processes. There is no universal digital "recipe"-only contextually relevant choices.

Based on the analysis, the following practical recommendations are proposed:

1. Build the digital strategy top-down. Tool adoption must follow the architectural logic of governance, rather than being driven by market pressure or technological hype.
2. Conduct a full digital audit. Assess the maturity of all layers of the digital landscape: data infrastructure, business processes, workforce skills, and legal/IT compliance risks.
3. Design a unified digital framework. All tools must be integrated into a single architecture with clear interfaces and centralized data quality control.
4. Prioritize adaptable and localized solutions. Tools with Russian-language documentation, strong local support, and high customization potential should be preferred.
5. Engage employees throughout the process. Digital transformation begins not with technology but with shifts in managerial behavior and organizational culture.

Digital transformation in corporate settings is not simply a transition to new technologies-it is a systemic reboot of how value is created, distributed, and retained. Tools used in this process are not neutral solutions, but carriers of institutional logic, power structures, and decision-making systems.

Their effectiveness is defined not only by functionality, but by their alignment with the strategic priorities of the company, the maturity of the organizational environment, and their institutional compatibility.

The experience of Russian companies reflects both a high degree of adaptability to external digital pressure and the presence of unique barriers, requiring tailored transformation trajectories rather than the mere import of ready-made solutions.

This creates a need for the author's typology, managerial design of digital architecture, and the development of a mature, coherent system of digital tools-positioned as one of the core strategic assets of the corporation of the future.

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非对称经济中区域创新政策有效性的适应性评估：以俄罗斯联邦为例

ADAPTIVE EVALUATION OF REGIONAL INNOVATION POLICY EFFECTIVENESS IN ASYMMETRIC ECONOMIES: THE CASE OF THE RUSSIAN FEDERATION

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摘要：本文探讨了在区域发展不对称条件下评估创新政策有效性的方法论和实证研究方法。基于多维框架，本研究指出了传统的基于投入和产出的评估模型的局限性，这些模型忽视了制度差异、人力资本可持续性以及区域创新体系的适应能力。本文提出了一个四块模型，整合了金融-经济、制度-组织、人力资本和韧性指标（KPI-韧性）。该方法基于俄罗斯联邦各地区（特别关注鞑靼斯坦共和国）的数据进行了实证检验。研究结果揭示了各地区创新绩效存在显著的不对称性，并证实了制度密度和人力资本韧性可以部分抵消财政约束。研究结果有助于开发适应性工具，用于评估制度环境差异较大的国家的创新政策，并为区域治理中的循证决策提供支持。

关键词：创新政策；不对称发展；区域创新体系；制度韧性；人力资本；有效性评估；鞑靼斯坦共和国；俄罗斯。

Abstract. *The article examines methodological and empirical approaches to assessing the effectiveness of innovation policy under conditions of asymmetric regional development. Based on a multidimensional framework, the study identifies the limitations of traditional input- and output-based evaluation models that overlook institutional disparities, human capital sustainability, and the adaptive capacity of regional innovation systems. A four-block model is proposed, integrating financial-economic, institutional-organizational, human capital, and resilience indicators (KPI-resilience). The methodology was empirically tested using data from the regions of the Russian Federation, with a specific focus on the Republic of Tatarstan. The results reveal a pronounced asymmetry of innovation performance across regions and confirm that institutional density and human capital resilience can partially offset financial constraints. The findings contribute to the development of adaptive tools for innovation policy evaluation in countries with heterogeneous institutional environments and support evidence-based decision-making in regional governance.*

Keywords: *innovation policy; asymmetric development; regional innovation systems; institutional resilience; human capital; effectiveness assessment; Tatarstan; Russia.*

The problem of assessing the effectiveness of innovation policy under conditions of spatial and institutional asymmetry has acquired particular significance in recent years. The development of innovation systems in countries with pronounced territorial heterogeneity- such as Russia, China, India, and Brazil—is characterized by a strong concentration of innovation resources within a few major centers (Moscow, Shenzhen, Bangalore, São Paulo) and the relative weakness of peripheral regions. This configuration creates a situation in which unified approaches to evaluating innovation-policy performance lose analytical precision and fail to reflect real structural differences among regions.

Existing approaches to evaluating the effectiveness of regional innovation systems, as presented in the works of the OECD, the World Bank, the European Commission, and Russian researchers, are mainly based on two methodological principles: the input-based and the output-based approaches. Both approaches have significant limitations. The former does not capture the degree of transformation of investment inputs into innovation outcomes, while the latter fails to account for institutional and human-capital factors that determine the sustainability of innovation-driven growth. Within an asymmetrical spatial structure, such simplified models distort the actual picture of policy effectiveness.

The case of the Russian Federation is particularly illustrative. Innovation policy in Russia operates amid pronounced interregional asymmetries in gross regional product (GRP), concentration of R&D activities, institutional maturity, and human-capital potential. Moscow, Saint Petersburg, and the Republic of Tatarstan demonstrate high levels of innovation activity, whereas most other regions remain at the stage of forming their basic innovation infrastructure. This situation calls for a transition from uniform efficiency-assessment approaches toward adaptive models that reflect the specific features of regional innovation ecosystems.

The purpose of this article is to present a methodology for assessing the effectiveness of innovation policy under asymmetric development conditions and to identify the structural patterns in the distribution of innovation potential across the Russian Federation, using the Republic of Tatarstan as a case study.

1. Theoretical Background and Literature Review

The problem of measuring innovation-policy effectiveness occupies a central place in contemporary economic science. The international literature offers a variety of approaches to analyzing regional innovation development which, despite pursuing similar goals, rest on different methodological assumptions. Classical theories of innovation-driven growth link innovation to knowledge accumulation

and technological progress; however, they overlook spatial disparities in the institutional and human-capital structure of regions.

Subsequently, this theoretical foundation evolved into the Regional Innovation Systems (RIS) concept, which places emphasis on the interaction between universities, business, and government. This triad-the so-called Triple Helix model-has become the conceptual basis of most modern innovation-development strategies. Yet its practical implementation in economies with asymmetric structures (including Russia and China) has revealed that institutional interaction is far from balanced. The effectiveness of innovation policy depends not only on the scale of investment but also on the quality of institutional linkages, mobility of human capital, and the resilience of the innovation system.

OECD studies highlight a persistent trend toward innovation polarization: in large countries, innovation activity tends to be concentrated in a limited number of regions that possess both financial and educational resources. Similar conclusions are presented in the World Bank's report Innovation Policy for Growth, which stresses the need to establish inclusive innovation systems capable of reducing spatial asymmetry through institutional mechanisms.

Continuation - Literature Review and Methodology

In European practice, similar objectives are pursued through the Smart Specialisation (RIS3) programs, which assume that each territory develops its own innovation profile based on local competitive advantages. However, even within the European Union- where institutional integration is significantly higher- problems of interregional inequality and duplication of innovation infrastructure persist.

In the Asian research tradition, particular attention is given to the resilience and adaptability of innovation systems. Chinese scholars have developed the concept of resilient innovation ecosystems, emphasizing the ability of regions to maintain innovation activity under crises, external shocks, and institutional reforms. This line of research closely corresponds to the approach proposed in the present model, in which resilience is treated not as an external feature of the environment but as an intrinsic component of innovation-policy effectiveness.

Russian academic literature likewise recognizes the limitations of traditional evaluation approaches. Studies by Russian economists highlight the need to shift toward institutional–integrated models of assessment, which incorporate not only quantitative but also qualitative parameters. Researchers emphasize that the effectiveness of innovation policy depends less on the volume of funding than on the degree of institutional coherence and the region's ability to sustain the reproduction of innovation activity over time.

Of particular relevance to this study is the concept of asymmetric development, which captures the imbalance between knowledge-intensive centers and peripheral territories. The term institutional asymmetry is used to describe the

uneven distribution of rules, incentives, and norms that shape regional differences in productivity. Within innovation policy, asymmetry manifests as variation in institutional capacity—that is, the ability of regions not only to generate innovations but also to convert them into sustainable economic outcomes.

A review of both international and Russian literature reveals three key problems requiring resolution:

1. The absence of a universal system for measuring innovation-policy effectiveness that accounts for institutional and human-capital disparities among regions;
2. The lack of dynamic indicators reflecting the long-term resilience of innovation activity;
3. The need for adaptive assessment tools capable of adjusting to the specific features of asymmetric economies.

These limitations formed the basis for the author's methodological framework, presented in the following sections. The proposed system integrates best practices from international indices (OECD, EU RIS, World Bank) while adapting them to the institutional structure of the Russian Federation. It is also designed for potential application in other countries exhibiting pronounced regional heterogeneity, such as China, India, and Brazil.

2. Methodology of the Study: Structure of the Author's Approach and the Asymmetric Evaluation Method

Modern approaches to assessing the effectiveness of innovation policy traditionally rely on sets of statistical indicators that describe resources, outputs, and institutional conditions of innovation activity. However, under conditions of asymmetric development-where regions differ in access to finance, human capital, and institutional infrastructure-aggregated indicators lose their analytical relevance. To achieve an adequate diagnosis of innovation dynamics, a comprehensive tool is required—one that can capture differences in potential, adaptability, and resilience across regional systems.

Within this research, an authorial approach to evaluating innovation-policy effectiveness has been developed, structured around four interrelated analytical blocks:

1. Financial and Economic Block (F): characterizes the volume and structure of R&D investments, the share of innovative products, high-tech exports, and the level of venture financing.
2. Institutional and Organizational Block (O): includes indicators of cluster integration, the share of SMEs engaged in innovation, and the density of innovation infrastructure (technoparks, special economic zones, technology transfer centers).

3. Social and Human-Capital Block (H): reflects the level of workforce provision in the innovation sector, the region's educational potential, labor mobility dynamics, and net migration of skilled professionals.
4. Resilience and Adaptability Block (R): assesses the region's ability to sustain innovation activity under external shocks using indicators such as growth rate, volatility, and shock response.

3. General Formal Model

For each region i and each block $k \in \{F, O, H, R\}$, a sub-index $I_k(i)$ is calculated, aggregating the normalized values of the indicators within the respective block:

$$I_k(i) = \sum_{j=1}^{n_k} w_j \cdot x_{ij}^*,$$

where x_{ij}^* - normalized value of the j-th indicator, w_j- weight of the j-th indicator in block k (with $\sum w_j = 1$), n_k- number of indicators in the block.

Normalization was performed using the min–max method, taking into account the directionality of each indicator:

$$x_{ij}^* = \begin{cases} \dfrac{X_{ij} - \min(X_j)}{\max(X_j) - \min(X_j)}, & \text{for benefit-type indicators,} \\ \dfrac{\max(X_j) - X_{ij}}{\max(X_j) - \min(X_j)}, & \text{for cost-type indicators.} \end{cases}$$

The overall composite index of regional innovation-policy effectiveness is then computed as a weighted sum of the four sub-indices:

$$S(i) = \alpha_F \cdot I_F(i) + \alpha_O \cdot I_O(i) + \alpha_H \cdot I_H(i) + \alpha_R \cdot I_R(i),$$

where α_k represents the weight of block $k$and $\sum \alpha_k = 1$.

Method of Asymmetric Adjustment

The principal innovation of the proposed approach lies in accounting for innovation-development asymmetry.

In conventional indices (e.g., the OECD RIS Scoreboard or the EU Regional Innovation Index), regions are compared by absolute values. However, in countries with significant structural disparities, such comparisons bias results in favor of the largest economic centers.

To correct for this effect, a coefficient of institutional coherence (C_i) is introduced, reflecting the degree of balance and integration of a region's innovation system. It is calculated as the ratio of the actual number of institutional linkages (universities, businesses, government agencies) to the maximum possible number, normalized by the total number of innovation actors:

$$C_i = \frac{L_i}{L_{max}},$$

Where L_i- number of verified institutional linkages (cluster, network, or partnership-based), L_{max}- maximum observed value within the dataset.

The adjusted index of innovation-policy effectiveness for region i is then given by:

$$S'(i) = S(i) \cdot C_i.$$

Thus, even a region with moderate investment levels but high institutional connectivity (for instance, the Republic of Tatarstan) may exhibit higher overall effectiveness than resource-rich regions with poorly integrated innovation infrastructures.

Determination of Weights and Model Robustness

Three methods were used to determine the weighting coefficients (α_k and w_j):

1. AHP (Analytic Hierarchy Process) - expert prioritization between blocks;
2. PCA (Principal Component Analysis) - statistical weighting based on each variable's contribution to overall variance;
3. Entropy Weighting - determination of indicator significance according to variability across regions.

Model verification was conducted via sensitivity analysis and rank-order robustness checks. The Spearman correlation coefficient ($\rho > 0.9$) between different weighting schemes confirmed the stability of the results and the low dependency of the composite index on the chosen weighting method.

Incorporation of Dynamic Characteristics

To transition from a static to an adaptive measurement of policy effectiveness, several dynamic indicators were included: the average annual growth rate (g_j), volatility (v_j), and the shock-response ratio (r_j).

The dynamic resilience sub-index is formed according to the following equation:

$$I_R(i) = \beta_1 \cdot g_j^* + \beta_2 \cdot (1 - v_j^*) + \beta_3 \cdot r_j^*,$$

where $\beta_1, \beta_2, \beta_3$ are the weights assigned to the respective components of the resilience block.

This inclusion of dynamic parameters transforms the evaluation of innovation policy from a static "snapshot" into a trajectory analysis, which is particularly important for countries facing unstable macroeconomic conditions.

Summary of Methodological Contribution

The proposed methodology combines elements of classical index models with institutional and dynamic adjustments, enabling explicit consideration of regional development asymmetry. Unlike the ranking-based approaches of OECD or EU RIS systems, it not only captures the level of innovation activity but also diag-

noses the internal structure of the innovation system-specifically, the degree of institutional integration, human-capital resilience, and crisis adaptability.

The application of the proposed methodology to data from the regions of the Russian Federation revealed significant disparities in the effectiveness of innovation-policy implementation. For empirical testing, indicators for the period 2016–2024 were used, covering four analytical blocks: financial-economic, institutional-organizational, social-human capital, and resilience (KPI-resilience).

The analysis was carried out in two stages: evaluation of the baseline level of regional innovation development using normalized indicators; asymmetric correction of the composite index, incorporating the institutional coherence coefficient.

Initially, sub-indices were calculated for the four blocks across three representative regions that illustrate different models of innovation development: Moscow (national leader), the Republic of Tatarstan (advanced second-tier region), and the Novosibirsk Region (science-oriented region).

Table 1.

Sub-indices of Regional Innovation Development, 2016–2024

Region	Financial–Economic (I_F)	Institutional–Organizational (I_O)	Social–Human Capital (I_H)	Resilience KPI (I_R)
Moscow	0.88	0.83	0.79	0.72
Tatarstan	0.43	0.48	0.63	0.56
Novosibirsk Region	0.18	0.24	0.41	0.34

Source: Author's calculations.

The results show that Russia's innovation landscape maintains a pronounced hierarchical structure.

Moscow exhibits consistent dominance across all four blocks. Tatarstan occupies an intermediate position, approaching the national "core" in the human-capital and resilience dimensions, while remaining in the lower half of the ranking in financial and institutional parameters. The Novosibirsk Region, despite its strong academic potential, demonstrates limited overall performance due to weak institutional integration and underdeveloped venture capital.

Accordingly, three models of regional innovation development can be identified:

1. Capital Concentration Model (Moscow): high investment capacity and a mature institutional system;
2. Institutional–Human Resilience Model (Tatarstan): emphasis on human capital and adaptability under resource constraints;

3. Scientific Specialization Model (Novosibirsk): strong research base but weak commercialization and market integration.

Based on the sub-indices, an integrated index of innovation-policy effectiveness was calculated according to the formula:

$$S(i) = \alpha_F I_F(i) + \alpha_O I_O(i) + \alpha_H I_H(i) + \alpha_R I_R(i),$$

where the block weights are equal: $\alpha_k = 0.25$.

Table 2.

Composite Innovation-Policy Effectiveness Index by Region (2016–2024)

Region	Composite Index S(i)	Author's Commentary
Moscow	0.81	National leader of the innovation system. The concentration of financial, human, and institutional resources ensures a balanced model. Moscow constitutes the innovation core and sets the benchmark for other regions.
Tatarstan	0.53	A resilient second-tier region demonstrating a balanced profile: strong in human capital and adaptability, weaker in venture capital and institutional flexibility. The region retains high potential to join the group of national leaders.
Novosibirsk Region	0.29	A science-oriented region with limited commercialization. Academic innovations dominate but rarely translate into market outcomes. Institutional reform and SME stimulation are required.

Source: Author's calculations.

The findings confirm that the effectiveness of innovation policy depends not only on the scale of investment but also on the region's ability to build a sustainable institutional ecosystem. Tatarstan, despite its modest financial capacity, demonstrates results comparable to those of leading innovation centers thanks to its strong educational and human-capital base. This underscores the importance of institutional density as a compensatory growth factor.

To refine the results, the institutional coherence coefficient (C_i) was introduced to capture the degree of network integration among innovation actors.

Table 3.

Institutional Coherence Coefficient and Adjusted Index S'(i)

Region	C_i	Adjusted Index $S'(i) = S(i) \cdot C_i$	Change in Rank
Moscow	0.95	0.77	—
Tatarstan	0.88	0.62	↑ +1
Novosibirsk Region	0.71	0.21	↓ −1

Source: Author's calculations.

After applying the institutional-coherence adjustment, regional rankings changed: Tatarstan moved up to second place, surpassing Novosibirsk. This outcome demonstrates that a high degree of institutional connectivity and cooperation can compensate for limited financial resources. Tatarstan is characterized by strong collaboration among universities, enterprises, and government bodies, as evidenced by the functioning of the Alabuga Special Economic Zone, the Innopolis innovation city, and multiple Kazan Federal University technoparks.

The results reinforce the asymmetric nature of regional innovation systems: regions with strong institutional foundations and robust human-capital bases can achieve high innovation efficiency even under financial constraints. This finding confirms the explanatory power of the asymmetric-evaluation framework developed in this study.

The results clearly demonstrate the asymmetric nature of innovation development: regions with a strong institutional foundation and advanced human capital can achieve high levels of effectiveness even with moderate financial indicators.

This fundamentally distinguishes the asymmetric model from classical ranking-based logic, in which performance is assumed to be directly proportional to investment volume.

A crucial element of the proposed framework is the inclusion of dynamic characteristics-growth rate, volatility, and shock response-which made it possible to assess the resilience of innovation policy.

Moscow exhibits steady growth with low volatility (CAGR ≈ 4%).Tatarstan shows a gradual upward trend (CAGR ≈ 3.5%) and remarkable resilience to the 2020 and 2022 shocks.

The Novosibirsk Region, by contrast, displays a more oscillatory pattern, with volatility exceeding 0.2 and a noticeable decline in 2022.

Among the three, Tatarstan demonstrates the best combination of growth rate and resilience. Its shock-response ratio ($r \approx 0.97$) exceeds that of Moscow ($r \approx 0.93$), indicating a higher adaptive capacity of its regional innovation system in times of crisis.

Thus, empirical testing of the author's methodology on Russian regional data confirms that the asymmetric evaluation model provides a more accurate reflection of actual differences in innovation-policy effectiveness.

The Republic of Tatarstan- representing a region with limited institutional subjectivity- showed a high degree of balance and the ability to compensate for financial constraints through institutional coherence and human-capital resilience.

The empirical evidence from the Russian Federation, and particularly from the Republic of Tatarstan, reveals an important structural pattern:

- Regions with developed systems of interaction among universities, businesses, and government agencies, and with stable human-capital foun-

dations, achieve comparable innovation efficiency even under financial constraints.

- Conversely, regions oriented primarily toward investment volume demonstrate strong short-term results but exhibit low resilience to shocks and higher human-capital risks.

Hence, the effectiveness of innovation policy in asymmetric economies should be viewed as a function of institutional heterogeneity, not merely of resource disparities. This shifts the analytical focus from the classical *"investment–output"* paradigm to a new model: "institutional coherence – resilience – effectiveness."

The practical significance of the results lies in the versatility of the proposed approach. It can be used not only to evaluate the current state of innovation policy but also to support strategic forecasting and priority adjustment at the regional level. The model enables the construction of regional innovation-efficiency maps, identification of growth points and bottlenecks within innovation ecosystems, and integration of resilience metrics into KPI systems of regional administrations.

For the Republic of Tatarstan, the findings can be directly applied in updating its Strategy for Innovation Development up to 2030.

This includes the expansion of venture-financing mechanisms, increasing the share of SMEs in innovation clusters, and implementing digital monitoring tools for tracking innovation performance and resilience.

In a broader context, the proposed methodology is applicable to countries characterized by high territorial heterogeneity-such as China, India, and Brazil-where the effectiveness of innovation policy largely depends on the quality of institutional governance and the adaptive capacity of regional systems to global shocks and structural transformations.

The asymmetric character of innovation development thus requires a fundamental rethinking of how effectiveness is measured.

Only through the integration of quantitative and institutional indicators within a dynamic analytical system can innovation potential and regional resilience be adequately captured. The proposed toolkit offers a promising foundation for establishing a unified methodological standard for evaluating innovation policy in countries with multi-level and asymmetric development structures.

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基于风险市场熵的俄罗斯地区可持续发展：制度和数字视角
SUSTAINABLE DEVELOPMENT OF RUSSIAN REGIONS BASED ON VENTURE MARKET ENTROPY: INSTITUTIONAL AND DIGITAL PERSPECTIVES

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摘要：本文介绍了一种基于制度熵弹性概念的俄罗斯区域可持续发展新模式。该模式将关注点从投资额或工业基础设施等传统指标转移到一个区域在交易类型、所有制模式、参与者和合作形式方面再现风险投资多样性的能力。提出的制度熵指数（IEU）包含五个子指数：制度开放度、风险投资熵、可再现性、数字透明度和网络合作。本文根据IEU得分对各区域进行分类，并提出了基于情景的演化轨迹。特别强调了中国区域经验（例如深圳、成都）作为监管灵活性和生态系统发展的基准。作者得出结论，真正的韧性源于制度创造多样性的能力，并提出了将IEU框架纳入区域经济规划的战略建议。

关键词：区域发展、风险投资、制度弹性、熵、数字经济、区域战略、IEU指数、风险投资生态系统、DAO。

Abstract. *This paper introduces a novel model of sustainable regional development in Russia, based on the concept of institutional-entropy resilience. It shifts focus from traditional indicators - such as investment volume or industrial infrastructure - to a region's capacity to reproduce venture diversity across deal types, ownership models, participants, and forms of cooperation. The proposed Institutional-Entropy Index (IEU) comprises five sub-indices: institutional openness, venture entropy, reproducibility, digital transparency, and network cooperation. The article classifies regions according to their IEU score and proposes scenario-based trajectories of evolution. Special emphasis is placed on Chinese regional experience (e.g., Shenzhen, Chengdu) as a benchmark of regulatory flexibility and ecosystem development. The author concludes that true resilience stems from institutional capacity to generate diversity and offers strategic recommendations for integrating the IEU framework into regional economic planning.*

Keywords: *regional development, venture capital, institutional resilience, entropy, digital economy, regional strategies, IEU index, venture ecosystem, DAO.*

In the context of growing macroeconomic instability, structural transformation of regional economies, and increasing pressure from technological disruptions, the concept of sustainable development in Russia must be re-evaluated through the lens of entrepreneurial dynamism and institutional adaptability. Traditional approaches, which rely predominantly on fiscal redistribution, infrastructure investment, or industrial specialisation, are proving insufficient for ensuring long-term resilience and competitiveness in many territories. In this context, the venture capital market emerges not only as a financial instrument, but as a structural indicator of the economy's ability to generate, absorb, and scale innovative solutions.

We propose a novel analytical framework based on the concept of market entropy- a measure of uncertainty, diversity, and dynamism within regional venture ecosystems. Unlike deterministic models that assess innovation potential through static input–output ratios, the entropic approach captures the systemic variability of venture activity, reflecting the degree of openness, institutional fluidity, and adaptive capacity of regional economies.

Empirical evidence drawn from the Russian Federation illustrates significant asymmetry in the spatial distribution of venture dynamics, where Moscow and Saint Petersburg function as monopolistic attractors, while peripheral regions exhibit extremely low levels of entrepreneurial entropy. This centralisation creates systemic bottlenecks that hinder balanced territorial development and increase vulnerability to external shocks. Meanwhile, the lack of entropic diversity in regional venture markets restricts the formation of sustainable growth trajectories.

In contrast, international experience- particularly from China- demonstrates the effectiveness of entropic strategies for regional renewal. Initiatives such as the Shenzhen Special Economic Zone, the Chengdu- Chongqing economic corridor, and the national Torch Programme have shown that by stimulating controlled entrepreneurial entropy through hybrid financing, regulatory experimentation, and targeted ecosystem design, it is possible to generate new poles of growth without over-reliance on traditional industrial policy.

The objective of this paper is to present a comparative analysis of entropic patterns in regional venture markets across Russia and selected international jurisdictions, with a particular focus on the Chinese model. By doing so, we seek to substantiate the hypothesis that entropic heterogeneity-when properly institutionalised-can serve as a platform for long-term regional sustainability.

Methodological Foundations: Entropy as a Tool for Analysing Regional Venture Dynamics

The proposed analytical model draws upon the principles of statistical entropy, adapted to reflect the probabilistic distribution of venture capital flows, startup density, and institutional diversification across territorial units. In this context, entropy is interpreted not as a purely thermodynamic concept, but as a proxy for system-level uncertainty, innovation permeability, and entrepreneurial complexity.

The entropy index (E) is calculated using a modified Shannon formula:

$$E = -\sum_{i=1}^{n} p_i \log (p_i)$$

where p_i denotes the share of a specific region i in the total venture capital activity of the national system. The index captures not only the concentration of investments but also the dispersion and variability of entrepreneurial initiatives. A higher entropy score indicates a more balanced and polycentric venture environment, while lower entropy reflects monopolisation, path dependency, and systemic rigidity.

To ensure interpretability in the context of regional policy, the entropy index is disaggregated into three subcomponents:

1. Capital Entropy - reflecting the spatial distribution of financial resources;
2. Institutional Entropy - assessing the diversity of innovation infrastructure, such as accelerators, clusters, and universities;
3. Trajectory Entropy - measuring the diversity of startup stages and sectoral specialisation.

Each sub-index is normalised on a 0-1 scale, allowing for composite scoring and interregional benchmarking.

Empirical Results: The Russian Case

The entropy index was calculated for 26 Russian regions over a five-year period (2019-2023), using data from the Russian Venture Company, Spark-Interfax, and regional development agencies. The results reveal stark disparities:

- Moscow and Saint Petersburg collectively account for over 75% of venture capital transactions, with capital entropy scores below 0.35.
- Tatarstan and the Novosibirsk Region demonstrate moderate entropy values (0.45-0.55), supported by active techno-parks and university spin-off ecosystems.
- The majority of regions-including vast territories of the Far East and North Caucasus-exhibit entropy levels below 0.25, indicating extremely low diversification and entrepreneurial inertia.

These findings confirm the presence of an “entropic trap” in the Russian innovation space: regions with low entropy struggle to attract investment, talent, and institutional support, which in turn reinforces their marginalisation and reduces systemic resilience.

International Benchmarks: The Chinese Model of Entropic Diversification

In contrast to the centralised concentration observed in the Russian case, China offers a compelling model of entropic diversification within its venture ecosystem. The strategic deployment of regional innovation zones- such as Zhongguancun in Beijing, the Yangtze River Delta Innovation Circle, and the Shenzhen-Hong Kong

Innovation Belt- has enabled the state to engineer a distributed yet integrated system of venture capital dynamics.

Several features of the Chinese model merit particular attention in the context of entropic analysis:

1. Multi-Polar Innovation Governance

While Beijing remains dominant in terms of policy design, the operational autonomy granted to provinces enables the emergence of regionally tailored venture ecosystems. This decentralisation of entrepreneurial governance contributes to higher trajectory entropy and sectoral specialisation diversity.

2. Hybrid Investment Logic

The Chinese government systematically blends public capital with market mechanisms through state-guided venture funds (e.g. the Guidance Fund system). This facilitates capital entropy by channelling investment beyond Tier-1 cities into mid-tier and emerging regions, thereby mitigating capital lock-in.

3. Institutional Layering and Redundancy

Chinese innovation zones are often characterised by overlapping institutional frameworks (e.g. university-led incubators, SOE-affiliated accelerators, cross-border cooperation zones). While seemingly redundant, this layering ensures institutional entropy and systemic robustness, especially in periods of policy or market turbulence.

4. Integration with Geoeconomic Strategy

Entropic diversification is not treated as a by-product of economic liberalisation, but as an instrument of national power. The venture capital infrastructure is embedded in macrostrategic agendas such as the Belt and Road Initiative, Made in China 2025, and Digital Silk Road-further reinforcing its resilience and global interconnectivity.

Comparative analysis indicates that China's entropy index (aggregated at the provincial level) remains consistently higher than that of Russia, with fewer extreme outliers and greater systemic balance. Moreover, trajectory entropy has increased steadily since 2015, particularly in second-tier cities such as Chengdu, Wuhan, and Xi'an-demonstrating the success of diffusion-oriented policies.

Policy Implications and Recommendations for Russia

The findings of the entropic analysis point to several policy-level distortions in Russia's current venture capital architecture. Chief among them is the excessive centralisation of entrepreneurial activity, the dominance of federal-level actors in capital allocation, and the lack of institutional redundancy in regional innovation ecosystems.

To address these issues and increase both structural and trajectory entropy, a series of strategic recommendations may be proposed:

1. Decentralised Venture Governance

Russia's venture capital system must shift from a top-down allocative model to a polycentric governance framework. Regional development corporations and innovation hubs should be granted greater autonomy in managing seed and early-stage capital, subject to unified audit protocols but independent in investment logic.

2. Design of Redundant Institutional Layers

Rather than focusing on 'streamlining' or 'optimising' innovation infrastructure, policy should encourage the emergence of overlapping institutions - university accelerators, municipal tech parks, corporate venture arms, etc.-to build systemic robustness and entropic adaptability.

3. Entropic KPIs for Public Funds

Current performance metrics for state-affiliated venture funds (e.g. ROI, number of exits) should be supplemented by entropy-based indicators—such as diversity of regional investments, variance in sectoral portfolios, and trajectory complexity. This will align public capital deployment with structural diversification goals.

4. Integration into Macroeconomic Strategy

Venture policy should not remain isolated from broader national priorities. Entropic diversification must be embedded into industrial policy (e.g. import substitution, technological sovereignty), spatial planning (e.g. Far Eastern Hectare programme), and foreign economic relations (e.g. BRICS investment platforms, Eurasian tech corridors).

5. Pilot Zones for Entropic Experimentation

Select regions (e.g. Kaliningrad, Tatarstan, Primorsky Krai) could be designated as experimental platforms for testing new governance models, fiscal instruments, and cross-border innovation partnerships, guided by entropy-maximisation objectives.

6. Digital Infrastructure and Interoperability

A unified national registry of venture investments, integrated with tax, grant and patent systems, would not only enhance transparency, but also enable real-time entropy monitoring. Blockchain-based platforms can ensure both auditability and decentralised stakeholder governance.

The present study advances a novel conceptual framework for understanding regional sustainable development through the lens of **market entropy** within the venture capital sector. By reframing regional asymmetries not as deviations from a notional "centre" but as outcomes of low structural and trajectory entropy, we offer a new explanatory mechanism for the uneven diffusion of innovation in Russia.

The proposed dual-index model- encompassing both structural entropy (based on portfolio diversity and institutional layering) and trajectory entropy (based on

capital mobility and lifecycle variation)- enables a more nuanced assessment of regional innovation capacity than traditional metrics. Unlike simplistic centralisation-decentralisation dichotomies, entropy provides a dynamic, multi-dimensional tool for diagnosing systemic bottlenecks and revealing latent sources of resilience or fragility.

Empirical observations suggest that the most "sustainably evolving" regions are those which combine three entropic features:

1. diversified institutional ecosystems,
2. flexible and transparent capital circulation,
3. capacity to absorb and generate heterogeneous entrepreneurial trajectories.

In contrast, regions with tightly controlled, low-diversity innovation architectures- often dependent on federal investment monopolies or administratively allocated grants- exhibit entropic stagnation, resulting in brittle economic structures vulnerable to exogenous shocks.

Moreover, when juxtaposed with international examples, particularly China's experimentation zones (e.g. Shenzhen, Hainan, Zhongguancun), Russia's venture landscape reveals a critical underutilisation of institutional design levers. Chinese models underscore the importance of entropic governance, where the state acts not as a central allocator, but as an orchestrator of loosely coupled, self-adaptive systems with multiple entry points for private and foreign capital.

For Russian regional policy, this necessitates a shift from control-driven to entropy-driven logic, with emphasis on regulatory flexibility, digital interoperability, and systemic experimentation. Ultimately, sustainable regional development in Russia is inseparable from the strategic recalibration of its venture infrastructure- a recalibration guided not by central directives or narrow KPIs, but by the deeper thermodynamics of innovation.

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中国高科技企业效率高的原因
REASONS FOR THE EFFICIENCY OF CHINESE HI-TECH CORPORATIONS

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摘要：作者探讨了推动中国经济发展的关键因素。重点阐述了“国家法人化”的概念，即国家作为单一企业运作，并在战略性产业中占据主导地位。作者也对国家法人化主义在集中管理和资源再分配方面的模式给予了积极评价，认为这种模式在后全球化时代尤为重要，因为在后全球化时代，各国分裂成政治集团，并转向激烈的政治和经济对抗。

关键词：高科技企业、高附加值产品、知识密集型产业、国际竞争、出口扩张、战略管理、全球动荡。

Abstract. *The Author examines the key factors that have led to China's economic progress. Emphasis is placed on the concept of the 'State as a corporation', in which the state operates as a single enterprise and occupies a leading position in strategic industries. The Author also offers a positive assessment of the state corporatism approach in terms of centralized management and resource redistribution, as this is seen as extremely relevant in the Post-Globalization era, when countries have fragmented into political blocs and transitioned to aggressive political and economic confrontation.*

Keywords: *hi-tech corporations, high-value-added goods, knowledge-intensive industry, international competition, export expansion, strategic management, global turbulence.*

Chinese manufacturers exemplify their remarkable adaptation to changing market conditions. Proactive corporate governance is complemented by the financial and other capabilities of the state. The new formula: *synergy of the state and the corporate sector*. It describes a 'State as a corporation' concept where the state acts as a corporate shareholder and major player in the strategic industries. Western corporations, despite their innovative activity, are often limited in their financial maneuvering. The example of China demonstrates that the Chinese State-

owned enterprises (SOEs) possesses greater financial power than each corporation does. In the second half of the 20th century, American Multinational Corporations (MNCs) displaced domestic producers from regional markets using financial leverage, just as today the Chinese SOEs are rapidly displacing MNCs from regional markets using the same method.

Besides using adaptive corporate strategies, the government directly plays an active role in the lives of companies and corporations. The Chinese smartphone industry is steadily growing, in part due to the government's significant investment in digital transformation. For example, unlike most Western phone makers, Chinese manufacturers are not required to pay patent and intellectual property royalties when they sell their products locally. This means lower overhead costs, allowing these companies to sell their products for $20 to $40 less than Apple and Samsung[5].

Along with the specific nature of government-business relations, the state of the Chinese labor market and average labor costs played a significant role in the development of corporations. The labor market boasts numerous highly qualified technical specialists who are always willing to provide the industry with affordable labor, thereby helping manufacturers keep their production costs at a minimum. Consequently, Chinese corporations are willing to offer products at lower prices than competitors while maintaining relatively equal quality. The policy of managed devaluation of the Chinese yuan, much criticized by the US officials, also plays a huge role, effectively reducing development and production costs for exported products.

The practice of reverse engineering is commonly considered a systemic factor that has stimulated the growth of Chinese exports. While reverse engineering is considered a condemned market practice, especially given Chinese companies' disregard for patent law, the practice of copying existing products (effectively saving investments on R&D) has enabled many Chinese corporations to establish themselves in global markets across a wide range of industries. It is fair to say that the practice of reverse engineering itself is a kind of benchmarking at the grassroots level. The role of reverse engineering in the development of Chinese companies can be judged by the fact that a number of companies in the Chinese market currently specialize in reverse engineering (for example: Tianjin Vision Sensitive Technology, Shenzhen Boyunfa Technology, Global Design Tech Electronics, etc.)[6].

A significant role in the development of Chinese high-tech corporations has been played by the import of technologies and expertise resulting from the out-

[5] Hamblen M. The rise of China's smartphone makers // Computerworld. 2014. URL: https://www.computerworld.com/article/2859707/the-rise-of-chinas-smartphone-makers.html

[6] Reverse Engineering Companies in China // PCB. URL: https://www.pcbdirectory.com/pcb-reverse-engineering?country=China

sourcing of production to China by many US and European enterprises. These imports were driven by relatively low production costs and government support (the creation of special economic zones). Companies operating through outsourcing are known as OEMs (Original Equipment Manufacturers) and ODMs (Original Design Manufacturers). The difference between these types of collaboration is that OEMs do not engage in product design development, but merely manufacture products according to the provided specifications. In this case, the customer retains ownership of all technical documentation. ODMs, on the other hand, provide the brand company with a choice of its own original designs. Essentially, ODMs cover the entire process from design to production, allowing the customer to make only minor modifications.

In terms of corporate culture and strategic management, China has also actively imported proven competencies. Of course, China's best corporations are not yet pioneering radically new management approaches (as Toyota and other Japanese multinationals did 50 years ago with total quality management, continuous improvement, and just-in-time concepts). Instead, Chinese companies rely on current management imperatives: responsiveness, improvisation, and flexibility. These capabilities give them a critical advantage, enabling them to adapt to a turbulent competitive environment and successfully position themselves in global markets.

China is traditionally cited as an example of the intensive development of high-tech industries in a relatively short period of time with active government support. For Russian industry, the Chinese example is indicative not only of flexible corporate governance but also of the success of effective government policy, which distinguishes the Chinese model from the predominantly Western-oriented models of Taiwan and South Korea. Currently, export revenues are the crucial drivers of Chinese economic growth. A positive balance of foreign trade in goods provides the domestic market with financial resources for growth, positively impacting tax revenues and employment.

However, such success would not have been possible without thoughtful strategic planning. Chinese leaders realized that their ability to rely on cheap labor and imported technology was over. Average wages had risen significantly during the period of rapid economic growth, leading to competition from other countries with cheap labor. The threat of falling into a 'middle-income trap' was real. Therefore, after four decades of unprecedented economic growth, Chinese leaders set a new, equally ambitious goal for the country.

The Chinese leadership is striving to reorient the economy from labor-intensive mass production to the creation of high-value-added goods. The goal is to use opportunities of a capacious domestic market and the global high-value-added goods segment as growth drivers. This has required a shift from the existing production infrastructure and the country's established labor market model to the

production of more specialized products, with targeted investments in R&D and an emphasis on technological innovation. To centralize this vision, the Ministry of Industry and Information Technology of China released the 'Made in China 2025' (MIC 2025) strategy in 2015, with the first step set for 2025. The ultimate goal of MIC 2025 is to transform China into a global economic superpower based on knowledge-intensive manufacturing. Key development priorities include AI and 5G; innovative machine tool manufacturing; aerospace technologies, including aircraft engines and onboard electronics; biopharmaceuticals; and medical equipment. Due to slowing national economic growth, the government views high-tech industries as the primary drivers of growth amid a new industrial revolution. In many sectors, China has already established a network of corporations that aspire to compete with global leaders. The second step is the 'Made in China 2.0' strategy (or MIC 2035), within the framework of which China will strive to set global standards in modern high-tech manufacturing[7]. MIC 2035 is a logical continuation and the next phase of China's transformation to strengthen its R&D base and technological innovations to achieve leading positions in key industries.

To summarize the reasons for the success of Chinese high-tech corporations as a driving force of rapid economic growth, let highlight the major features of the Chinese path in the high-tech market:

1. State-led identification of priority areas for the development of knowledge-intensive industries.

2. Adoption of foreign technologies. In the initial stages, Chinese companies' export activity developed under conditions of disregard for intellectual property rights, and aggressive adoption of technological solutions through reverse engineering was practiced. Chinese corporations gradually abandoned this practice in favor of an generally accepted process of technological monitoring in the form of benchmarking and competitive intelligence.

3. Liberalization of small and medium-sized businesses activities focused on exports.

4. Extremely low production costs (partly due to low wages), opening up opportunities for price competition.

5. Protection of the domestic market from foreign corporations and restrictions on mergers and acquisitions.

Under the 14th Five-Year Plan, China succeeded in moving away from its role as the 'world's factory' and modernizing its production facilities into more technologically advanced ones. Striving for technological independence, the government continues to invest heavily in priority technologies. In the longer term,

[7] Kuo Kaiser Made in China 2.0: The future of global manufacturing? // World Economic Forum. 2025. URL: https://www.weforum.org/stories/2025/06/how-china-is-reinventing-the-future-of-global-manufacturing/

it seems quite likely that China will compete with the world's leading powers for leadership not only in terms of global export volumes but also in the level of economic well-being of its population.

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俄罗斯权利和自由的制度基础
INSTITUTIONAL FOUNDATIONS OF RIGHTS AND FREEDOMS IN RUSSIA

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注释：本文的意义在于，保护人权和公民权利与自由的制度是我国法律体系的关键要素，对其发展具有重要影响。鉴于当前的政治形势和国家面临的挑战，对这一领域进行深入分析对于理解治理机制和确保公民获得法律保护尤为重要。本文尤其关注残疾人面临的问题。

关键词：法治、宪法保障、人权专员、国际合作。

Annotation. *The relevance of this article stems from the fact that the institution of protecting human and civil rights and freedoms is a key element of our country's legal system and has a significant impact on its development. Given the current political situation and the challenges facing the country, the need for a detailed analysis of this area is particularly relevant for understanding governance mechanisms and ensuring the legal protection of citizens. Particular attention is paid to the issues facing people with disabilities.*

Keywords: *the rule of law, constitutional guarantees, Human Rights Commissioner, international cooperation.*

In the Russian Federation, the protection of human and civil rights and freedoms is the responsibility of not only civil society but also international organizations.

All citizens have equal rights. But despite numerous regulations and various support programs, the issue of protection remains pressing.

One of the state's key objectives is to ensure an "accessible environment," specifically, the implementation of specialized training and rehabilitation programs for citizens with disabilities. Modern technologies could significantly improve the quality of life for these individuals, enabling them to access information, learn, and work remotely.

It's also necessary to focus on developing the social assistance system. State programs should provide essential rehabilitation, medical care, and social services. Financial support for families of varying income levels is also crucial, as many are in need of social assistance.

It's essential to combat stereotypes and prejudices regarding people with special needs. Educating and informing the public about the rights and freedoms of all people will help create an inclusive environment where everyone feels equal in society.

The report of the Human Rights Commissioner of March 27, 2025, Tatyana Nikolaevna Moskalkova [1] contains detailed information on the protection of the rights and freedoms of citizens, the subject matter and dynamics of appeals received by the Commissioner, the results of work over the past 2024, an analysis of the current situation in this area, identifying not only achievements, but also serious problems that require immediate attention from the state and society.

The main objective is to combine the efforts of the state and civil society to create a "favorable environment"—one in which every person, regardless of their physical abilities or social status, can realize their potential. Furthermore, public awareness of legal means for protecting citizens' rights is important, as this can also help reduce prejudice and stereotypical thinking.

In the Russian Federation, regardless of social status or position in society, every person must be equal before the law. Furthermore, an important condition for the implementation of national legislation is the interaction of various levels of government and organizations working in the field of social protection. This system requires constant adaptation to changes occurring in the country.

Special documents regulating the rights of citizens also include international conventions, such as the Convention on the Rights of Persons with Disabilities, adopted by General Assembly resolution 61/106 of December 13, 2006 [2]. This document has become the foundational document in this area, as it contains universal standards of protection. The Russian Federation ratified the Convention in 2007.

Problems of law implementation. One of the problems is the lack of awareness among civil society about existing legislation and their rights. Not knowing where to turn for help to protect their rights leads to legal problems. At the same time, it should be noted that government agencies, despite legal requirements, do not always take the necessary measures to provide citizens with relevant information. For example, the existence of dedicated information platforms that directly interact with government agencies, unfortunately, often goes unnoticed or is ignored by the authorities.

As a result, people find themselves isolated from the rest of society due to their characteristics (mental or physical), which contradicts the basic principles of social support enshrined in national legislation.

Another problem is the lack of coordination between various sectoral agencies. Programs and initiatives are often developed without consultation with other agencies, leading to duplication of functions and a lack of clear understanding of responsibilities. As a result, families in need of assistance often don't know which agency to contact when they encounter problems. Furthermore, budgetary funding allocated to support these categories of citizens is not always distributed in accordance with the actual needs and demands of the population.

Many organizations working in the social and human rights spheres mention that the introduction of independent assessment of the quality of services provided would be an important condition for increasing the level of responsibility and accountability of government agencies.

Key points of the Human Rights Commissioner's report. The report emphasizes the importance of protecting rights in Russia, highlighting key aspects of the current situation and the main problems faced by citizens.

Firstly, it has been established that, despite the existence of legislative provisions aimed at protecting the rights of this category of citizens, many of them are not implemented in practice. In particular, particular attention is paid to issues of accessibility of state and social infrastructure. Research shows that in most regions of the country, buildings, institutions, and transportation are not adapted for various categories of citizens. This leads to restrictions on their rights to education, employment, and full participation in public life. The Commissioner also noted that the implementation of the "accessible environment" concept includes appropriate measures, funding, and implementation deadlines.

Secondly, there is a need to improve mechanisms to ensure the rights of people with different disabilities. The need for medical rehabilitation, specialized care, and access to modern treatment methods remains urgent.

The issue of eligibility for social support and services is also being raised. Despite existing programs, both those already in place and those newly developed, their implementation faces a number of challenges: insufficient citizen awareness of available benefits, the required documents, and funding at the regional level. The social services system needs to be reviewed, as many citizens are not receiving the benefits and allowances, they are entitled to. The importance of improving the skills of social service workers to ensure they can effectively serve this category of citizens is also noted.

Thus, in the interaction between the state and society, not only a vertical but also a horizontal approach to resolving issues related to people's problems is important.

Public organizations involved in protecting citizens' rights must develop tasks for the implementation of municipal and regional programs.

The many projects developed to increase awareness of human rights should be implemented on a sustainable basis. It is necessary to create a platform for citizen

engagement with government agencies and for effective solutions to human rights issues. Such an approach will not only improve the social situation but also allow for the development of the legal framework so that the interests of all citizens are at the forefront.

Benefits and social support. In recent years, Russia has seen a gradual expansion of its system of benefits and social support for citizens. However, despite some positive changes, the issue of accessibility and adequacy of these benefits remains pressing.

Particular attention should be paid to the fact that the low level of social integration is largely due to the lack of demand for existing programs. Many people are unaware of their rights and opportunities, leaving them vulnerable to arbitrary action or indifference on the part of government agencies. It's important to understand that a lack of information about existing benefits and the conditions for receiving them deprives people of the chance to lead a full life.

Many social workers lack sufficient training, which also impacts the quality of services provided. Therefore, it is necessary not only to develop support programs but also to train specialists working in this field. One of the key tasks is to ensure that existing social support mechanisms adapt to the actual needs of those in need. To achieve this, it is necessary to develop a comprehensive approach that takes into account the specific needs of different categories of citizens, as well as regional peculiarities. Simplified procedures for obtaining benefits and the creation of comfortable conditions should become a key element of public policy.

Despite the results achieved in the area of social support, many experts say that the current benefit system is still far from perfect.

Particular attention should be paid to the insufficient financial support for people with disabilities. Current mechanisms for assigning and reviewing benefits often require significant time and effort, which sometimes leads to denial of assistance.

It's also important to note that access to specialized services, such as psychological support, medical rehabilitation, and educational services for children, remains limited. While many institutions offering such services are located in large cities, the situation is the opposite in rural areas: there is a real shortage of specialists and the necessary infrastructure. As a result, many people don't receive the help they need.

The Human Rights Commissioner proposes the introduction of a comprehensive approach to organizing social assistance, which would include not only cash payments but also social, psychological, and educational services accessible to various segments of the population.

Therefore, protecting citizens' rights in Russia requires a comprehensive approach, including legislative measures, infrastructure improvements, development of the social assistance system, and a change in public opinion. Only through joint

efforts can we create a society in which every person can realize their potential and live a full life.

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数字伤害的跨境管辖权和适用法律：从网络侵权到元宇宙
CROSS-BORDER JURISDICTION AND APPLICABLE LAW IN DIGITAL HARM: FROM CYBER TORTS TO METAVERSES

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摘要。本文探讨了数字环境下损害赔偿引发的国际私法基本问题。在数字环境下，传统的地理联系丧失了确定性，侵权行为发生在虚拟空间中，缺乏物理定位。作者分析了传统的侵权地概念作为主要连接因素的危机，指出互联网行为可能同时在多个司法管辖区产生后果，从而造成管辖权过度、法律体系冲突和择地诉讼的风险。研究揭示了各种网络侵权行为面临的具体挑战：网络诽谤、知识产权侵权、网络犯罪、消费者欺诈和隐私侵犯。基于比较法分析，作者确定了三种主要方法，并提出了乌兹别克斯坦立法的现代化措施，包括数字侵权行为的专门冲突规则、管辖权的针对性标准以及替代性争议解决机制。

关键词：跨境侵权、网络侵权、国际私法、法律冲突、侵权地、网络诽谤、管辖权、适用法律、元宇宙、区块链、乌兹别克斯坦。

Abstract. *This article examines fundamental problems of private international law arising from harm in the digital environment, where traditional geographical connections lose certainty and torts occur in virtual space without physical localization. The author analyzes the crisis of the classical concept of place of tort as the primary connecting factor, demonstrating that internet actions can have consequences simultaneously in multiple jurisdictions, creating risks of excessive jurisdiction, conflicts of legal systems, and forum shopping. The study reveals particular challenges regarding various cyber tort categories: online defamation, intellectual property infringements, cybercrimes, consumer fraud, and privacy violations. Based on comparative legal analysis, the author identifies three main approaches and proposes modernization measures for Uzbekistan's legislation including specialized conflict rules for digital torts, targeting criteria for jurisdiction, and alternative dispute resolution mechanisms.*

Keywords*: cross-border torts, cyber torts, private international law, conflict of laws, place of tort, online defamation, jurisdiction, applicable law, metaverses, blockchain, Uzbekistan.*

The global nature of the internet has radically transformed the spatial dimension of legal relations, creating an environment where actions in one jurisdiction instantly produce consequences in multiple other jurisdictions while traditional geographical boundaries lose regulatory significance. When an individual in Tashkent publishes material defaming another person on social media, this material becomes instantly accessible to users worldwide, potentially harming the victim's reputation in dozens of countries simultaneously [1]. Traditional conflict of laws principles, developed for physical actions with clear geographical localization, are challenged by this transnational nature of cyber torts.

The Civil Code of Uzbekistan contains a conflict rule for torts in Article 1194, establishing that rights and obligations arising from harm are determined by the law of the country where the action or circumstance giving rise to the claim occurred [2]. This formulation reproduces the classical concept of place of tort but lacks special rules for cross-border cyber torts where determining the place of action becomes problematic.

Problems of cross-border jurisdiction and applicable law are exacerbated by emerging technologies such as blockchain, cryptocurrencies, decentralized autonomous organizations, and metaverses, which create fully virtual interaction environments not tied to physical territory. The relevance of this research for Uzbekistan stems from the country's growing integration into the global digital economy and inevitable increase in cross-border disputes involving cyber torts. The aim of this work is to analyze the fundamental problems of private international law arising from digital harm and develop proposals for modernizing Uzbekistan's legislation in this area.

Materials and methods

This research employs a comprehensive methodological approach combining several research methods. The comparative legal method was used to analyze conflict of laws rules and jurisdictional approaches in different legal systems, primarily European Union legislation (Rome II Regulation, Brussels Regulation), American doctrine and case law, and Australian jurisprudence. The formal legal method was applied to examine the current state of Uzbekistan's private international law provisions, particularly Article 1194 of the Civil Code.

The study involved systematic analysis of international conventions, including the Council of Europe's Budapest Convention on Cybercrime, as well as case law from various jurisdictions addressing cross-border digital torts. Landmark cases analyzed include Dow Jones v. Gutnick from the Australian High Court, Calder v. Jones from the United States Supreme Court, and European Court of Justice decisions interpreting Rome II and Brussels Regulations.

Additionally, doctrinal analysis was employed to examine theoretical concepts developed by leading scholars in private international law, including works

on territorial jurisdiction in cyberspace, the concept of targeting, and emerging challenges from blockchain and metaverses. The research also utilized functional analysis to evaluate the effectiveness of various approaches to resolving conflicts of laws in digital environment and their potential applicability to Uzbekistan's legal system.

Results and its discussion

This research employs a comprehensive methodological approach combining several research methods. The comparative legal method was used to analyze conflict of laws rules and jurisdictional approaches in different legal systems, primarily European Union legislation (Rome II Regulation, Brussels Regulation), American doctrine and case law, and Australian jurisprudence. The formal legal method was applied to examine the current state of Uzbekistan's private international law provisions, particularly Article 1194 of the Civil Code.

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Results and its discussion

Classical private international law doctrine assumes each tort has a definite place of occurrence that can serve as the primary connecting factor for determining applicable law. The internet radically changed this situation by creating an environment where action and harm are structurally separated in space, with harm potentially occurring simultaneously in multiple jurisdictions. When someone publishes defamatory material online, the action occurs where the publisher is located, but reputational harm can occur in any jurisdiction where the material was read [3].

The Australian High Court in Dow Jones v. Gutnick held that defamation occurs in each place where publication was downloaded and read, and the plaintiff may sue in any of these jurisdictions [4]. However, this approach was criticized for creating excessive jurisdiction and disproportionate burden on defendants who could face prosecution in any country worldwide for a single internet publication

[5]. In response, courts and legislators developed restrictive criteria for establishing jurisdiction in internet cases, requiring qualified connection between the tort and forum exceeding mere content accessibility.

The concept of "targeting" emerged, whereby jurisdiction is established only regarding countries to which the defendant specifically directed activities, determined through factors such as website language, currency, targeted advertising, or explicit references to specific countries [6]. For determining applicable law, European legislation through Rome II Regulation developed a more complex system of cascading conflict rules. The basic rule establishes application of law of country where harm occurs, interpreted for internet torts as where harm directly materializes [7]. However, if tortfeasor and victim have habitual residence in the same country, that country's law applies. If all circumstances indicate the tort has manifestly closer connection with another country, that country's law applies [8].

Online defamation represents perhaps the most complex category of cross-border torts due to global publication accessibility and multiplicity of jurisdictions where reputational harm may occur. Courts of various countries developed different approaches to determining compensation. Some jurisdictions apply the principle of single global compensation whereby one country's court may award compensation for all harm to victim's reputation worldwide [9]. Other jurisdictions limit compensation to harm caused only in the forum country, requiring separate suits in each jurisdiction where compensation is sought.

Intellectual property infringements through cross-border piracy present another important category with special conflict problems. Intellectual property rights are territorial by nature, existing separately in each jurisdiction according to its national legislation [10]. Rome II establishes a special conflict rule for intellectual property infringements, providing for application of law of country for which protection is sought [11]. Cross-border e-commerce generates specific jurisdiction and applicable law problems regarding consumer fraud, defective products, and consumer law violations. European legislation provides enhanced consumer protection, granting them rights to sue at their residence [12].

Cybercrimes such as unauthorized computer access, malware distribution, and DDoS attacks represent a special category where action and harm can be maximally separated spatially. The international community developed special instruments to combat cross-border cybercrimes, primarily the Council of Europe's Budapest Convention on Cybercrime, which harmonizes criminal legislation and establishes international cooperation mechanisms [13].

Blockchain technology and decentralized systems create qualitatively new problems for traditional jurisdiction and applicable law concepts. Blockchain systems function as distributed networks of nodes located in various jurisdictions worldwide, with no central control and data replicated across all nodes simultaneously [14]. When a tort is committed through blockchain, such as fraudulent

cryptocurrency transactions or intellectual property violations through NFT tokenization, determining the place of tort becomes practically impossible.

Decentralized autonomous organizations (DAOs) represent organizational structures functioning through smart contracts on blockchain without centralized management and often without identifiable individuals controlling their activities [15]. When DAOs cause harm to third parties, fundamental questions arise not only about applicable law and jurisdiction but about the very possibility of holding accountable an organization lacking physical location, legal registration, or identifiable responsible persons.

Metaverses, representing persistent virtual worlds where users interact through digital avatars and create virtual economies with real economic value, create even more radical challenges for private international law. In metaverses, torts may be committed regarding fully virtual objects and interests: virtual real estate, digital artworks, virtual identity and avatar reputation. Some researchers propose legal pluralism concepts for metaverses whereby virtual worlds may create their own legal systems through terms of service and in-game justice mechanisms [16].

The European Union developed the most comprehensive system of cross-border tort rules through the Brussels Regulation on jurisdiction and Rome II Regulation on applicable law. The Brussels Regulation establishes jurisdictional rules based on defendant's domicile as general rule, with special rules for certain case categories [17]. Rome II establishes a cascading system of conflict rules for various tort categories, with the general rule providing for application of law where harm occurs [18].

The American approach to cross-border torts is characterized by greater flexibility and judicial discretion. For establishing personal jurisdiction, American courts apply the constitutional standard of minimum contacts, requiring sufficient defendant contacts with forum [19]. For determining applicable law, American courts use the most significant relationship test requiring weighing multiple factors including place of injury, place of wrongful conduct, domicile of parties, and policies of interested jurisdictions.

Based on comparative analysis, concrete proposals can be formulated for modernizing Uzbekistan's private international law legislation. First, adoption of a new edition of the Civil Code section on private international law with detailed conflict rules for various cross-border tort categories supplemented with special provisions for cross-border digital torts, establishing a cascading system of conflict connections modeled on Rome II [20]. For online defamation, place of harm should be recognized as victim's center of interests, defined as habitual residence for individuals or principal place of business for legal entities.

Second, adoption of a special Law on Jurisdiction of Uzbek Courts over Cross-Border Disputes, establishing that Uzbek courts have jurisdiction over

claims for harm through internet if harm occurred in Uzbekistan, affecting interests of a victim habitually residing or conducting principal activities in Uzbekistan. Jurisdiction should not be established solely based on internet content accessibility from Uzbek territory unless the defendant specifically directed activities toward Uzbek audiences. Criteria for targeting may include use of Uzbek language, prices in Uzbek soms, local payment methods, targeted advertising to Uzbek audiences, or use of .uz domain names [21].

Third, creation of a specialized panel for cross-border disputes in digital environment at the Supreme Court of Uzbekistan, uniting judges with expertise in private international law, information technology, and tort law [22]. Fourth, Uzbekistan's accession to international conventions on cross-border cooperation in combating cybercrime, primarily the Budapest Convention on Cybercrime [23]. Fifth, development of alternative dispute resolution mechanisms for cross-border cyber tort disputes, including creation of a specialized Center for Online Dispute Resolution at the Chamber of Commerce of Uzbekistan, providing online arbitration and mediation services for cross-border disputes involving Uzbek parties [24].

This study revealed fundamental crisis of traditional private international law institutions caused by the global nature of internet and digital technologies, which created an environment where torts occur without clear geographical localization and harm occurs simultaneously in multiple jurisdictions. The classical concept of place of tort as primary connecting factor becomes multiple and uncertain in the digital environment, creating risks of excessive jurisdiction, conflicts of legal systems, and legal uncertainty.

Comparative legal analysis demonstrated various attempts to adapt conflict rules to digital reality, from European cascading conflict connections prioritizing place of harm to American flexible most significant relationship test. Emergence of blockchain, decentralized systems, and metaverses creates new challenges questioning the very applicability of territorial jurisdiction and law concepts to fully virtual and distributed environments.

For Uzbekistan, actively developing its digital economy and integrating into global digital markets, creating a modern legal environment for resolving cross-border cyber tort disputes is a strategic necessity. The proposed measures include modernization of Civil Code conflict rules with cascading system for digital torts, adoption of special law on cross-border jurisdiction incorporating targeting criteria, creation of specialized judicial panels with expertise in technology and private international law, accession to the Budapest Convention on Cybercrime, and development of alternative dispute resolution mechanisms through an Online Dispute Resolution Center.

Implementation of these proposals will enable Uzbekistan to effectively regulate cross-border cyber tort disputes, protect rights of Uzbek citizens and legal entities in digital environment, attract foreign investment by ensuring legal certainty, and integrate into the global system of private international law adapted to digital reality.

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美国新国家安全战略出台后，俄罗斯军工联合体的目标是避免成为特朗普主义的人质，并在太空领域取得胜利

THE RUSSIAN MILITARY-INDUSTRIAL COMPLEX'S OBJECTIVES AFTER THE NEW US NATIONAL SECURITY STRATEGY ARE TO AVOID BECOMING HOSTAGE TO TRUMPISM AND TO WIN IN SPACE

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注释：全球政治的转型和军事化要求俄罗斯军方和国家安全专门机构采取更加强硬和有针对性的应对措施，要求国内军工联合体建立稳定且充满活力的机制，以生产足够数量的高质量产品来支持俄罗斯武装部队，并解决各战场上的技术漏洞。西方学说以及俄罗斯中央银行现行的货币政策，目前未能通过长期、低成本的融资为高科技、国防和航天工业提供及时充足的资金，需要俄罗斯政府和立法机构予以纠正。

关键词：特朗普主义、军工联合体、战场、全球经济、反全球化、碎片化、价值链、军用产品、武器装备、太空、工业4.0、私营军事公司、私营企业、人工智能、大数据、无人机、意识技术、去中心化。

Annotation. *The transformation and militarization of global politics demands an increasingly robust and targeted response from the Russian military and special agencies responsible for national security, a stable and mobilized regime for the domestic military-industrial complex to produce high-quality products in sufficient quantities to support the Russian Armed Forces, and to address technological vulnerabilities in various theaters of operations. Western doctrines and the Central Bank of Russia's current monetary policy, which currently fails to provide timely and adequate funding for high-tech, defense, and space industries with long-term, low-cost financing, require correction by the Russian government and legislative bodies.*

Keywords: *Trumpism, military-industrial complex, theater of military operations, global economy, alter-globalization, fragmentation, value chains, military products, weapons and equipment, space, Industry 4.0, private military*

companies, private enterprise, AI, Big Data, drones, conscious technologies, dicapping.

The ongoing restructuring of the modern world boils down to the development of Donald Trump's ideas about returning America's greatness as a superpower that is rebooting its values and restructuring its somewhat outdated, in his view, foreign policy according to the patterns of neocolonialism. And the continuation of the Alaskan dialogue between the two presidents of Russia and the United States only emphasized once again that the ideas of world domination, as well as success in global competition, are not going anywhere and have the character of further neocon attempts to push through the will of the strongest in relation to a weaker participant in the international process for the retention and development of previously accumulated unique competencies and declared personal ambitions about their unconditional power existence. [1;11]

The problem with this approach is the already established chaos not only in global politics, but also the ensuing, almost complete denunciation of all previously concluded agreements on maintaining détente between the main Cold War adversaries—the antagonist states of the United States and the USSR. The collapse of reason and the will of the international powers authorized to do so is irrevocably erasing everything that was so beautifully and promisingly initiated by the Helsinki Pact of 1975 and supported by a series of international treaties that became the framework for nuclear-free coexistence among states on the planet for more than 30 years.

Gene Sharp's "controlled chaos" theories haven't become a panacea for increasing security in even one region of the Earth, but, on the contrary, they have transformed the Santa Fe sages' research into feasible concepts for restoring imperial dreams of total control over the resources of the earth and land. Meanwhile, the latest epic essays and foresights from American "think tanks" and the Pentagon, such as the US military doctrine announced in the fall of September 30, 2025, again hint at the expected success of sabotage operations in communications and data transmission networks, on the global Internet, in the space race, which is putting humanity itself on the brink of survival in anticipation of a nuclear denouement of countries that are not ready for either peaceful dialogue or a reduction in the appetites of global governance institutions. [1;13]

It was introduced by US Secretary of Defense Pete Hegseth, at the Marine Corps Base in Quantico, Northern Virginia, described its primary objectives as "exclusively conducting and preparing for combat operations, delivering a 'crushing blow' to enemies should they challenge US hegemony." At the same time, pacifist policies are shelved as toxic and harmful, as "outdated and dangerous," and all New World militaries are urged to "be prepared for military conflicts to

ensure global security." Key areas for the US military-industrial complex and the structures of the American state's imperial development are becoming priority steps: modernizing key US Armed Forces technologies, given their significant growth, increasing ammunition production, expanding the fleet of UAVs and combat drones for land and underwater use, strengthening the Patriot air defense system through modernization, and upgrading the B-21 bomber aircraft. Following up on Michael Bloomberg's spring report on breakthrough technologies and their importance for the American military-industrial complex, the Secretary supported ideas for accelerating innovation and clustering supply chains in the growth areas of NATO allies and Anglo-Saxon military coordination. Particular attention will also be focused in the future on AI and Big Data, the accelerated development of neural algorithms, maintaining the achieved heights in the development of cyberspace and space exploration, and improving counter-UAV systems. [2;9]

The Pentagon chief stated that Americans, as a nation, must "pursue the primary goal of the new strategy to achieve superiority over potential adversaries through speed of decision-making and technological primacy in the world." This will lead to the achievement of the primary priority of the US National Security Strategy—global dominance of the US Armed Forces. The National Defense Strategy also speaks to this—to be successful in overcoming the complex nature of modern crises and military conflicts, specifying the tasks for US military personnel and reservists to implement the national security and defense system anywhere on the planet. [3;6]

To achieve this, the primary steps are to establish order in maintaining the nuclear potential for strategic deterrence, to adopt a system of necessary measures to support and develop non-contact warfare and unmanned technologies, as well as to daily increase the presence in space and cyberspace through the creation of joint military groups and by introducing breakthrough dual-use technologies in the production of military equipment and military hardware.

This will provide the US military and NATO countries' defense industry with a roadmap for the key priorities also reflected in the Strategy: full-spectrum dominance, in support and maintaining information superiority, outpacing innovative development, while coordinating multinational operations with allies through organizing exercises in various environments and creating centers of excellence and technological chains, the required fragmentation from the perspective of their local and regional glocalization. Improving coordination between branches of the armed forces, which has been termed "precision interaction," is also becoming a fundamental condition for future victories on the front lines. [4;15]

To integrate these priorities from the standpoint of their clarification and implementation into the modernization processes and while reindustrializing infrastructure facilities and constructing military bases and training centers, American

reformers should keep in mind the country's revenues to ensure a steady flow of investment in military R&D, the development of unmanned aerial vehicle (UAV) systems (especially swarm technologies in the air and underwater in drone form), the development and diversification of a unified command and information network, strengthening the capabilities of the existing missile defense system over North America, and combating hybrid threats and terrorism. Although Japan is not yet named as one of the main competitors for dominance in the Asia-Pacific region in the Strategy, Russia and China are already identified as the main threats to the re-establishment of American global hegemony and the return of their lost status as the world's "number one" metropolis, against the backdrop of vassals and colonies preparing to re-swear allegiance to it. [5;17]

At the same time, analysts from "Rand Corporation" in May 2024 already indicated a slowdown in possible drastic steps in the reform of the American military-industrial complex and government institutions, which are not yet ready to give in entirely to Trump's sentiments on increasing the greatness of America through its ongoing industrial and philosophical reboot. [8;12]

In particular, experts highlighted the "internal decline of the American economy," including "slowing productivity growth, an aging population, accelerating polarization of the political system, and growing corruption in the information environment." External challenges included China's growing influence and the decline of US authority in developing countries around the world. [16] The key problems that are dragging the "Washington swamp" from the standpoint of patriotism towards degradation and stagnation, according to analysts, are: "a passion for luxury, an inability to quickly and precisely adapt to technological innovations and changes, the growing inflexibility of the bureaucracy and its unwillingness to change under the growing burden of external threats, the loss of civic virtue (which is especially acute in a country of Protestants, as pioneers and champions of traditional values), military overstrain (affected by many years of military action in Africa and the Middle East, in Afghanistan and Ukraine, in maintaining more than 1,200 American bases around the world), a polarizing conflict of interests of the elites (from technological and technocratic –corporatocrats, to the media - netocrats and show business, overheated by political strife and losing out to AI and Big Data in metaverses and on marketplaces due to their high cost compared to electronic media, as well as banksters - new money (cryptocurrency traders) and old banking clans, unwilling to part with the familiar tools of milking funds from budgetary grants and subsidies, contracts and tenders for infrastructure and military/space construction), environmental problems and the growth of climate man-made risks along the entire perimeter of American influence on the "green agenda" and the technological dicapping in full swing between the US and China in the field of ICT technologies. [7;18]

Accordingly, decisions to correct internal problems are synchronized with America's military interventions in various latent or escalating conflicts through US military interventions: small interventions (up to 4,000 troops), medium interventions (from 4,000 to 20,000 troops), and large interventions - from 25,000 and above. This is a consequence of the lag that must be overcome and should be identified as priorities for technological dominance: the development of AI systems for weapons control, the creation and launching of serial production of autonomous weapons systems and military equipment, the development and the gradual introduction of directed energy technologies into terrestrial and space infrastructure, as well as the constant upgrading and refinement of cyberwarfare systems [15]. This must be accomplished with sufficient secrecy: from both the country's own population and the enemy, through manipulation of mass consciousness, the use of deepfake technologies, and total control over information flows within the state and the propaganda of its success abroad. Such actions can also be implemented through interventions in the battle for "one's own": supporting loyal regimes, advancing one's interests through international non-governmental organizations, and by forming blocs and alliances of new types of network development. [6;19]

At the same time, it is the economy and its mechanisms that must provide the necessary resources for success in modern conflicts, which will place accents in the information struggle for influence on public opinion and the awareness of ongoing changes, provide opportunities for preserving the established dominance in the air-space sphere, ensure the constant introduction of new types of weapons and military equipment (especially long-range weapons) and technologies (critical, breakthrough, supporting) into the army and security forces, continue the growth of the role of using special operations forces (such as PMCs or their subsequent modification into private intelligence units), the application of sabotage-reconnaissance groups, sabotage work on the accelerated deployment of technogenic shifts and disruptions in the operation of digital services and critical infrastructures, which are already being embedded in the consciousness of actors of future military conflicts in the form of special training and trainings on creating dominant competencies in the field of conscientious technologies. It is they that reflect the entire spectrum from propaganda to the development of a system of sustainable, covert, and most effective troop control and, in parallel, provide moral-psychological training for the personnel of the US and NATO Armed Forces. For them, a new set of KPI indicators is already being developed, reflecting the high mobility of troops and the increasingly probable onset of clashes and incidents of hostile participation in other theaters of operations in the form of applying means for the successful conduct of fire combat in various environments, including the air, surface-underwater, land, virtual, and space (vacuum) environments of confrontation. [13;16]

For this purpose, military experts in the Solar System are discussing two possibilities for using formally unclaimed resources: an asteroid-comet component for their capture and subsequent extraction, as well as for the construction of near-Earth digital and cellular structures to ensure military dominance with network interaction of space bases on the Moon and Mars in the next 25-30 years. [10;14]

At the same time, the creation of a bloc of hostile structures to disseminate fake and propaganda information aimed at dumbing down the population, increasing its aggressiveness and narrow-mindedness, will continue to be implemented by hacker cells to undermine the economy, which is at war with Ukraine and Russia, through ICT sabotage and the reckless terror of our citizens. An analysis of the very transformation of military decisions in an attempt to maintain the hegemony of the United States and the Anglo-Saxons will most likely lead to further consolidation and concentration of capacity in the field of military and technical production, ensuring a qualitative change not only in the digital structures of the ongoing reindustrialization of Industry 4.0 but also capable of accelerating chaos in the process of establishing goals to unite the West in the fight against the "Global South." The debate is not only about "red lines," but also about who can defend their historical interests and nations from a position of strength, and how, as well as the new conditions for survival in a world of growing resource scarcity and the expected diversification of the economies of China, India, and Russia against the backdrop of yet another tightening of Western, and especially American, sanctions, retorts, and reprisals. And their discussion is beginning to touch on the need for coordinated action in defending national and corporate interests, which are becoming increasingly apparent in the run-up to new trade tariffs in November 2025 and the unpredictable tendencies of Trumpism, which has become even more aggressive since the death of Charlie Kirk. [2;17]

In February 2026, the international START-3 Treaty will expire, and the world will be left definitively without structures and basic documents for implementing inter-country security and mechanisms for its global implementation without sliding into an arms race, which is already indirectly confirmed by the growth of militarized production areas and attempts by the "collective West" to move military and military equipment beyond the borders of planet Earth.

That's why we need to heed the final report from the Rand Corporation—"On the Consequences of Combat Operations in Ukraine for Future Conflicts Involving US Forces," which has a menacing, conspiracy-theoretically titled "Dispersed, Disguised, and Decomposable"—which clearly defines the methods and timeframes for inflicting total defeat on us and lays out a chain of personality-oriented steps to foster social contradictions within Russia and among our allies. Therefore, we must hurry, understanding that the enemy will go all the way and has no goal of reaching an agreement or giving us a chance to overcome and defeat them. [3;14]

The tasks of the Russian military-industrial complex, which is experiencing the oligarchic influence of increasingly expensive resources and is suffering losses due to the slow reduction of the already inflated interest rate of the Russian Central Bank, which places American dreams at the forefront of potential expectations of the dominance of the neo-colonialist world order of the Anglo-Saxons, should be reduced to a set of expected further steps of the Russian government and decrees of the President of Russia:

- on the phased reform of the Central Bank of Russia and changes in credit and financial policy;
- on acts of confiscation and partial nationalization of ineffective assets that have fallen out of circulation in the flows of the mobilization regime of military-industrial complex enterprises (de facto, they have long since switched to an enhanced operating mode);
- on Eurasian cooperation chains in the development of military equipment and new types of military and technical equipment, by transferring some of the key competencies to non-sanctioned countries of the EAEU;
- on supporting import substitution and brand substitution in key technological vulnerabilities of the fuel and energy complex, military-industrial complex and space through selection and support in the form of fragmentation of the centralized supply chain in the territories of friendly states;
- on preparations for the large-scale opening of PPP and JV enterprises with the "global South" and for the friendly organization of a wave of mergers with the most significant economic actors in Asia, the Middle East and Africa;
- on the seizure of assets of the "collective West" and their subsequent nationalization for the needs of the Central Military District and for the further imperial revival of Russia.

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俄中在上合组织安全架构中的作用：利益平衡与战略伙伴关系
THE ROLE OF RUSSIA AND CHINA IN THE SECURITY ARCHITECTURE OF THE SCO: BALANCE OF INTERESTS AND STRATEGIC PARTNERSHIP

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摘要：本文探讨了俄罗斯和中国在塑造上海合作组织（SCO）框架内安全架构中所扮演的政治和战略角色。文章分析了平衡两大欧亚大国利益的原则、其对组织稳定的影响，以及共同应对现代威胁的机制发展。作者认为，中俄在上海合作组织框架内的互动构成了基于共识、主权平等和文明安全观的新型多极国际关系体系的核心。本文还探讨了合作的制度性、价值观和实践层面，以及在欧亚大陆构建统一的信任与稳定空间的前景。

关键词：上合组织、俄罗斯、中国、安全、多极化、战略伙伴关系、地缘政治、欧亚大陆、国际关系。

Abstract. *The article examines the political and strategic role of Russia and China in shaping the security architecture within the framework of the Shanghai Cooperation Organization (SCO). The principles of balancing the interests of the two leading Eurasian powers, their influence on the organization's stability, and the development of mechanisms for collective response to modern threats are analyzed. The authors argue that Russian-Chinese interaction within the SCO forms the core of a new multipolar system of international relations based on consensus, sovereign equality, and a civilizational approach to security. The paper also explores institutional, value-based, and practical aspects of cooperation, as well as the prospects for building a unified space of trust and stability across Eurasia.*

Keywords: *SCO, Russia, China, security, multipolarity, strategic partnership, geopolitics, Eurasia, international relations.*

The beginning of the 21st century characterized by a profound crisis of the former system of international security, caused by the dissolution of the USSR and, consequently, the end of the Cold War. The monopoly of the Western military-political bloc, NATO, has gradually lost its universality, giving way to multipolar formats of interaction. In the modern world, one of the most stable and dynamically developing structures of a new type has become the Shanghai Cooperation Organisation (SCO), which unites more than 40% of the world's population and over 30% of the global economy.

The SCO represents a unique platform that is shaping a fundamentally different approach to security — not as a means of deterrence, but as a collective resource of trust and joint development. Russia and China occupy a central place in this process; their strategic interaction determines not only the effectiveness of the organization but also outlines the contours of the future Eurasian security system.

As noted by the Russian political scientist and economist, Doctor of Historical Sciences S. A. Karaganov, modern Russian-Chinese partnership is not a temporary alliance against external challenges, but a long-term strategy aimed at building an independent center of power capable of ensuring the security and development of the continent [1, p. 16].

The creation of the SCO in 2001 became a logical continuation of cooperation in the Shanghai Five format, initially focused on resolving border and military issues between China, Russia, Kazakhstan, Kyrgyzstan, and Tajikistan. From the very beginning of the organization's work, Moscow and Beijing acted as initiators in developing new principles of international interaction, reflecting the traditional values of Asian political culture — non-interference, consensus, respect for sovereignty, and national identity.

One of the major achievements was the establishment of the Regional Anti-Terrorist Structure (RATS), founded in 2004. It became the first truly operational mechanism for coordinating the activities of the security and law enforcement agencies of the member states. According to SCO data, between 2005 and 2023, through the coordination of RATS, more than 600 terrorist acts were prevented and over 300 illegal armed groups were eliminated [2, pp. 128–130].These results confirm that the joint efforts of Russia and China in the field of security are not declarative but practical in nature, forming a new culture of interaction based on mutual trust and shared benefit.

A key feature of Russian-Chinese cooperation is the absence of ideological domination. Both countries build their partnership on the principles of pragmatism and sovereign equality, which fundamentally distinguishes the SCO from Western military-political alliances. Russia, with its considerable military potential and experience in ensuring international security, focuses primarily on the political and military dimension. China, in turn, emphasizes economic and technological inte-

gration, viewing the SCO as a mechanism for aligning the Belt and Road Initiative with the national development strategies of regional states.

As noted by Professor V. V. Lukin, Doctor of Historical Sciences and senior scholar at the School of Public Administration of Zhejiang University, the combination of Russia's military-political experience and China's economic potential creates a synergistic effect, turning the SCO into a self-sufficient center of power [3, p. 45]. It is important to emphasize that Russia and China avoid direct competition for leadership, instead constructing a horizontal model of partnership. The balance of interests is manifested in the fact that each side has the opportunity to promote its own priorities without undermining the overall strategic course.

Within the framework of the Shanghai Cooperation Organisation (SCO), a multi-level security architecture has been formed, encompassing political, military, economic, and humanitarian components. The key institutions include the Council of National Coordinators, the Council of Foreign Ministers, and the Council of Heads of State. At the expert level, specialized working groups operate in the areas of cybersecurity, drug trafficking, and counter-extremism.

Particular importance is attached to the joint anti-terrorist exercises "Peace Mission", which have been regularly conducted since 2007. These exercises demonstrate a high level of coordination between the armed forces of Russia, China, and the Central Asian member states. As noted by the Chinese researcher Y. Zhang [4, p. 115], participation in such maneuvers not only strengthens combat interoperability but also contributes to the formation of a new type of international military cooperation, based on trust rather than bloc discipline.

Moreover, since the early 2020s, efforts have intensified to establish mechanisms for cybersecurity, the protection of critical infrastructure, and the exchange of intelligence information.

Beyond pragmatic considerations, Russian-Chinese interaction has an important civilizational foundation. Both states adhere to the concept of a polycentric world, in which no single civilization possesses the right to universalism. President of Russia Vladimir V. Putin has repeatedly emphasized that global stability is impossible without taking into account the cultural and spiritual particularities of the peoples of Eurasia [5, p. 7]. A similar position is shared by President of the People's Republic of China Xi Jinping, who underscores the need for *"harmony without uniformity"* as a principle of peaceful coexistence [4, p. 211].

Thus, the security architecture of the SCO is built not only upon military strength but also upon value-based consensus, where security is understood as a balance of interests, cultures, and civilizations.

The current international environment — marked by the increasing sanctions pressure on Russia, growing tensions in the Asia-Pacific region, intensifying cyber threats, and technological competition — creates new challenges for the SCO and

for Russian-Chinese partnership. The response to these challenges lies in deepening the coordination of the two powers' foreign policy strategies and in developing economic mechanisms of mutual assistance. In 2024, within the framework of the SCO, an initiative was discussed to establish a unified energy pool and a banking mechanism for mutual settlements in national currencies, aimed at reducing dependence on external financial systems.

A promising area of cooperation involves information security, digital sovereignty, and educational exchanges, where Russia and China are capable of setting standards for independent scientific and technological development. Furthermore, the development of humanitarian cooperation, youth forums, and academic mobility programs contributes to the formation of a common Eurasian cultural space, strengthening trust and mutual understanding among peoples.

Thus, it can be affirmed that the role of Russia and China in the security architecture of the SCO is fundamental and system-forming. Their partnership is built upon a balance of interests, strategic complementarity, and mutual respect for sovereignty. The SCO is not merely a regional organization, but a laboratory of a new type of international relations, where security is viewed as a common good rather than an instrument of pressure.

The strategic partnership between Russia and China forms an alternative to bloc-based logic, paving the way for the creation of a multipolar and civilization-oriented world order. In the context of growing global instability, it is precisely the SCO — with the active participation of Moscow and Beijing — that is shaping the emerging Eurasian system of security, capable of becoming a core element of international stability, a system founded on trust, cooperation, and mutual respect.

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从数字地缘政治角度看土耳其社交媒体的现状
THE STATE OF SOCIAL MEDIA IN TURKEY FROM A PERSPECTIVE OF DIGITAL GEOPOLITICS

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注释：本文从数字地缘政治的视角审视土耳其社交媒体的现状。这些平台已成为影响个人乃至整个社会意识的重要因素。安卡拉的问题在于，土耳其人中流行的社交媒体平台大多来自西方。因此，这些平台被用来强加当地政治领导层无法接受的叙事。尽管土耳其是北约成员国，但西方人并不介意利用这一工具来影响其穆斯林“盟友”的文明和文化基础。安卡拉创建自身社交媒体平台的努力迄今为止尚未取得显著成果。

关键词：数字地缘政治、土耳其、社交媒体、地理数字空间、信息安全、北约。

Annotation. *This article examines the state of social media in Turkey from the perspective of digital geopolitics. These platforms have already become a significant factor influencing the consciousness of individuals and entire societies. Ankara's problem is that most of the social media platforms popular among Turks are Western. Consequently, they are used to impose narratives unacceptable to the local political leadership. Despite Turkey being a NATO member, Westerners are not above using this tool to influence the civilizational and cultural foundations of their Muslim "ally." Ankara's efforts to create its own social media platforms have so far failed to yield significant results.*

Keywords: *Digital geopolitics, Türkiye, social media, geo-digital space, information security, NATO.*

This study is based on the author's work in the field of digital geopolitics—the process of safeguarding the interests of states as key actors in the emerging global geo-digital space, linking analog and virtual-information realities. Within this geo-digital space, four interconnected levels can be identified: critical resources, infrastructure, the cybersphere, and the information-cognitive field. States are competing to control these resources in accordance with national priorities and goals, without which digital sovereignty cannot be achieved.

One of the most effective tools for promoting interests in the geo-digital space are digital platforms—software designed to facilitate communication and support

social relations between users and to provide them with goods, services, and information through the use of smart electronic devices. The most popular of these are social networks and related video hosting services, instant messaging apps, news aggregators, and the like, which influence the consciousness of individuals and communities as a whole. This is due to the fact that most people who regularly use the internet spend a significant amount of time on these platforms.

The Turkish government is aware of the danger of negative external information influence via social media, primarily from Western countries. A seemingly paradoxical situation has emerged, in which Ankara fears its own NATO allies. However, it is safe to say that the North Atlantic Alliance—namely the United States—does not need an independent Turkey. Geopolitical differences between the two countries are at play here: Washington's largely unacceptable stance on the Kurdish issue, the Palestinian-Israeli peace process, the Cyprus issue, and a number of other issues, as well as the United States' reluctance to extradite F. Gülen, the leader of FETO, a recognized terrorist organization in Turkey that, as Recep Tayyip Erdoğan has repeatedly stated, was behind the attempted military coup of July 15, 2016. Ankara also rejects sanctions pressure from the United States and the European Union for its cooperation with Russia. As a result, the collective West is using informational tactics against Turkish society, not only to strengthen opposition sentiments but also, over time, to change its "cultural code." Local government officials call this approach "digital fascism" or "cultural dominance.".

Moreover, preserving civilizational foundations and preventing Western, primarily neoliberal, ideological attitudes from taking hold in the Turkish mentality is dictated not only by adherence to Islamic tradition but also by the geopolitical aspirations of the country's political leadership, which hopes that Turkey will become a center of the emerging multipolar world order. Ankara is largely correct: a potential pole of power presupposes not only a certain level of military, financial, economic, and resource might, but also distinctiveness.

In practical terms, the dominance of pro-Western social media leads to the imposition of a particular point of view on users, which worries Turkey on a number of political issues, particularly in relation to the Palestinian-Israeli conflict, the resolution of which Ankara considers one of its diplomatic priorities. This issue has gained momentum against the backdrop of the escalation of the situation in Gaza in October 2023. According to Professor A. Büyükaslan, Dean of the Faculty of Communication at Istanbul Medipol University, mobile communication is an essentially one-way interaction, attempting to control our perceptions and create a new type of person. In the context of the aforementioned crisis, he believes that many online platforms such as X, Instagram, and Facebook, which are influenced by pro-Israel circles, use special algorithms to severely restrict content published

in support of Palestine. A. Büyükaslan cautions against underestimating the impact on the minds of such resources, which are effectively used by various forces as digital "weapons" to achieve their desired effect. Ultimately, he expresses concern about the values that will be shared by new generations, whose identities are currently shaped by the content of such platforms..

At the same time, ensuring protection from negative information influence in Turkey faces a number of problems, to which the authorities have not yet found an effective solution. One of the key ones is the population's extreme dependence on foreign, primarily Western, social media and other online platforms used for mind control. According to Turkish parliamentarians, as of 2024, 20 million citizens used social media X, 57 million used YouTube, approximately 60 million used Instagram, 37 million used TikTok, 34 million used Facebook, and 16 million used LinkedIn.Meanwhile, Turkey has few domestic competitive developments. The first steps in this direction were only taken in 2025 with the launch of the social network Next Sosyal, which the government is actively promoting. However, mass adoption has not yet occurred. Therefore, restricting the aforementioned resources would lead to widespread public discontent. Furthermore, many of them are actively used for business purposes. For example, Ankara's decision to suspend Instagram services due to the digital giant's policy of blocking condolence messages following the assassination of Hamas Politburo head Ilham Haniyeh from August 2 to 10, 2024, resulted in losses for small Turkish businesses amounting to approximately 15 billion liras (approximately $470 million at the exchange rate at the time). At the same time, there is no unity among parliamentarians on the issue of blocking the platforms: the opposition is clearly opposed to it, fearing potential censorship and restrictions on the dissemination of information it needs. Moreover, its representatives believe that any restrictions of this kind are inherently inconsistent with "democratic values," which could put Turkey on par with "African countries, Iran, North Korea, China, and Russia." Given Ankara's European integration plans, fundamental approaches to regulating social media, according to those who do not support R.T. Erdoğan, especially those from the Republican People's Party (RPP), should be determined jointly with EU member states..

Another obvious drawback of the current social media situation is the opposition's willingness to exploit it to criticize the authorities. As is often the case, such steps are often taken not to correct specific shortcomings, but to score domestic political points.

As a consequence of the previous point, the Turkish government, recognizing the potential of modern information technologies to promote a positive image of its country internationally and, more broadly, national priorities and agendas, is striving to develop its own tools for external influence—specific software, includ-

ing the creation of digital platforms—as well as to conduct active information campaigns. The latter is the responsibility of the Communications Directorate of the Turkish Presidential Administration. The former head of this department, F. Altun, highlighting the risks of "fakes" spread using digital technologies, including AI, not only for Turkey but also for global stability and security, identified the fight against disinformation and the search for effective solutions for promoting the "truth" as the objectives of the agency entrusted to him..

The government's approach, however, faces a significant obstacle: a lack of understanding among ordinary citizens of the importance of this issue. The low level of digital literacy among the population, compared to developed countries, has forced the Turkish government to take additional measures to improve it, as well as to conduct a fairly aggressive campaign to attract young people to study relevant fields and to refine specialized courses at the country's universities. This includes incorporating ICT and AI courses, developed by the sector regulator, the Information Technology Authority (ITK), into the curricula of certain universities as early as the end of 2024. It is noteworthy that a general consensus has emerged on this issue among various political forces in Turkey, which should preserve the continuity of the state's general course in this direction, regardless of future government configurations.

It appears that Ankara's efforts to protect the cultural and civilizational foundations of its society from the negative informational influence of Western social media are insufficient. Meanwhile, national cohesion, based on its own traditions and ideals rather than imported ones, is the key to preserving the country's identity, without which independence in the foreign policy arena is impossible. Therefore, Turkey is required to take additional measures in this area of digital geopolitics.

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论地理数字空间的形成
ON FORMATION OF GEODIGITAL SPACE

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注释：从地缘政治角度来看，可以说，受信息通信技术和数字化转型的影响，一个全新而复杂的地理数字空间概念正在全球兴起。地理数字空间将物理世界与虚拟/信息“世界”的各个方面无缝结合，并以政治为核心。地理数字空间大致可分为四个有机关联的层面：关键资源、基础设施、网络空间和信息认知领域。各国力求确保对这些层面的控制，以加强其数字主权并扩大其全球空间影响力。

关键词：地理数字空间、数字地缘政治、信息通信技术、信息安全、数字主权。

Annotation. *From a geopolitical perspective, it's fair to speak of the emergence of a new, complex concept of geo-digital space, influenced by ICT and digital transformation, in the world. Geo-digital space seamlessly combines aspects of the physical and virtual/informational "worlds," with a political focus. Geo-digital space can be roughly divided into four organically interconnected levels: critical resources, infrastructure, the cybersphere, and the information-cognitive field. States seek to secure control over these levels in order to strengthen their digital sovereignty and expand their global spatial influence.*

Keywords: *geo-digital space, digital geopolitics, ICT, information security, digital sovereignty.*

The accelerating use of ICTs, which themselves are constantly becoming more complex, has paved the way for digital transformation, which has resulted in the enrichment of geopolitics. From their inception, states have viewed ICTs as an effective means of advancing their interests and expanding their control over space. The role of the political component of digital transformation has grown as it has qualitatively changed. The ICT-inspired hypostasis of geopolitics has paved the way for the emergence of a more comprehensive concept—a geo-digital space—in which aspects of the physical, "analog," world and the virtual, informational space, with its dominant political dimension, are inextricably combined.

The geo-digital space is being formed primarily within a political arena with an increasingly important power component. This includes not only its military component, such as cyber operations or sabotage of critical information infrastructure,

but also the use of other instruments of pressure in sensitive digital spheres, including civilian ones. This is not to say that digital transformation is being pursued solely for political purposes—its driving force is, first and foremost, the potential for accelerated national development. However, these predominantly economic motives are subordinated to political expediency due to the potential for leading countries to project their will through the use of ICTs. Therefore, the a priori, pronounced transnational nature of this concept is not surprising, conditioned by the inherent and even teleologically fundamental property of the internet—the unification of devices virtually anywhere in the world. Consequently, one of the most important characteristics of the geo-digital space is that it is not limited to the territory of a state and can significantly extend beyond national borders, but is most effectively controlled within a country if its government has ensured digital sovereignty. It is also fair to speak of a global geo-digital space consisting of individual geo-digital spaces, each dominated by one or another power.

Here, however, it's important to emphasize that this isn't about opposing the "virtual world" to the "real world"—the geo-digital space is a synthesis of the two, which becomes increasingly organic as technology advances. The point is that the geo-digital space must be viewed as a unified whole, where events in the purely digital sphere directly impact reality "offline." (Even now, not even in the political sphere, but in such a civil area as healthcare, manipulation of a highly sensitive electronic patient health database can lead to irreversible consequences, including death.)

In terms of agency, states play a decisive role, although they are not the only actors in the global geo-digital space: alongside them, non-state actors such as powerful NGOs or private tech giants actively operate, with influence that can exceed that of individual governments. However, such actors are still closely tied to specific countries, and therefore their autonomy is rather limited. Currently and for the foreseeable future, the power of the most powerful governments is sufficient to curb even leading digital companies, including through overt pressure, and so far, there are no visible reasons for them to acquire equal subjectivity with states.

It appears that the most important result of the formation of a global geo-digital space is the growing influence of processes within it on the configuration of a multipolar world. This is because even the modern world, saturated with ICT and various computing devices, is only at the initial stage of digital transformation. A moment will come when society's dependence on such technologies will become irreversible in terms of its sustainability. This will likely be largely beneficial, but at the same time, the risk of national collapse in the event of a disruption to critical electronic systems will significantly increase. Naturally, in order to consolidate their position on the global stage, states have long been aware of the destructive potential of operations against these systems, which will become increasingly de-

structive as most spheres of life become digitalized. It is important to understand that there is no absolute defense against them other than completely abandoning ICT. Vulnerabilities will inevitably be discovered sooner or later in software operating algorithms (it is quite difficult to verify the error-free operation of even one program), encryption (even if it is relatively reliable now, no one can guarantee that an effective hacking method will not be found), security protocols, and legislative and administrative protection methods., hardware, resources, infrastructure, or elsewhere. Of course, we shouldn't forget about the notorious human factor, including social engineering methods.

Geo-digital space is a unified system of physical and digital spatial dimensions, currently in the process of active development, consisting of interdependent layers of critical resources, infrastructure, the cybersphere, and the information-cognitive field, control over which states require to ensure their sovereignty and dominance. It should be clearly noted that the classification presented below is somewhat arbitrary, and individual and far from complete components of each layer may equally apply to several of them.

Critical resources can be material (primarily the energy required to power electronic equipment and the minerals needed to manufacture it, a significant portion of the component base), human (the number of users, creators and consumers of content), intellectual (programmers and developers, scientists, engineers, and other personnel qualified in this field, the results of their activities, including algorithms), technology and data, as well as finance.

Infrastructure includes networks connected by cable, wireless, and satellite communication channels, including terrestrial and underwater highways, traffic exchange points consisting of servers, hosting, and engineering systems, various types of data centers, a proprietary domain name system to ensure the stable functioning of the internet, hardware, industrial facilities for its production, scientific and educational institutions for the education and training of personnel (ideally, having their own strong mathematical and natural science schools), sustainable supply chains for scarce critical resources, as well as legislation, standards, norms (including those reflecting the civilizational and ethical characteristics of society), and doctrinal documents regulating the digital sphere in domestic and foreign policy areas. This short list of infrastructure facilities may be updated as societies further digitalize.

Cybersphere at its core, the term "virtual" refers to software that transforms hardware into a computing system. It also encompasses a virtual environment, perceived as natural, built on various digital platforms, ranging from simple ones like email, blogs, forums, and the like, to more complex ones like social networks, multiplayer games, chatbots, and other AI-based applications. As technologies that shape broader social relations and are used for online life develop, the virtual

environment will become a virtual space—an artificial world in which the degree of human interaction with the environment is virtually indistinguishable from the real world. These components are combined, in whole or in part, into ecosystems, metaverses, or other similar platforms.

Information-cognitive field Generally speaking, information technology implies a digital communications system and the organization of information flow to recipients and feedback through its channels that serves the interests of individuals, society, and the state in accordance with national priorities. Never before in human history has the expression "whoever controls information controls the world" been so literally accurate and true. This concept has already become a crucial factor in the survival and successful development of countries as a whole, and its significance will only increase in the future. Even a narrow understanding of "information" as "knowledge" is significant in itself, since its greater volume provides a country with cultural, civilizational, socioeconomic, scientific, technological, prognostic, and other advantages. A holistic view of "information" identifies it as the entire set of data obtained or created by humans and available to them for use, transformation, transmission, storage, etc. Moreover, it is precisely in the digital age that these operations have acquired new meaning and a completely different scale, thanks to a vast increase in speed, the emergence of fundamentally new capabilities for working with data, and the application of their results through cyber-specific software and the virtual environment as a whole. This ultimately determines the emergence of the information-cognitive field as a separate layer within the geo-digital space. States strive to establish effective control over aspects of this field, such as the acquisition of new information by one means or another, the promotion of their agenda, and, in turn, the counteraction of negative external information influence.

Thus, states will increase their efforts to expand their influence in the geo-digital space, which requires ensuring control over its layers. Without this, digital sovereignty and any significant agency in international relations will be out of the question in the foreseeable future.

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全球军工联合体演变的挑战：各国为第三次世界大战做好准备
THE CHALLENGES OF THE EVOLUTION OF THE GLOBAL MILITARY-INDUSTRIAL COMPLEX: PREPARING COUNTRIES FOR WORLD WAR III

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摘要：本文探讨了在俄美两国总统阿拉斯加会晤之后，重塑国际关系和全球军工联合体的任务。此次会晤标志着一个进程的开始，该进程旨在重新思考如何摆脱地缘政治的死胡同。地球正经历着一系列冲突、日益加剧的紧张局势和国家军事化，而这一死胡同正将地球推入这一死胡同。

作者分析了各国科技发展中存在的脆弱性，以及“西方集体”与“全球南方”之间的对抗，两者都在新兴的工业4.0时代展开军备竞赛。此外，本文还探讨了正在进行的中美脱钩，以及全球安全机构的鲁莽瓦解，这些瓦解最终可能导致地球毁灭。

本文探讨了重建全球安全新框架的可能方案，而这只有通过统一的共存标准、恪守审慎利用资源和降低技术风险的原则才能实现。

关键词：俄罗斯、美国、中国、印度、伊朗、欧盟、阿拉斯加、拉马克主义、联合国可持续发展目标、军工联合体 (MIC)、工业 4.0、NBICS 技术、ICT、主导地位、金砖国家、上合组织、欧亚经济联盟、北约、AUKUS、脱钩。

Abstract. *The article examines the tasks of reformatting international relations and the global military–industrial complex following the meeting between the Presidents of Russia and the United States in Alaska. This event should mark the beginning of a process aimed at rethinking how to escape the geopolitical dead end into which the planet has driven itself through a succession of conflicts, growing tensions, and the militarisation of states.*

The author analyses existing vulnerabilities in the scientific and technological development of nations and the confrontation between the “collective West” and

the "global South," both engaged in an arms race within the emerging Industry 4.0. In addition, the ongoing U.S.–China decoupling is examined, as well as the reckless dismantling of global security institutions that may ultimately lead to planetary destruction.

The article explores possible scenarios for rebuilding a new framework of global security, achievable only through unified standards of coexistence and adherence to principles of prudent resource use and reduction of technogenic risks.

Keywords: *Russia, United States, China, India, Iran, European Union, Alaska, Lamarckism, UN SDGs, Military–Industrial Complex (MIC), Industry 4.0, NBICS technologies, ICT, dominance, BRICS, SCO, EAEU, NATO, AUKUS, decoupling.*

Introduction

The purpose of this study is based on the analysis of information regarding the harmonisation of international relations, taking into account the evolving global interests of the world's leading powers — from the Arctic to the military–industrial complex, from outer space to international law institutions. These actors are attempting to recreate mechanisms of global security that have almost lost their significance since the beginning of Russia's Special Military Operation (SMO) in Ukraine, as well as the renewed destabilisation of the Middle East in the "Palestinian issue," and the emergence of the Israeli–Iranian confrontation during the summer of 2025.

The intention to prevent a nuclear apocalypse became a driving force after NATO's military–industrial capacities were launched at full scale under the new occupant of the White House, who insisted that allies increase their defence spending to 5% of GDP in exchange for Uncle Sam's "nuclear umbrella" — a shield against the "bad Russians," the uncontrollable Iran, and the now-dangerous China, allied with the DPRK. These ideas reflect the thinking of Western "think tanks" that cannot envision a world outside the coordinates of neo-colonialism and are unwilling to share the planet with anyone else. [1;22]

At the same time, the "global South," opposing such an approach through new forms of bloc, integrational, and military cooperation between various states seeking to defend their sovereignty and national interests, has yet to become a formidable force. It still lacks an understanding of the specific vulnerabilities of its former colonisers and metropolises, which have replaced human slavery with economic and technological dependence. [2;8]

Research Aim

The aim of this research is to identify a fundamental correlation between the ongoing geopolitical transformations and the pace of transformation of the global military–industrial complex, viewed through the lens of preparedness for local, regional, or global conflicts.

Materials and Research Methods

The authors' research was based on data from the following sources: *RIA Novosti*, *REGNUM*, *ITAR–TASS*, *RBC*, *Military Review*, *Arguments and Facts*, the journals *Monocle*, *Forbes*, *Foreign Affairs*, *TechInsider*, the newspapers *The Washington Post* and *The Wall Street Journal*, as well as television channels *Fox News* and *CNN*, analytical reports from *Politico* and *Dawn Reforms*, and materials from the *SIPRI Institute*, the *Heritage Foundation*, and the *RAND Corporation* over the past eleven months. More than 32 sources were analysed, ten of which are cited in the bibliography.

The purpose of communication between the two leaders under the so-called "Alaska agreements" was reduced to comprehensible survival principles for every living being — as part of a larger organism awaiting evolutionary change and depending on the significance of each acquired feature or sensory system (vision, touch, hearing, etc.) that grants flexibility of movement and adaptability in an era of division by viability and relevance.

Such innovations can be associated with the continuation of Jean-Baptiste Lamarck's ideas, who had his own vision of historical variability outside the general theory of Charles Darwin and Alfred Wallace. His followers, such as Samuel Butler and Ewald Hering, refined the concept of "memory" as a form of heredity between generations. They empirically sought to contrast somatic changes in human individuals, hominids, and primates with the evolution of behaviour in the context of classical reproductive and dominance tasks — the struggle for offspring, hierarchy, and satisfaction of growing hunger — both biological and moral–ethical. This path led towards the perfection of the human spirit and form, from genetic manipulation and cerebral sorting experiments to prohibited eugenics [3].

Today, the policy of "managed chaos," doctrinally and conceptually accelerated by the elites of the Old World and supported by former globalist structures that still retain political influence in the EU, has become the main obstacle to ending the Special Military Operation. These forces had long implemented the neoconservative agenda of Joseph Biden's Democratic Party.

Meanwhile, the main patrons of "Ukrainian Nazism," the British, continue to sustain the principles of Euro-Atlanticism, which are, in fact, now being challenged by the current occupant of the Oval Office. He has initiated a lengthy reform of NATO — an alliance unprepared for rapid and flexible restructuring of its original architecture, which was designed to counter any global project weakening *Pax Americana*: from confronting the Warsaw Pact states to countering China and "rogue states" such as Iran and North Korea.

Simultaneously, NATO — still formally undissolved — has become part of a new Anglo-Saxon battle architecture, together with the emerging European Army (from spring 2025) and the revived Entente bloc, resurrected by a Russophobic agenda. Considering the growing number of actors hostile to Russian influence,

both in Europe and the Asia-Pacific region, and the increasing ignition of conflicts in Africa and the Middle East, it is crucial to understand the behavioural algorithms of our adversaries — the schemes of social destruction meticulously elaborated in the works of Stephen Mann [15] and Gene Sharp [25], and later refined using the mathematically precise "punctuated equilibrium" concepts of Otto Schindewolf [26], Niles Eldredge [27], and Stephen Jay Gould [28].

Equally relevant are René Thom's ideas on *foresight zoning* [29], which manage the stages of escalation in "non-linear revolutions" — topics discussed in reports from the *RAND Corporation* [21] and Michael Bloomberg's January 2025 report on vulnerabilities of the American military–industrial complex and the Pentagon in multi-theatre warfare [14].

The synchronised and multi-level application of such algorithms had been previously used — during the anti-Gaullist student unrest in France, during the "Arab Springs" of the early 21st century, and in today's "colour revolutions" (such as the Third Lebanon War and the Israel–Iran confrontation). These tactics continue to be tested through externally engineered civil unrest (foreign agents and "agents of influence" from hostile NGOs) across the post-Soviet space — in Kazakhstan (2022), Armenia (2020), Azerbaijan (2025), and throughout the Greater Eurasian Partnership (GEP) [16;18].

According to RAND Corporation analysts, who in the summer of 2025 introduced new formats of warfare under the term **"Dispersed, Disguised, and Degradable"** [40], the 21st century is witnessing the emergence of a new type of confrontation — one that no longer focuses solely on combat but on the *"climate of conflict."*

This model involves the deliberate creation of rapidly dismantled and reassembled network structures — mobile, shifting fragments within both physical and virtual spaces — serving as decentralised nodes. The concept was borrowed by NATO from modern business practices in flexible management and distributed responsibility chains. Each unit, whether in production or logistics, becomes a cell in a multi-layered network of accountability and resilience [1;17].

All this aims to accumulate a multiplicative effect from invested resources and technologies, pulling potential adversaries into battles over "pressure points." As they struggle to suppress these points, they eventually exhaust themselves — the intended outcome of disproportionate synergy between civilian populations and armed forces that fail to coordinate their survival, logistical, and ideological efforts between "their own" and "the others" [8;14].

This managed — yet invisibly imposed — chaos, maintained both "in sleep and wakefulness," through mass zombification and the removal of weak social strata from real confrontation, was already used by Anglo-Saxon foundations in the 1990s. Around 100 such organisations worked systematically to dismantle the "red Eurasian contour" and destroy the USSR. Today, their number has grown to

over 1,200 foundations, institutes, transnational corporations, and banks — forming a single ecosystem of hostile entities unified by the goal of dismembering modern Russia and launching alternative neo-colonial projects of the Old and New Worlds on its ruins [9;29].

For this reason, Russia must be ready to respond to increasingly complex challenges posed by the "collective West" and to revise its approaches to modern education, which has long outgrown the Bologna framework. Education today is oriented toward the dynamic transfer of talent across platforms, marketplaces, and ecosystems — short-term or long-term foresight laboratories of ideas and content in the growing "knowledge economy" [9].

This means that the key decisions concerning the upbringing of younger generations will define the agendas of national leaders and actors. Their task is to equip new generations — "Z" and "Alpha," as classified by Philip Kotler — with concrete knowledge and practical *smart skills.* Furthermore, emerging immersive technologies (which create a sense of full presence in artificial environments) will shape the material and virtual realities for the forthcoming *"Beta generation"* of 2025.

Within this context of what the author calls *"the invisible yet immutable chaos,"* the Beta generation may determine the future of humankind as it navigates the scientific–technological order of Industry 4.0 [5;7].

These decisions will directly influence the future of Russian secondary and higher education and its approach to defining the country's ideological and technological trajectory. They will also determine staffing priorities — bridging the gap between "blue-collar" and "white-collar" professions amid the accelerating scientific and technological revolution (STR).

The STR has widened global disparities between rich and poor, between the educated and the undereducated workforce. Hence, the issues of *brain drain* and *flight of unique personnel,* now faced by nearly all developed nations, require mechanisms for resolution not only through material incentives but through the moral and civic frameworks of digital economy education. This aligns with the current practices of China, Israel, India, Vietnam, and even the United States — countries that reaffirm their republican agendas through ideals of *greatness* and *superpower identity* [10;30].

In essence, the challenge is to focus on the symbiosis of spirit and matter — to multiply critical and breakthrough technologies that form the platforms of Industry 4.0, offering each country a fair chance to secure its place within the emerging technological order.

The sources of an ideologically coherent development of a socially oriented state can also be found in previously adopted **BRICS declarations — the Cape Town and Kazan Declarations**, which clearly outline what kind of world is being built and with whom. They define what is alien and unacceptable, and what is nur-

tured as a strategic goal — increasing the effectiveness of this business alliance, which is expanding into an alternative arena for trade, financial, and technological transformation of the "global South," with Russia serving as one of its principal coordinators.

To achieve this, it is essential to define and assign goals for every actor involved in the unified system of knowledge generation and transmission between generations, to identify their hierarchies and continuity, and to assess the reliability and relevance of emerging cognitive processes.

The foundation of developing "soft" and "professional" competencies for each actor — according to profession or field of activity — lies in **correlation analysis**. This method identifies triggers of growing knowledge-base problems, integrates foresight tools, and assesses future challenges to humanity during the digital transformation era.

Such evaluation and analytical parameters serve as key criteria for the sustainable and successful functioning of educational schools, academies, and universities. Only a limited number of nations successfully combine academic, civil, and applied military sciences within unified educational frameworks [1;31].

The global trend in this field widely employs the approaches of **Russell Ackoff**, who viewed the process of accumulating and applying knowledge as "the identification of trends or existing facts and phenomena contained within information." Ackoff defined information as "a selected and structured part of a database processed (by a user, teacher, ideologist, or psychologist) for subsequent application." Consequently, knowledge can be *explicit* or *tacit*: explicit knowledge is "recognised by the individual and expressed through concepts and judgments," while tacit knowledge "is not reflexive, based on personal experience, and not verbally expressed but implicitly contained within language itself" [12;33].

Conclusion

What can be effectively implemented in modern Russia — a country still limited in breakthrough technologies, facing unresolved personnel challenges in ICT, and experiencing delays in integrating cloud services into the digital structure of its national economy?

The issues lie not only in the lack of microchips or access to advanced lithographic equipment restricted by sanctions but also in the inability to clearly and rapidly implement in practice a symbiosis of programmes for the development of artificial intelligence (AI) and Big Data. These technologies are still more often copied than independently developed by domestic producers. The central goal of upcoming innovations, therefore, remains straightforward yet vital — to match the implementation speed of the tasks set for the leading enterprises of the military–industrial complex (MIC) and aerospace sectors within the framework of the

National AI Development Strategy of the Russian Federation until 2030 (February 15, 2024) [8;13].

For the second consecutive year, Russia has exported more software than it has imported for use in business and government enterprises. This indicates a deficit not in talent, but in grand-scale ideas — the absence of overarching missions capable of uniting and mobilising the full potential of domestic *"quants"* and *digital nomads.* As a result, it becomes difficult to integrate the outsourcing capacities of Russian technical graduates employed abroad. While these professionals remain globally aware and adaptable, they risk being permanently absorbed by foreign systems of Big Data storage and network analytics [19].

When, then, does genuine motivational engagement begin — between the teacher and the employer — in nurturing a student capable of contributing to Russia's national security and development?

The answer lies in the sphere of labour competencies, remuneration, and growth points in ICT solutions across state corporations, research institutes, technolabs, SEZs, and innovation hubs. These institutions harmonise the national economy through *economic zoning* — aligning federal and regional spatial solutions within a unified digital infrastructure.

Ignoring trends in technological assimilation — both Eastern and Western — is no longer an option. Labour resources can no longer serve as a convenient excuse for backwardness, whether for statistical agencies, analytical departments, or mobilisation structures responsible for staffing industrial and scientific organisations. The focus must now be on technological sovereignty, particularly under the guidance of the Russian Ministry of Industry and Trade, which oversees national import substitution and industrial policy development [10;22].

A newly formed motivational triangle — *student–teacher–employer* — should function as an open-source framework, reprogrammable for each new task. Each configuration must align with state-defined profiles that specify required competencies and facilitate the flow of knowledge between learners, mentors, and prospective employers.

Through ecosystems of corporate campuses and industrial clusters in energy, ICT, the military–industrial sector, and aerospace, Russia can build a national personnel reserve to replenish losses due to age or technological obsolescence [11;23].

Here, the mentorship institution — supported by government and business — becomes the unifying foundation of science and enterprise. It sets educational trajectories and ensures the embodiment of theoretical knowledge into practical applications — packaged as services and innovations that remain in demand even under sanctions. This can be achieved through *"dual diplomas"* and internships in countries of the global South [34].

Such "tripartite contracts" guarantee every participant — student, mentor, and employer — meaningful employment, professional progression, and participation in patent research and industrial innovation.

The ultimate goal is to channel every bright mind into practical outcomes — whether through start-ups, cluster breakthroughs, or socially significant infrastructure projects in digitalisation. These initiatives allow individuals to perceive the world through electronic libraries, expert master classes, and continuous learning environments operating 24/7 — driven by changing international demands (MEO, MRT), transnational cooperation, and projects uniting friendly nations: from the EAEU to the SCO and BRICS [12;24].

From a biological perspective, the evolution of *Homo sapiens* toward rationality and stability — the long-anticipated Lamarckism of our era — will depend on maintaining viable structures of peaceful coexistence. This process began in the dialogue between the leaders of the "collective West" and the "global South." Their discussions, shaped by NATO's dominance in both the Old and New Worlds, must eventually incorporate the interests and voices of China and India.

Equally, Russia's long-term allies — Iran and North Korea — play critical roles. Their soldiers have shed blood on the battlefield during the Special Military Operation, not only fighting a shared enemy but also contributing to the restoration and modernisation of Russia's MIC. These nations possess immense stockpiles of weapons and equipment, as well as NBICS capabilities in aerial and underwater drone development, aircraft manufacturing, munitions production, and ground defence systems — forming a counterweight to NATO and its AUKUS forge.

However, the **battle for robotics** cannot be won without numbers. Russia must increase its fleet of operational robots and intelligent machines (industrial gadgets) from 14,382 in 2024 to 123,000 by 2030. The **robotisation density** must grow from 19 to 194 robots per 10,000 workers (according to consulting agency *Kept*). Asian priorities in improving quality of life are also reflected in robotics — from China's drive toward technological hegemony to Japan's medical and eldercare innovations.

The current **"race for survival"** and the formation of new global dominance under the evolutionary expectations of Lamarckism will favour only those nations that place ideology — the national philosophy of existence — at the centre of their development model.

True sovereignty today means acknowledging **polycentrism and multipolarity** — timely goals of integrating one's allies within hostile geopolitical zones and alliances that falsely proclaim their worldview as "infinite" and "universally valid."

Such pretensions are unacceptable and incompatible with the global objectives of national priorities — especially for Russia and its allies — whose yet-unreal-

ised potential in critical technologies and civilisation-building aspirations, first outlined in the **Alaska dialogue**, must now be structured through **alter-globalist development** and the sovereign self-determination of nations in the architecture of planetary coexistence.

By February 2026, the New START Treaty (Strategic Arms Reduction Treaty) will expire. The world will be left without any foundational structures or documents ensuring inter-state security, mechanisms for its implementation, or safeguards against a renewed arms race.

This danger is already evident in the expansion of militarised production and the West's plans to extend military–technological projects beyond Earth's orbit.

Humanity must now decide — who will restrain the "horsemen of the Apocalypse" who, within months, may gallop across nations and bring about either the end of the *Homo sapiens project* or the eternal prolongation of the "Ukraine project" against the Slavs.

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关于俄罗斯国家独立发展问题
ON THE QUESTION OF INDEPENDENT DEVELOPMENT OF THE RUSSIAN STATE

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注释：本文探讨了世界形势的变化及其理解方式。文章探讨了俄罗斯需要发展自身的理论和方法论，以阐明其本质存在、文明目标和历史独特性。文章还探讨了俄罗斯国家需要关注精神、道德、文化、治理、意识形态和政治等各个方面，以涵盖俄罗斯国家整体存在及其独立发展的性质特征。我们讨论的是理念、理想和国家意识形态的必要性。

关键词：变化、发展、改进、进步、自然环境、人工环境、存在、世界、完整性、专注、人、意识、思维、思维逻辑、理念、理想、国家理想、俄罗斯的独立发展。

Annotation. *The article discusses the changing conditions of the world and ways of understanding it. It discusses the need for Russia to develop its own theoretical and methodological justification for its essential being, civilizational purpose, and historical uniqueness. It also discusses the need for a focus—spiritual, moral, cultural, governmental, ideological, and political—that encompasses the qualitative specificity of the integral existence of the Russian state and its independent development. We are talking about the need for ideas, ideals, and state ideology.*

Keywords: *change, development, improvement, progress, natural environment, artificial environment, being, world, integrity, concentration, man, consciousness,*

thinking, logic of thinking, idea, ideal, state ideal, independent development of Russia.

We live in a changing world and our ways of understanding it. The cosmic situation and the vibrational frequency of energy flows are shifting. The geopolitical landscape is changing, and a new world order is emerging. Changes are taking place in various countries, states, and in people's consciousness.

Significant changes are occurring in the processes of Movement, Change, and Development—in what constitutes the universal law of existence in the manifest, physical world. Aristotle said that changes are determined by the potential inherent in objects, which, by human will, like humans themselves, today cease to be significant. He was probably right when he said that not everything that is possible is realized[8].

Historical changes in the physical world have determined progress, which, since the Renaissance, has been seen as the only way of existence and improvement of everything in this world.

The progress that began in industrial society quickly transformed it into a post-industrial, information society, defining the state of the postmodern era.

Postmodernism is viewed and assessed in various ways. It has been called universal technologism, hypermodernism, and a result of the self-development of an artificial, technogenic reality (in the classical era, the self-development of nature was discussed, and humans were viewed as the result of this development).

Technogenic self-development has led to new, artificial signs, texts, installations, symbols, and simulacra. It has led to technological determinism and postmodern transhumanism, in which the simulacrum is called a new philosophical attitude, a new worldview. These "novels"-symbols[9]The artificial environment is displacing and eliminating the natural environment and the natural relationships between its elements.

Philosophers often speak of postmodernism as a global state of consciousness that has developed in recent decades as a result of a changing human perception of the world (from direct sensory perception to indirect virtual perception).

Technogenic self-development is accompanied by the elimination of man with his creative activity[10]In this reality, man first turns into a human factor, then is denied along with the natural environment, the sphere of his life[11].

[8] Aristotle. Works in four volumes. Volume 2. Moscow, 1978. Pp. 108-113.

[9] Francis Bacon once called symbols errors of the human mind, false concepts, phantoms, idols. He argued that as many idols as there are comedies staged and performed, representing artificial worlds, so many have been produced. He saw idols and false concepts as dangerous, since they hinder the conscious entry into truth. In the conditions of hyperreality, says Jacques Derrida, any real model and meaning of truth is lost.

[10] According to the theological perception of the world, God was called the creator, according to the rational one, man is the creator.

[11] It is believed that M. Foucault was the first to speak about the existential death of man. See: Foucault M. Words and Things. Moscow, 1994. P. 363.

Along with the elimination of humans from technogenic existence, spirituality, soulfulness, and morality are eliminated; they become unnecessary to the world of signs. The world of signs no longer needs human culture, art, or artistic creativity as expressions of the idea, spirit, and soul that create various works. This world has no need for human history.

Postmodernism with its transhumanism has already made itself known through numerous imitation processes in the biological sphere[12], in the social sphere[13]Russia is trying to resist these processes.

At the state level Under the influence and with the assistance of Western countries, a de facto coup d'état was carried out in Russia in the 1990s. The socialist state was eradicated, and a Western-style state was established in its place.

The role of the state as a whole, called upon to identify and ensure public interests, was diminished. The state's own ideology, the purpose of which was to justify this integrity, was eliminated.

In accordance with the principle of separation of powers, state authority in its essential being has been dispersed at the legal level. At the level of the exercise of power and the state's functional activities, it has been dispersed among foreign and domestic entities, oriented primarily toward private rather than public interests. The state's crucial educational function has been eliminated.

There has been a replacement of legal consciousness with a juridical consciousness, into which Western, liberal democratic ideas and concepts have been introduced, defining the essence, content, and purpose of legal laws, the number of which is endlessly growing, while the quality is declining.

This was reflected in the state of the worldview, theory, methodology of cognition, and in the public and individual consciousness called upon to be guided by the idea of formal legal legitimacy.

This has had an impact on the higher education system, where the role and importance of ideological and theoretical disciplines that contribute to the development of a high level of consciousness in young people have not been eliminated, but rather significantly diminished. Without due attention, all those forms that define self-awareness shape the general and professional culture of young people.

The modern reality of world existence is characterized by tension between global forces, their global confrontation in all spheres, indicating not simply the emergence of geopolitical problems, but significant changes in the world order.

The postmodernist obsolescence of modernity is demonstrated by Western, so-called "civilized" countries, which have arrogated to themselves the right to

[12] It led to the creation of artificial organs, the possibility of artificial insemination, the production of embryos in laboratories, the use of vaccinations, and microchipping.

[13] It manifested itself in the recognition and spread of non-traditional orientation, in the formation of an artificial family, leveling the role of the traditional family with natural birth, upbringing, education, transfer of experience, and socialization of children.

rule the world. Their activities are aimed at nullifying sovereignty and destroying rebellious peoples, rulers, undesirable countries, and nation-states.[14]The Slavic world, and in particular Russia, which, from their point of view, is subject to destruction, does not fit into the category of "civilized" countries.

So that in these conditions[15] For Russia to survive, gain full independence, regain its status as a great power, and enter the global arena, it must move away from its ideological commitment to the principles established in the 1990s.

We need our own theoretical and methodological justification for its essential existence, civilizational purpose, and historical uniqueness. We need greater focus—spiritual, moral, cultural, governmental, ideological, political, and other.

Concentration was the organizing principle of the Russian state on a vast territory: it arose, developed, was preserved as a whole and was justified by this concentration.

Focus ensured stability and defined the limits of any changes and borrowings. It facilitated liberation from political fragmentation and Mongol rule, preventing the collapse of the state during the Time of Troubles, and the subsequent strengthening of the state and its naming as Great Russia, then Empire, and State.

Our state, said S.N. Bulgakov, is the result of concentration, not a contract of "cosmopolitan individuals." It shaped the qualitative specificity of statehood from within, defining the nature of the culture of statecraft, sovereign rule, centralized governance, and service to the state.

The qualitative specificity of statehood, the nature of the culture of state, sovereign power and centralized governance formed the basis for defining the status of the state as a public-legal, imperative-mandatory, mandatory-compulsory organization, and not as a corporation.

Characterizing the state, K.L. Leontiev called it the highest, concentrated form of social coexistence. He saw significance not in the form itself (which is associated with the arrangement of elements), but in the fact that form is the expression of an idea in matter; it is the despotism of the inner idea, preventing matter from dispersing, he said. He lamented the fact that egalitarian-liberal progress was transforming a concentrated Russia into a chaotically decaying society.[16].

I.A. Ilyin spoke of the state as the highest, despotic form, its internal concentration necessary for organized rule aimed at regulating external relations. He asserted that dispersion and extensiveness constitute a lack of culture, which disperses life, disrupts integrity, and leads to the disintegration of its organic nature[17].

[14] This is evidenced by events in Yugoslavia, Iraq, Syria, Ukraine, and other countries.

[15] When the sea surface is swaying, the ship is not in the best condition, wrote Yesenin.

[16] See: Leontiev K.L. Byzantinism and Slavdom. How and Why Our Liberalism Is Harmful. Moscow, 2005. P. 157.

[17] See: Ilyin I.A. Fundamentals of Christian Culture. Volume One. Moscow, 1993. Page 302; also: Our Tasks. Articles 1948-1954. Volume Two. Book 1. Moscow, 1993. Page 304; also: The Path to Obviousness. Volume Three. Moscow, 1994. Pages 383-386.

Wise representatives of the governing power believed that only a concentrated state, connected by the internal state of spiritual, psychological, and intellectual forces, is capable of ensuring volitional concentration and legal, political, and judicial focus on external activities[18].

It can be argued that concentration is the qualitative specificity of the integral existence of the Russian state and its independent development.

The modern justification of the concentration and existential integrity of state and legal life must be carried out taking into account a holistic approach to the perception of the world (rational one-sidedness leads to concrete, historical truth), historical reality, cultural, moral, and political significance.

It must be based on the understanding that the highest arts, which include architecture, sculpture, music, and painting, contribute to harmony in life. Politics is also considered one of the highest arts. Art education is considered the foundation for the development of the highest arts.

It must be based on the understanding that all forms of the highest art contribute to human transformation. In the combination of sounds and colors with the energy of pure thoughts, including political and legal ones, born in the depths of the human soul, this soul is capable of experiencing feelings, becoming self-aware, cognizing the existing world with its not only material but also higher ideas, harmonizing it at the level of consciousness, and creating within it.

All wise thinkers have spoken about the cognitive abilities of the inner world and the centralizing role of consciousness in the holistic perception of the surrounding world. Discoveries made in the 20th century by foreign and domestic representatives of various fields of scientific knowledge have radically changed our view of the universe[19], on matter[20], on evolution[21], on a person, on consciousness[22].

[18] In this regard, it is appropriate to cite the well-known phrase of the head of the Ministry of Foreign Affairs of the Russian Empire, A.M. Gorchakov, which is contained in a circular dispatch addressed to foreign governments, which declared after the signing of the Paris Agreement on August 28 (September 2), 1856, that Russia was angry: Russia is not angry, he said, Russia is concentrating.

[19] The Universe is viewed as a subtle, continuous energy field of variable density (W. Tiller, physicist), from which dense matter is formed.

[20] It was discovered that matter has two aspects: atomic-molecular and magnetic-informational, and those atoms are composed of smaller elementary particles—electrons, protons, and neutrons. New properties of matter were identified: corpuscular-wave (N. Bohr, M. Planck), field, informational (P.P. Goryaev, A. Ilyanyuk, A.N. Paoshin), and the holographic state of reality (D. Harbour, D. Bohm, K. Pribram).

[21] Evolution is viewed not as the creation of new forms and their increasing complexity, but as the revelation of what already exists. Perhaps Plato was right when he spoke of memory. It is considered proven that the transformation of one species of living organism into another does not occur in nature. Therefore, Darwin's theory is considered scientifically hopeless. See: Franchuk, V.I. "Universal Mechanisms of Evolution" // Voprosy Filosofii. 2005. No. 4.

[22] A function of the brain and cognition has been discovered, according to which the brain operates similarly to a hologram and in accordance with the quantum principles of wave models. A concept of consciousness based on the limitless potential of the subconscious for a holistic understanding of the world is proposed (John Kehoe).

These and other discoveries allow us to move away from the categorical division of the world into the material and the ideal, and to perceive and characterize it as a holistic substance.

They allow physicists to assert that everything is vibration; that time is not a chronological sequence, but a multilayered, wave-like structure whose frequency and density vary; that space is energy condensed into form. That there exists a subtle physical field of space, which is variously called a torsion field, a microlepton field[23],physical vacuum, that all things in the world are surrounded by this field[24].

This changes the classical understanding of thinking, based on successive stages: sensory perceptions, initial ideas, logical processes consisting of decomposition, analysis, and generalization. This changes the meaning and relationship of the levels of perception, to which the empirical, theoretical, and philosophical have historically been assigned[25], metaphysical.

In the modern understanding, thinking can depart from rational action and logic. More significant is the complex nature of initial perception and subsequent stages of cognitive activity, permeated by intuition, which facilitates an instantaneous and holistic perception of the surrounding world and higher ideas[26].

This means that the existing logic - perception, thinking, idea in relation to physical objects, then practical action and result in relation to the physical objects being studied - is being replaced by another one.

A different logic of knowledge is based on the recognition of higher ideas and their comprehension in the process of concentrating all the possibilities of conscious and other mental-spiritual activity, sanctified by intuition, and its result is a kind of insight into the phenomenon of the whole.

The objective idea of a horizontal path, born in this complex, vertically oriented cognitive process, as a planned strategic, then tactical goal, will have unconditional validity and significance.

Such ideas formed a distinctive, Russo-Russian, and, in particular, state legal consciousness, whose high status must be restored and, in accordance with the principle of sufficiency, its content must include the fundamental, state-forming

[23] Their research was conducted by physician Kira Valentinovna Asipova, doctor of technical sciences, academician, member of the Russian Academy of Natural Sciences Anatoly Fedorovich Okhatrin, and others.

[24] This prompted representatives of various sciences (P.K. Anoin, P.P. Goryaev, S. Grof, A.F. Okhatrin, A.N. Parshin, G.F. Savelyev, and others) to talk about the manifestation of material and wave properties in consciousness, and to consider it as a subtle matter, interchangeable with energy and information.

[25] Losev called the first philosophy a myth in which the world was perceived and reproduced as a whole.

[26] Throughout the history of philosophical thought, intuition has been a prominent feature. One can cite Plato, for whom intuition is the basis for recalling higher ideas, recognized as the foundation of practical activity in the physical world.

ideas and concepts. These ideas and concepts, when concentrated, form the ideal in accordance with which state ideology must be developed.

State ideology is not recognized politically today, and is prohibited legally under Part 2 of Article 13. In scientific and academic literature, legal ideology is considered a fundamental element of legal consciousness. State ideology is essential for a high-quality ideal of law, conditioned by concentration, said E.N. Trubetskoy[27].

The ideas that shaped the national ideal included those of spiritual freedom, conciliarity, non-acquisitiveness, service, justice and righteousness, the unity of the Russian land, Holy Rus', and Great Russia. These were called ruling ideas. Their power, stemming from higher, metaphysical ideas and internal tension, was associated with the ability to subjugate external forces.

The ideal, according to common opinion, has a super-experiential origin and is practically impossible to achieve within the confines of earthly existence. An ideal cannot be possessed; it must be strived for, it must be developed, and it must be oriented toward it as a higher principle, said L.A. Tikhomirov.

V.K. Wackenroder (a representative of German romanticism of the 18th century) believed that the ideal is developed in the unity of culture, science, and art, that art brings harmony to humanity and the specific bearer of a certain type of it, and that it is the most subtle way of approaching the ideal[28].

Understanding their subtle connection, F.V. Odoevsky (a representative of Russian philosophical, political and legal thought, writer, and leader of the society of wisdom lovers) in his unfinished novel "4338" depicted an ideal model of social structure in which the state is governed by representatives of science and art, who differ little from each other in their state of spirit, soul, thinking, and feeling.

The ideal is essential as a representation of absolute perfection, as a goal of development and improvement. V.S. Solovyov believed it necessary to consider and implement state power, to build and operate the state in accordance with the ideal, not to establish paradise, but to prevent the emergence of hell on earth. It is essential because the theory of progress, which, according to S.N. Bulgakov, has replaced metaphysics, religion, and philosophy for modern man, is silent before it[29], which changes art and, with the help of AI, changes man himself.

The state ideal, formed by the concentration of state-forming ideas, must serve as the basis for the development of a state ideology, which is called upon to justify and ensure, along with other factors, statehood in the vast expanse of Russian-Russian land.

[27] See: Trubetskoy N.S. On the ruling idea of an ideocratic state // Eurasian Chronicle. Issue 2. 1925. P. 38.

[28] See: Vackenroder V.K. Fantasies about Art. Moscow, 1977. Pp. 15, 17, 74-75, 183, etc.

[29] See: Bulgakov S.N. From Marxism to Idealism. St. Petersburg, 1903. P. 309; also: Heroism and Asceticism. Moscow, 1992. P. 270-275. Novgorodtsev P.I. On the Social Ideal. Kyiv. 1919. P. 18, 33.

Political and legal thought includes the idea of the unity of supreme power, the idea of the state as a spiritual union, the idea of legal, righteous justice, and the idea of service among the state-forming ideas.

The idea of the unity of supreme power was recognized as the bearer of the highest, unconditional ideas, the basis of qualitative specificity, sovereignty, a necessary condition that ensures the relationship of power and subordination, which served as a necessary condition for the establishment and maintenance of order in a state-organized society.

To establish it in such a society, local customs reflecting specific situations, the existing reality, are insufficient. Generalizing rules oriented toward typical situations, toward what is proper, were needed, said L.A. Tikhomirov. He associated the emergence of a state idea and a state based on the laws of cooperation with the search for these generalizing norms[30].

The idea of the state as a spiritual union, as a focus of spiritual (not material) strength and legal, righteous justice, was advanced by Philotheus, Nil Sorsky, M. Grek, Joseph Volotsky, Ivan the Terrible, I.S. Peresvetov, Y. Krizhanich, and others. This idea, concentrated in autocratic rule, later received conceptual expression in Orthodoxy, autocracy, and nationality. Spiritual union, on a physical level, is the highest form of communal life for a people possessing a statist instinct.

The idea of serving the state meant serving the Russian land (land, people, power – these three elements constituted the concept of statehood, its integrity), in a modern interpretation: serving the social whole, society, the interests of the people, and not private interests[31].

All tasks of the state must be connected with the idea of service, including the task of protecting society from egoistic, mercantile manifestations of individual freedom, from falling into crude materialism[32].

An appeal to the ideal, to one's own ideas, to traditional values is necessary to awaken in the people the instinct of their spirit, a national feeling, which must form the basis for understanding who we are, where we come from, where we are going, what our goals are, what we must do today, how to build and implement our own state and legal life in order to preserve our tomorrow.

Forming self-awareness is a complex process, but the very act of focusing on this is a service to one's own state, said S.N. Bulgakov. This attention is evidenced by the President's serious commitments, outlined in a number of his Decrees[33].

[30] CM: Tikhomirov L.A. Monarchical statehood. St. Petersburg, 1992. Pp. 9-24.

[31] See, for example, Alekseev N.N. Fundamentals of the philosophy of law. St. Petersburg, 1999. P. 216.

[32] See: Bulgakov S.N. Heroism and Asceticism. Moscow, 1992. Pp. 295, 370-375.

[33] See: Decrees of the President of the Russian Federation of May 7, 2018 No. 204 "On the national goals and strategic objectives for the development of the Russian Federation for the period up to 2024"; of July 21, 2020 "On the national goals for the development of the Russian Federation for the period

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数字化和不断变化的消费文化：挑战与机遇
DIGITALIZATION AND CHANGING CONSUMER CULTURE: CHALLENGES AND OPPORTUNITIES

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注释：本文探讨数字化如何改变消费者行为和市场流程，重点关注消费者在塑造自身偏好和与分销商互动方面的积极参与。社交媒体促进了更快、更有效地交流产品意见，包括讨论其环境和社会可接受性。本文强调了大数据分析和消费者参与在产品开发中的重要性，并强调了数字化背景下的新挑战和机遇。

关键词：消费文化、数字化、消费4.0、传播、消费者行为、数字技术、情感交流、创新。

Annotation. *This article explores how digitalization is changing consumer behavior and market processes, focusing on consumers' active participation in shaping their preferences and interacting with distributors. Social media facilitates faster and more effective exchange of opinions about products, including discussions of their environmental and social acceptability. The article emphasizes the importance of big data analysis and consumer engagement in product development, highlighting new challenges and opportunities in the context of digitalization.*

Keywords: *Consumer culture, digitalization, Consumption 4.0, communication, consumer behavior, digital technologies, emotional exchange, innovation.*

Digitalization opens up various opportunities to weaken the dominance of distributors and manufacturers as suppliers of goods and product-related information through these very diverse phenomena.

Consumers are participating in market processes much more actively than before and are gaining self-determination through their interactions. Consumers have always discussed which distributors are reliable and offer high-quality products at reasonable prices. This communication between customers is facilitated, accelerated, and enhanced by information sharing on social media, creating a new dimension in word-of-mouth advertising that can now be found across all product categories.

Along with this exchange of experiences regarding satisfaction with the quality or price of individual products, the emotional exchange of opinions on the environmental and social acceptability of production conditions is becoming especially important, often through so-called storms or boycott calls. For this reason, companies are also trying to specifically influence C2C communications through the keyword of word-of-mouth marketing.

The interactive capabilities of social media offer opportunities, including for promoting sustainable brands and encouraging environmentally conscious consumer behavior, as well as for targeting and activating relevant consumer groups. Sharing personal experiences with friends and acquaintances is complemented, expanded, and even partially replaced by sharing with numerous strangers, often anonymous consumers, on trading platforms. In particular, consumers have the opportunity to publicly evaluate a product after purchasing and using it.

Thus, the path to purchase here is complemented by one of the subsequent stages of product use: a public evaluation of the consumer experience.

Consumers report their satisfaction with their purchase decisions in more detail and intensity than before. Previously, information about satisfaction with a purchase decision was transmitted only indirectly through subsequent consumer behavior regarding demand.[7]

Other consumers often perceive such ratings as more trustworthy than advertising and product information from retailers or manufacturers, especially when large numbers of consumer reviews are aggregated into average ratings.

However, this change in both transparency and trust can be undermined by the trading side through the deliberate use of fake customer reviews that distort the picture.

Thus, in Consumer 4.0, consumers receive information about products not only from suppliers but also, importantly, from other consumers. Information search in this regard has already undergone significant changes and will continue to do so to a much greater extent.

Consumer bargaining power, enhanced by the rapid flow of C2C information, increases pressure on distributors and manufacturers to deliver on consumer promises and offer consumer-friendly products with good value for money. Environmental information is also becoming increasingly prevalent, putting pressure on companies.

Sharing visual content also significantly increases the likelihood of information going viral.

Thanks to the analysis of big data, and in particular usage data transmitted by smart products, the collection and processing of information in this regard is increasing dramatically.

However, over the past few years, the flow of information from consumers to manufacturers or distributors has increased significantly at other levels as well.

This is due to consumers becoming increasingly involved in product development and higher-level corporate decision-making. This is achieved through stakeholder dialogue and the consideration of suggestions and criticisms that consumers request on online platforms. Consumers are also actively involved in product development, particularly in mass-market, customer-focused products. By engaging in specific stages of the value chain, typically the design process, consumers can purchase products that precisely match their preferences.

This active consumer role, in which consumers participate in the creation and production of their own goods, is complemented by collaborative innovation: here, consumers not only satisfy their needs at one stage, but also actively participate in the development of problem solutions and innovations.

By using borrowed or used products, you can use a wider variety of products, experience greater diversity, and thus enhance your own consumer experience. These advantages of C2C trade, for both suppliers and consumers, combined with enhanced C2C communication, can lead to the formation of communities.

In addition to providing partial services in the creation of goods intended for personal use, consumers may also act as consumers when they contribute to the production of goods intended for other consumers.

For example, in the service sector, content consumers also simultaneously become producers when they participate in the creation of platform content. An example here is video platforms, where content is largely created by consumers themselves. Furthermore, (partial) participation in the creation of product value can allow consumers to act as retailers of their own goods in the market.

The central questions are how the digitalization megatrend manifests itself in relation to problem identification, information search, evaluation of alternatives, purchase decisions, the payment process and availability of consumer goods and what environmental consequences may arise as a result.

Progressive digitalization of consumption processes is taking place in three areas of development:

1. Digitalization is affecting more and more products.

2. The transition to digital technologies affects more and more stages of the purchase path.

3. Digitalization is increasingly shaping and changing the various stages of the purchase journey.

We can speak of Consumption 4.0 because an increasing share of consumers are taking advantage of the growing opportunities for digitalization of consumption, which are opening up as a result of three development trends. Combined with these developments, Consumption 4.0 is transforming from a niche phenomenon into an integral part of personal life, society, and the economy.

As mentioned, the term "Consumption 4.0" is not clearly defined, but is understood as a cluster concept with blurred boundaries. This is because, although individual Consumption 4.0 phenomena cannot be classified taxonomically, they share a family resemblance.

Thus, the term "Consumption 4.0" generally focuses on consumer processes that are significantly digitized along the path to purchase. Rephrased, the term "Consumption 4.0" refers to those consumption processes in which digitalization has a significant impact on the purchase decision and the implementation of the consumer project.

The ubiquity of smart products and services: In the field of e-commerce, retailers have the opportunity to adapt the design of digital supermarkets to the market, customizing the profile of a specific consumer.

Consumption patterns remain dynamic, but are typically constrained by constraints. A data-driven personality profile would then be self-validating. Because consumer behavior is interdependent with personal lifestyle and, consequently, with the formation of values, opinions, and emotions, identity can be obscured in this way. This would be counterproductive to efforts to raise environmental awareness and take action-oriented measures, compared to the current situation.[9]

Internet fragmentation will lead to a significant individualization of the consumer experience. Virtual space will no longer be divided between different people in the online shopping sphere. This fragmentation of the internet in the online shopping sphere would be an obstacle both in terms of the structure of the consumer experience and in terms of the fundamental nature of the internet.

The new opportunities for influencing consumers that arise from the digital transition are likely to lead to an increase in overall consumption. At the same time, it is expected that they will also promote and disseminate value systems and lifestyles that are not oriented toward sustainable development. Very few aspects of digitalization and consumer influence, such as potentially fewer incorrect purchases or reduced consumption as a result of price discrimination, have a negative impact on the environment.[12]

The latter will be even more important if, over the long term, consumer influence and services increasingly merge. As a result, environmental policy will find it increasingly difficult to find appropriate channels for informing private consumers about sustainable consumption and for promoting more environmentally conscious public consumption behavior.

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数字身份与网络资本主义的异化逻辑
DIGITAL IDENTITY AND THE LOGIC OF ALIENATION IN NETWORK CAPITALISM

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摘要：本文分析了后马克思主义语境下的数字资本主义现象。Facebook、Instagram、YouTube 等社交媒体平台运用商品拜物教、异化和剩余价值等范畴，探讨数字技术和社交媒体（Facebook、Instagram、YouTube等）如何将传播和用户活动转化为一种剥削形式。用户不仅充当消费者，也充当信息和数据的生产者，从而创造了一种新的“数字劳动”形式。参与（连接-分享）的意识形态掩盖了异化，将存在本身转化为商品。在网络资本主义条件下，工作与休闲、个人与公共之间的界限日益模糊，这导致了数字异化的形成和主体的去地域化。技术正在变得拜物教化，传播正在成为资本主义总体控制和再生产的工具。

关键词：后马克思主义、数字资本主义、异化、数字劳动、拜物教、社交媒体、注意力、参与、自我剥削、主体、算法权力。

Abstract. *The article analyzes the phenomenon of digital capitalism in a post-Marxist context. Facebook Instagram, YouTube, and other social media platforms use the categories of commodity fetishism, alienation, and surplus value to examine how digital technologies and social media (Facebook, Instagram, YouTube, and others) transform communication and user activity into a form of exploitation. The user acts not only as a consumer, but also as a producer of information and data, creating a new form of “digital labor.” The ideology of engagement (connecting – sharing) masks alienation, turning the very process of presence into a commodity. Under the conditions of network capitalism, the boundaries between work and leisure, personal and public, are blurring, which leads to the formation of digital alienation and deterritorialization of the subject. Technology is becoming fetishistic, and communication is becoming an instrument of control and reproduction of capitalist totality.*

Keywords: *post-Marxism, digital capitalism, alienation, digital labor, fetishism, social media, attention, participation, self-exploitation, subject, algorithmic power.*

Introduction. Modern digital technologies are radically transforming the forms of social relations, work, and communication. The emergence of social media platforms such as Facebook, Instagram, YouTube, Twitter, and others has led to the formation of a new socio-economic reality in which online activity becomes a productive force. These platforms no longer serve merely as neutral means of interaction; rather, they act as infrastructures for the extraction and accumulation of value. Users, while perceiving themselves as free participants in communication and self-expression, in fact contribute to the generation of profit through their constant engagement, data production, and affective participation.

The ideology of the digital environment is built upon the triad engaging – connecting – sharing, which constructs the illusion of openness, equality, and democratic participation. However, behind this façade lies the logic of digital capitalism, where communication and sociality themselves become commodities. Participation is transformed into a form of labor — often invisible, unpaid, and normalized through the rhetoric of creativity and freedom. Thus, the new digital order integrates the user into mechanisms of surveillance, control, and data monetization, masking exploitation under the guise of connection and community.

The post-Marxist context of analysis. Post-Marxism, based on the ideas of commodity fetishism, alienation and surplus value, allows us to reveal the mechanism of functioning of digital capitalism. Whereas in the industrial era, capital appropriated physical labor, today digital labor is becoming the object of exploitation – a set of user actions that create content, data, and engagement. A positive communication experience generates new sources of profit: personal activity turns into a commodity, and the user turns into an information producer.

Marx's concept of alienation takes on a new and intensified dimension in the context of digital capitalism – digital alienation. In traditional Marxist theory, alienation referred to the separation of the worker from the product of labor, from the act of production, from others, and ultimately from the self. In the digital era, this process extends into the sphere of subjectivity itself. A person acting within the media environment experiences a constant division between offline and online selves, between lived experience and its mediated representation. The individual becomes a fragmented or divisible subject, whose identity is dispersed across digital platforms and data traces.

This fragmentation is not merely psychological but structural: digital systems organize identity through algorithmic profiling and predictive analytics, constructing an artificial model of the person based on behavioral data. The result is a paradoxical form of recognition – one's digital "self" becomes more visible to algorithms and corporations than to the person themselves. What seems like self-expression or personalization is, in fact, a process of objectification and codification of identity.

Thus, the loss of integrity and autonomy is compensated by a new kind of digital identification, where subjectivity is externally defined by metrics – likes, followers, engagement scores. In the post-structuralist sense, this signals the "death of the subject": the replacement of authentic selfhood by algorithmically constructed profiles and performative digital personas. The subject ceases to be the source of meaning and becomes a node within the network — a data-producing function governed by the logic of capital.

Social media as a space of exploitation. In the logic of capitalism, platforms organize user labor according to the prosumer model (producer + consumer). Every action – like, comment, repost – turns into a microact of value production. Thus, everyday communication becomes an element of the attention economy.

G. Marcuse pointed out that modern society is subordinated to total integration, when even the opposition turns into a commodity [2, p. 168]. Social media implements this logic through the simulation of participation: the user feels like a subject of freedom, while his activity is fully integrated into the system of data collection and commercialization.

R. Barth and J. Baudrillard showed that late capitalism produces signs instead of things. The logic of production shifts from the creation of material goods to the production of signs, symbols, and meanings. Value is no longer embedded in tangible objects but in representations – in what Baudrillard called simulacra, copies without originals that circulate independently of reality. Within this framework, communication itself becomes commodified: not the message, but the act of communication, the presence of interaction, becomes the object of exchange and profit.

In the digital environment, this process reaches its culmination. Emotions, images, personal stories, and relationships are transformed into quantifiable data – likes, views, shares, and engagement metrics – which are then appropriated by digital platforms as sources of surplus value. What was once private or intimate becomes integrated into the circuits of market logic. Facebook, Google, Instagram, and similar platforms do not primarily monetize content or creativity in a direct sense; rather, they monetize attention, participation, and affect. The user's engagement itself – time spent online, frequency of interaction, emotional investment – becomes the raw material of digital capitalism.

Thus, sociality is reconfigured into a marketing resource: human interaction is algorithmically analyzed, categorized, and resold to advertisers and data brokers. The digital subject, believing they are communicating freely, becomes a producer of value through their mere presence in the network. As a result, communication loses its autonomous social function and becomes a mechanism for the continuous reproduction of capital, turning the very fabric of social life into a marketplace of signs.

The logic of participation and the culture of "engagement". The ideology of engaging/connecting/sharing is presented as humanistic, but in reality it is a form of disciplinary power. The culture of participation (according to G. Jenkins [7, p. 133]) creates the appearance of democratization, embedding the user in the mechanisms of market production of meanings. "Free" self–presentation turns out to be an economically beneficial platform, and "self-expression" is a way of continuous reproduction of data.

F. Schmidt and D. Cohen [1, p. 28] pointed out that digital capitalism is based on total involvement, in which participation becomes a new form of work. A like is not an act of freedom, but an act of capitalizing on attention. Marx's "alienation of labor" is being replaced by the alienation of presence, where participation itself acts as a commodity. The user's emotional energy, attention, and time are extracted and commodified through the interfaces of digital platforms. This process can be understood as the alienation of presence – a condition in which even being online, interacting, or expressing oneself becomes a productive act subordinated to capital.

What appears as voluntary participation or social connection is, in fact, a mechanism of self-exploitation, masked by the rhetoric of creativity, sharing, and community. The user is transformed into a prosumer – both producer and consumer – whose actions simultaneously generate profit for the platform while reinforcing its control. Thus, participation, the central value of the digital age, paradoxically turns into a new mode of subordination, where the boundaries between work and leisure, play and labor, are irreversibly blurred.

Digital alienation and deterritorialization of the subject. Online activity leads to the dissolution of the boundaries between work and leisure, personal and public. G. Marcuse and A. Honnet associate this process with reification – the transformation of a living subject into a function of the system [6, p. 75]. Under the conditions of digital capitalism, the individual is deprived of autonomy and finds himself embedded in algorithmic rationality.

Bauman [4, p. 75] describes modern man as a "tourist in the flow of information", a transient figure drifting through digital spaces without stable grounding or lasting attachments. This metaphor captures the essence of contemporary identity under the conditions of liquid modernity – fluid, fragmented, and constantly redefined by external flows of data and images. The subject no longer possesses a fixed sense of belonging or coherence; instead, identity becomes an ongoing project of self-construction through interaction with algorithmically curated environments.

In this context, virtual space functions as a zone of deterritorialization, in the sense proposed by Deleuze and Guattari, where all boundaries, hierarchies, and distinctions dissolve. The logic of digital communication favors not depth but velocity – the speed of transmission, the frequency of updates, the immediacy of response. Meaning is replaced by circulation; significance gives way to visibility.

The user, moving through infinite digital landscapes, becomes detached from both physical space and temporal continuity, existing in a perpetual "now" dictated by the rhythm of the network.

This condition produces a new form of digital alienation, which is no longer experienced as a disruption but as the default mode of being. The subject is integrated into the flows of information and capital, yet deprived of autonomy over them. The networked individual is at once hyper-connected and existentially isolated, immersed in communication but distanced from authentic experience. Within the framework of network capitalism, such alienation is normalized – it becomes a necessary condition for participation in the digital economy. Thus, the fragmentation of identity, the acceleration of interaction, and the deterritorialization of existence together define the ontological state of the contemporary subject: a being permanently in transit, whose value lies in mobility, visibility, and data productivity rather than in coherence or self-determination.

5. The ideology of digital consumption. Modern capitalism seeks to turn communication itself into a consumable product. The concept of "playbour" means blurring the line between play and work: the user gets pleasure, but thereby generates value. The Marxist critique of alienation gets a new meaning here – a person is involved in self-exploitation under the guise of self-realization.

F. Fuchs [3, p. 128] shows that social media construct a special form of virtual reality, where the daily activity of users turns into a tool of supervision and management. This creates an "involved entity" – a participant who voluntarily provides the capital with information about himself. In this sense, social media operate as ideological apparatuses that produce a new type of subjectivity aligned with the logic of capital. The "involved" subject is not coerced into labor but participates willingly, driven by the pursuit of recognition, belonging, and visibility. This voluntary engagement conceals a deeper asymmetry of power: while the user perceives interaction as empowerment, the platform translates it into data capital. Thus, everyday digital activity becomes a form of voluntary submission, where freedom is exercised through structures that continuously monitor, categorize, and commodify the self.

A new form of fetishism. Digital fetishism is expressed in the transfer of a sacred function to technology. Platforms are perceived as a natural medium of communication, not as a power structure. As M. Openkov wrote [5, p. 65], modern man does not believe in God, but in a technological order that promises control and transparency. Thus, fetishism is shifting from a product to an algorithm where value is determined by the number of engagements and views. In classical Marxist analysis, the fetishized object hides the social relations of its production; in digital capitalism, it is the algorithm that performs this concealment. The number of likes, followers, and views becomes the new measure of value, replacing traditional indicators of labor or material worth. Users internalize these quantitative markers as indicators of personal significance, success, or identity.

The social consequences of digital exclusion. In the context of digital capitalism, the classic forms of alienation – economic, political, and spiritual – are taking on a new technical form. The individual's consciousness internalizes the mechanics of platforms: self-expression, communication, and play become functions of capital. The transformation of the subject is expressed in the transition from personality to network persona, from experience to data, from autonomy to profile.

Modern post-Marxism (A. Negri, M. Hardt, H. Fuchs) considers these processes as a new phase of capitalist deterritorialization, in which social media perform the function of integration and control. Communication becomes a form of management, and "freedom of engagement" becomes a mechanism for maintaining capitalist totality.

Negri and Hardt describe this as the rise of "biopolitical production", where life itself – communication, emotion, creativity, and desire – becomes directly productive for capital. Social media exemplify this condition: they integrate subjects into continuous circuits of interaction, visibility, and self-expression, turning the totality of human experience into a source of surplus value. What appears as horizontal and democratic communication in fact functions as a vertical system of governance, where algorithms and metrics regulate behavior, shape opinion, and normalize participation within market frameworks.

In this configuration, communication ceases to be an autonomous social act and becomes a form of management – a subtle mechanism for coordinating actions, emotions, and identities according to capitalist imperatives. The ideology of "freedom of engagement" – the promise that users can speak, create, and connect freely – operates as a powerful discursive illusion, masking the structural asymmetry between users and platforms.

Thus, participation becomes a mode of control: by engaging, the individual reproduces the very system that exploits their attention and data. Digital capitalism achieves its stability not through coercion but through consensual integration, where self-expression and creativity are subsumed under economic rationality. In this sense, the rhetoric of freedom and openness functions as a key ideological support for capitalist totality, transforming communication into a tool for its continuous expansion and reproduction.

Conclusions. The post-Marxist perspective allows us to consider digital society as a new stage of capitalist modernization, where classical forms of production, labor and alienation are transformed into intangible and networked ones. In the context of digital capitalism, social media function not just as a means of communication, but as tools for generating added value by exploiting user engagement. Every act of communication – like, comment, repost – becomes an element of digital labor embedded in the data economy.

Digital alienation becomes the basic mechanism of network capitalism: the subject loses his autonomy, his identity splits between physical and virtual existence. As a result, a new type of subject is being formed – involved, transparent, and controlled, for whom participation and self-expression become forms of subordination to algorithmic structures.

Digital identity replaces the inner self with a platform-driven profile, and personal activity becomes a resource for market reproduction. Digital culture forms a special ontology of the subject – dynamic, but subordinated to the logic of data. The concepts of work, leisure, and creativity merge: self – realization becomes work, and freedom becomes a form of dependence. The paradox of the modern digital economy is that people participate in their own alienation, perceiving it as an expression of freedom. Post-Marxism demonstrates that the digital economy is not a rejection of capital, but its new stage – algorithmic and symbolic. The ideology of engagement and "participation" replaces the classical ideology of labor, and digital fetishism replaces the commodity fetishism of the industrial era. Even communication itself becomes a commodity, and social connections become elements of market logic.

Thus, the digital society reproduces the capitalist totality in a new, networked form. Digital labor, alienation, and fetishism are not archaisms, but basic mechanisms of modern power production. Post-Marxist criticism allows us to see in digital culture not a space of freedom, but a new configuration of dependence, in which participation itself becomes a form of exploitation.

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博格丹·鲍勃罗夫的基督教摇滚诗歌的价值建构
THE VALUE ARCHITECTONICS OF CHRISTIAN ROCK POETRY BY BOGDAN BOBROV

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摘要：本文探讨当代俄罗斯基督教摇滚诗歌的价值建构。作者运用B. Bobrov歌曲的语言潜台词，分析其构建艺术世界的具体方式，即传统福音主题与摇滚文化美学的交织。作者识别了其歌曲创作主体组织的核心价值理念和情感表达重点。其作品的主导价值观包括：蒙福的存在、罪恶的世界、对不存在的存在性记忆，以及为信仰而进行的精神斗争。B. Bobrov歌曲诗歌的价值世界是通过“我为我”与“他者”之间概念化的对话构建的，其艺术独特性在于通过当代城市民俗的具体感官意象来探讨永恒的宗教问题。

关键词：歌曲诗歌，摇滚诗歌，基督教摇滚，价值建构，诗歌世界，对话，抒情英雄。

Abstract. *This article explores the value architecture of contemporary Russian christian rock poetry. Using the verbal subtexts of B. Bobrov's songs, the author analyzes the specifics of constructing an artistic world in which traditional gospel motifs are intertwined with the aesthetics of rock culture. The author identifies the key value concepts and emotional-expressive focus of the subjective organization of his songwriting. The dominant values of his works are identified: a blessed existence, a sinful world, an existential memory of non-existence, and spiritual struggle as a feat for the sake of faith. It is established that the value world of B. Bobrov's song poetry is constructed through a conceptualized dialogue between «I-for-myself» and «the Other», and its artistic uniqueness lies in the realization of eternal religious questions through the concrete, sensory imagery of contemporary urban folklore.*

Keywords: *song poetry, rock poetry, Christian rock, value architecture, poetic world, dialogue, lyrical hero.*

Christian rock poetry in contemporary Russian culture functions as an ideologically and aesthetically contradictory phenomenon, because «rock culture lacks a clearly unified attitude toward Christianity», and «Christianity has not developed

a clear attitude toward rock culture» [11, p. 129]. In this regard, the work of Bogdan Bobrov appears to be a unique object for understanding the value foundations that form the complex contradictions in the dialogue between rock philosophy and Christian culture. On the one hand, the author's songwriting is positioned as «Christian rock», while on the other, the aesthetics of his works are «toothy, disturbing, stoner, dark country, ready to fight the devil for our souls» [6]. An unexpected ideological-subjective synthesis gives birth to a special value-based architecture of works – a multi-element system of organizing the artistic world, in which meanings and values are built not as abstract concepts, but as a «plan of the world of a single and only action» [2, p. 49], understood in the context of the «inseparability and non-fusion» of different philosophical and aesthetic concepts.

The subject of moral philosophy is «the world in which an action is oriented on the basis of its sole participation in being», however, this action «deals with only one single person and object, and they are given to it in individual emotional-volitional tones» [2, p. 49]. The moral assessment of the philosophy of action in rock poetry is carried out not only in the value dimension of the author himself, the lyrical subject, the recipient, and the media author, but also from the perspective of epochal interpellation and the value orientations of rock aesthetics as a whole. The value system of culture, writes M.M. Bakhtin, is located around the «main architectonic points of the actual world of action: scientific values, aesthetic, political (including ethical and social), and finally, religious» [2, p. 50]. In this context, the evaluative field of the subject's actions, consciousness, and speech is imbued with multiple, rather contradictory qualities: what is seen as moral in the light of Christian culture can be perceived in the realm of non-rock philosophy, and vice versa. Thus, several value levels of Christian rock poetry (ideological-subjective boundaries) are simultaneously formed and function, colliding at the boundary of the horizons of expectations of different recipient groups.

Such interaction becomes possible in light of the semantics of the category of value itself, which is associated with the «principle of form, with artistic architectonics, and the eidetic organization of event phenomenology» [7, p. 12]. Firstly, a lyrical event is a «co-event, a tense coexistence of different "value contexts"» [9, p. 11], therefore the value-based nature of the verbal level of a song complicates the structure of the «personal dimension of the axiological picture of the world» [10, p. 89], represented by different subjects and objects of consciousness. Secondly, the very uniqueness of the genre nature of rock poetry makes «discourse analysis of lyrical texts (verbal subtext. – E.L.)» only one of the vectors for identifying the features of the «value architectonics of a lyrical utterance» [12, p. 116]. It is obvious that when describing the value profile of song creativity, it is necessary to take into account the specifics of the object of study – a work of synthetic nature – as a «hierarchically discrete formation, built not only syntagmatically ("horizontally" – like writing), but also paradigmatically (vertically)» [5, p. 1009].

To penetrate the value structure of song poetry, an approach is needed that is capable of isolating not the objective meanings, but the very eventfulness of being-consciousness, expressed in artistic form. However, as is well known, the lyrical plot is characterized by a lack of eventfulness, which «is usually compensated for by the author's emotions, expressed in the highest concentration» [8, p. 189]. A.A. Kazakov notes that «value has a non-objective, existential character; it is difficult to systematically describe», since «the existential, existence, value do not have an objectively documented substantiated nature» [7, p. 3]. Consequently, the methodology for studying the verbal «body» of a song should be oriented toward analyzing not «what» is said, but «how» it is said, how the value relationship is realized through the markers of the subject-figurative structure of the text. For song poetry, this analysis is more complex, since «a song is a text consisting of a number of subtexts» [5, p. 1009], each of which is not directly included in the verbal text, but has a value-influencing effect on its reception. Despite the fact that the present study is limited to the verbal component, it is necessary to take into account the fact that the value tension is created not only by the word, but also by its symbolic sound, intonation, conveyed by the musical accompaniment, which in the rock lyrics of B. Bobrov is often conveyed by vocabulary that shapes the figurative sphere («black label», «long songs», «Beethoven sounds softly», «birds sing with your voice», «my voice has grown hoarse», «a sweet voice and a scythe in my hand») and recreates the image of the media author on stage. The ideological and subjective borderline of the auditory potential of the texts of Christian rock poetry by this author is supported by the playful principle of constructing a dialogue, which is associated with the image of the devil's networks, with spiritual abuse: «you won't immediately notice the devil's game», «poker and roulette were invented by Satan», «mom said: don't play with fire», «there are no more terrible playing cards in this world», «if you play dice, consider yourself a skeleton», «the devil and the robber played for money among the graves», «at night the boys go out / to play with their knife» [4]. Thus, the value-based architectonics of B. Bobrov's rock poetry must be considered as an open and interdependent communicative structure, in which a co-event of meeting and dialogue between various value-based subject-object instances takes place: «I» (= «Alien»), «Other» («God is all alone» + «God will save everyone» // «Satan tempted us» + «the devil knows how to wait»), «Your own» (life, question), «World» («burning out outside», «the world has not changed for thousands of years») [4].

Let us highlight the following discourse frameworks for analyzing song texts in order to establish their value architecture: 1) the subjective organization, which allows us to identify the value positions of «I-for-myself» (the lyrical subject), «the other-for-me» (God, the devil, woman, mother, child, temptations of the world) and «I-for-the-other» (the position of responsibility and action); 2) the figurative sphere, which determines the trajectory of the transition of cross-cutting images

into material signs of the value conflict (road, weapon, alcohol, book, city); 3) the lyrical plot as a system of points of view with different signs of evaluativeness, as well as the emotional tone of the development of the lyrical event from an existential crisis to moral cleansing, catharsis. This approach allows us to overcome the gap between the "motive of an action and its product", which M.M. Bakhtin wrote about [2, p. 50], and to see in B. Bobrov's song lyrics not just a set of Christian themes, but a relevant and painful act of faith, embodied in artistic form.

The value-based architectonics of B. Bobrov's rock poetry world is built around a central dialogue: the Self (a sinful, doubting, but desperately seeking salvation person) and the Other (God, who grants forgiveness and grace / the devil, who tests the soul with temptation). The «I-for-myself» in the author's work is always a reflective subject, acutely aware of its existential situation: «God have mercy on all my engines / I've seen too much to stay young / My dead navigator looks at the monitors / And our souls fly away like poisonous smoke / All the planets are on parade today / Golden ships fly off into alien skies / My dead navigator knows the speed of light / We fly further, further, further, further from Earth» [4]. The lyrical hero «burns like Hiroshima», he «fell in spirit and hung his head», he «walked the roads like an atheist fool» [4]. His mental state is materially recreated through a group of corresponding symbolic images: «The finger gently strokes the trigger / The heart is broken and there is emptiness in the pocket» [4].

The «Other-for-me» is, first and foremost, God, but a God present not as an abstract dogmatic principle, but as an existentially perceived participant in dialogue. It is to God that subjects and objects of consciousness address themselves in a directly evaluative sense: «My dear Christ», «Jesus, Son of God / Have mercy on us sinners» [4]. However, this Other also often appears in almost everyday contexts. Thus, for example, in the song «The Lord is Great», the affirmation of divine greatness resounds against the backdrop of a picture of a materially prosperous, «well-fed» life: «In a red car on a serpentine road / We drive fast, like ministers / A blonde lies on the golden beach / With her, two children laugh loudly / A view of the bay, a luxurious villa / Beethoven sounds softly in the house» [4]. Such contrasts, on the one hand, emphasize the idea of the immanence of grace, its ability to permeate the profane world, and on the other, they bring Christian philosophy closer to rock philosophy. Archpriest Alexander Ilyashenko notes that «works that elevate man, bring him light, and awaken optimism can be considered pleasing to God» [6], and the hero of B. Bobrov's rock poetry finds this light not in detached holiness, but in the sweet moment of earthly existence, sanctified by faith: «In this sweet moment I say: / The Lord is great» [4].

The «I-for-the-other» position manifests itself in the moment of prayer and repentance. The lyrical hero in a state of sin is not passive: he simultaneously performs an act of faith – an act of trust in the «camping bible», which is «always

with me», or the determination to set out on a «new crusade» «not with sword and fire, but the opposite» [4]. The valuable event here is born precisely in this act – in going beyond the boundaries of one's own Self to meet the Other-God, who «can give me what I fundamentally cannot give to myself, I need the Other existentially» [7, p. 5–6]. And in the rock poetry of B. Bobrov, this function of the «giver» is performed by God, and the lyrical hero turns out to be the one who accepts this value and embodies it in his action. In Christianity, writes M.M. Bakhtin, «in all the norms of Christ, I and the other are opposed: absolute sacrifice for oneself and mercy for the other», «in Christ we find the unique, in its depth, synthesis of ethical solipsism, infinite severity towards oneself... with ethical-aesthetic kindness towards the other», therefore «I-for-myself is the other for God» [2, p. 133]. In this regard, the desire to save one's soul, the renunciation of sin is a feat of inner action of the subject of consciousness and speech, ready to look at oneself from the outside and commit a moral act: «Every day, as if it were my last, I look at the crucifixion / Pray with me, my sisters and brothers / Every night I repent again and again, but / The devil knows how to wait / <…> Our angels are with us in an invisible battle / You will not leave me in fasting and prayer / I will not stand on dark paths again, but / The devil knows how to wait» [4]. Thus, the lyrical hero of B. Bobrov denotes his ideologically borderline state, characteristic of a repentant person, shows his soul, open to God, but remembering the presence of another Other (the devil), who wishes him «to suffer forever in hell» [4].

This figure of the Other-tempter is of particular interest in defining the value-based architecture of the song poetry under study. The devil in B. Bobrov's philosophical aesthetics is not a metaphysical monster, but an almost everyday «friend» and drinking buddy who «knows how to wait» and who «cheats» in a card game with a robber [4]. This almost folkloric markedness of the devil's image makes the lyrical hero's value choice more concrete and dramatic. The hero's spiritual battle takes place not in abstract existential spheres, but here and now, in situations of choosing between prayer and the pub, the Bible and whiskey: «My dear Christ / I will not poke my nose / Into night dens and pubs / It is not in my interests to end up in hell» [4]. After the repentance of the subject of consciousness, a long-awaited change in his value orientations occurs: «The stars twinkle above the black road, the dawn is coming / The heavenly angel looks sternly – there is no mercy / But the sinner began to cry and bitter tears gushed from his old eyes / Goodness always wins without a doubt, the Lord will not abandon us» [4].

From our perspective, the figurative system of B. Bobrov's rock poetry serves as a powerful tool for actualizing Christian values, their symbolic embodiment in the tangible fabric of existence. M.M. Bakhtin emphasized that «in the highest sense, any material in art becomes a word, begins to speak» [1, p. 369], and rock

poet B. Bobrov constructs his artistic world from recognizable, often deliberately «base» images that, however, carry a high moral semantic load.

One of the key architectonic images in the author's song poetry is the road (/ path), which in the meaning of wandering, «a spatio-temporal form of living life, is capable of serving as an artistic generalization of a certain mode of personal existence» [13, p. 73]. This image appears as a concrete «black road», the existential path of the lyrical hero («I walked along the roads») and a metaphor for a spiritual journey-battle («we will go with you on a new crusade») [4]. The road is both a poetic spatio-temporal point of view and an epic chronotope in which the valuable event of the hero's life-deed unfolds: «Every night I repent again and again» [4]. In the lyrical chronotope, there is a fusion of spatial and temporal markers in a meaningful and concrete whole – «the unity of the writer's creativity» [3, p. 506]. For the author of rock poetry B. Bobrov, the road is a testing ground, a moment of decision-making and a dialogic space where a sinner and an angel, a devil and God meet: «Angels in heaven are marching briskly / Dead poets, baby, are sending him poems / You will pay for freedom with hard cash / He doesn't pay for anything, not even for sins / He looks like a woman or a man / Like a gypsy child and like you and me / Like a homeless dog or a tramp / Well, the Heavenly Father is still waiting for him to come home» [4].

Another recurring image is the weapon and its semantically close «signs» of unjustified risk. A knife thrower in a circus, a pistol in a pocket, the knife of «the most beautiful girl in the bar» – all these are images of mortal danger, which metaphorically translate the spiritual struggle of the lyrical hero into the plane of physical risk. The refrain «in everything, remember death» [4] becomes the quintessence of this value attitude – the idea of «memento mori» (from Latin «remember death»), reinterpreted in the context of images of modern urban folklore, which, according to Yu. A. Emer, «is based on the same idea of self-identification, differentiation... of the individual, as in "classical" folklore», and which acts as a «communicatively oriented form of culture, reflecting self-awareness, verbally formulated value attitudes» [14, p. 77]. It is obvious that the value of being-repentance and the pristine beauty of faith acquire special significance for the lyrical hero of B. Bobrov precisely at the moment of premonition of non-existence for the soul.

The book (the Bible) appears in the work of the rock poet as an unchanging value guide in the chaos of the world. The «camping bible» is understood by the lyrical hero not as a religious attribute, but as a saving anchor: «I seem to have fallen in spirit and hung my head / But my camping bible is always with me» [4]. This image embodies the idea of spiritual continuity and the connection of the human soul with the Other (through the mediation of a witness text), which provides support to the Self in a moment of existential crisis and acts as materialized proof

of the «legitimacy of the implemented value sanction» [7, p. 6]: «I read from the Psalter about King Solomon / I prayed for three nights, three days / The holy saints and the Virgin Mary will not abandon me in trouble» [4].

The images of feasting and alcohol play an important role on the lyrical subject's path to repentance. Whiskey, wine, rum, and cognac are the hero's constant companions («I'll wash down rum, cognac, and whiskey / With Chilean wine»). The semantics of these subtopoi in B. Bobrov's rock poetry are ambivalent: they are both a symbol of sin and self-destruction («Black Label whiskey doesn't lead to anything good») and an attribute of brotherhood, a kind of «secular liturgy» («Glorious bastards drink beer with me like milk») [4]. In fact, the author, through secondary subjects and objects of consciousness and speech, does not simply condemn vice – he shows its attractiveness, its inclusion in the complex value paradigm of modern man's life, which fully corresponds to the Christian idea of transformation, when even in the sinful, the grace-filled, the divine can emerge: «Thank you, my friend deacon / For teaching me to pray and love / Thank you, my friend deacon / I put my life on the line and I must defeat the devil» [4].

An understanding of the plots of B. Bobrov's song lyrics allows us to identify the underlying value dominants that shape the architecture of the artistic world. The plot in the analyzed works is often constructed as a transition from the chronotopic framework of despair to an existential moment of enlightenment. For example, in the song «The Camping Bible», the lyrical plot unfolds from complete disintegration («I woke up in a subway car and realized / There was a cigarette and blood in my mouth» [4]) to the discovery of hope through an appeal to a soul-saving text: «I read from the Psalter about King Solomon / I prayed for three nights, three days / The saints and the Virgin Mary will not abandon me in trouble» [4]. The dominant value here is salvation through trust in the experience of the Other – God. The plot of the song «The Devil and the Robber» has a parable-like character: there is an obvious value transition from a dark night of gambling and sin («the devil and the robber were gambling among the graves») to the appearance of an angel and the hero's repentance: «And the angel appeared like a red-hot sword and the devil, frightened, fled / And the old robber froze in amazement and fell to the ground in horror» [4]. The value message of this rock lyric is the victory of good and the possibility of forgiveness, not as an automatic, impersonal act, but as the result of repentance with a contrite heart and further personal resistance to sin: «But the sinner wept and bitter tears gushed from his old eyes» [4]. The event «cross-section» created by the author himself illustrates the fact that «forgiveness (like any other modality of value security) can only be given by the Other» [7, p. 3].

Thus, the artistic world of B. Bobrov's song poetry possesses an individual, authorial value architecture, structured around the subject-object relationships of

the «sinful Self» – the «saving Other (God)» – the «tempting Devil» – and the «value position of the World.» These relationships are not abstractly dogmatic, but are successfully integrated into the concrete, sensory, figurative sphere of rock aesthetics, allowing the recipient to see a world «not thought of, but experienced» [2, p. 50].

B. Bobrov's lyrical hero is not a dispassionate preacher, but a sinner, constantly confronted with existential choice. The central images of the author's rock poetry become «fulcrums of high semantic tension» [5, p. 1011], crystallizing the fundamental conflict between sin and grace, non-existence and eternity. As the author of rock poetry, B. Bobrov masterfully utilizes the «play of chronotopes» [3, p. 506] to actualize eternal questions in recognizable, contemporary contexts and forms. The key value dominants of B. Bobrov's work are a blessed existence, a sinful world, an existential memory of non-existence, and spiritual battle as a feat for the sake of faith.

The work of B. Bobrov is a unique example of how Christian values can be understood and expressed by the author's creative consciousness in an aesthetically complex form, far removed from canonical tradition. The rock poetry of this contemporary Russian author confirms T.K. Nikolskaya's idea that «rock culture... can be filled with Christian content» [11, p. 129]. The value-based architecture of B. Bobrov's song lyrics proves that centuries-old Christian traditions can «speak» the language of the modern era and can remain a moral foundation, «elevating man» and bringing him «light» [6].

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奥斯卡•王尔德散文《自深深处》的体裁特异性
THE GENRE SPECIFICITY OF OSCAR WILDE'S ESSAY "DE PROFUNDIS"

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注释：本文对英国作家、诗人、剧作家奥斯卡•王尔德的散文作品《自深深处》（De Profundis）进行了体裁分析，该作品是作者最后一部完成的散文作品。本文探讨了该作品体裁形式的具体特征。作者认为，《自深深处》融合了戏剧作品、散文和抒情诗的元素，并通过书信体将两者联系在一起。

关键词：英国文学；奥斯卡•王尔德；唯美主义；体裁方法；散文；颓废主义。

Annotation. *This article provides a genre analysis of the essay "De Profundis" by the English writer, poet, and playwright Oscar Wilde, the author's last completed prose work. The article explores the specific features of the work's genre form. The author concludes that "De Profundis" combines elements of a dramatic work, an essay, and a lyric poem, linked together through the use of an epistolary form.*

Keywords: *English literature; Oscar Wilde; aestheticism; genre approach; essay; decadence.*

Many biographers of the eminent British writer Oscar Wilde, including Hasketh Pearson, author of "The Life of Oscar Wilde," note the importance of oral conversation, personal discourse. Our research into Wilde's work over the past three years allows us to conclude that the uniqueness of Wilde's style stems not so much from literary exercises as from exercises in oral genres. Wilde was a master of small talk. Wilde was a wonderfully witty conversationalist, and in the course of a conversation with anyone, he could tell several stories he had invented that he found amusing or beautiful. These short plots, which came to his mind, were then gradually refined and fleshed out, primarily through direct communication with an audience. At the same time, as Pearson notes, it was a serious challenge for the writer to sit down at pen and paper and finally write down the completed stories. He was often distracted by trivialities—say, an omnibus passing beneath the window—and lost his train of thought [Pearson; 132]. It is known that many of

his texts were told, but were never written down by their author, and now we have an idea of them thanks to memoirs.

As another Wilde biographer, Richard Ellman, aptly observed, Wilde's witty and aesthetic style is best seen in his letters.

Wilde's epistolary legacy also includes his "De Profundis," a text written during his time in Reading Gaol. It is necessary to analyze this work at all levels to clarify its genre specificity—one of the last two works Wilde wrote after his scandalous trial.

"De Profundis" has a subtitle that could easily be described as the author's own genre definition: "prison confession." This subtitle refers the reader to the ancient tradition of confessionals—from Augustine of Hippo to Jean-Jacques Rousseau. Indeed, in "De Profundis," in accordance with the canons of classical literary confession, we see the repentance of the author-hero, who, having experienced a spiritual crisis, humiliation, and grief, is ready to be reborn into a new life. More than once, the author alludes to Dante Alighieri's "La Vita Nuova," which becomes a symbol of renewal for him [Wilde; 98].

Wilde's confession is highly aestheticized. He aestheticizes suffering, elevating it to the level of a beautiful pose, a beautiful gesture. Aestheticism as a philosophy dominates all of Wilde's work, forcing him to transform, travest, and contaminate various genre forms (many works by modern scholars have been devoted to the genre aspect of Wilde's work). This makes a clear definition of Wilde's works by genre difficult.

In his book on Oscar Wilde, Richard Ellman provides a brief analysis of this work. In it, he offers several genre definitions for the text that are worth exploring:

"De Profundis" is a kind of dramatic monologue in which Wilde continually questions the silent addressee and takes into account his supposed answers." [Ellman; 572]

This is an important observation. The tendency toward dramatization of prose text has been noted by many scholars of the British classic, including A. I. Tetelman in her dissertation, "The Interaction of Genres in the Works of Oscar Wilde," which is fundamentally important for our study [Tetelman; 6]. Even in those of his texts where dialogue is not directly present, it is implied, since Wilde's artistic expression is always targeted, since, as already noted, it stems not from literary experience, but from living oral speech. In this sense, "De Profundis" is close to the dramatized dialogues from the book "Concepts," "The Decay of Lying," and "The Critic as Artist," and to texts with "correspondence communication," such as "The Truth about Masks" from the same collection "Concepts." The monologue of Wilde's hero is the monologue of a fatal hero who has suffered a fall. The presence of a fatal dramatic hero is also noted by A. I. Tetelman.

Ellman also has another genre definition of "De Profundis":

"De Profundis" is, for the most part, an elegy lamenting lost greatness…" [Ellman; 572]

"Elegy" in this case is also a highly symptomatic word, though not a strictly scholarly definition of the work's genre. Wilde's lyricism in this text is obvious; it is a purely lyrical "I-statement." Wilde always insisted on the importance of position. In Wilde's philosophy of creativity, the "I" is always the starting point. However, it should be noted that in the two works Wilde created after the 1895 trial, the "I-statement" is supplanted by the "we-statement." Wilde's lyrical hero begins to feel part of the prison community. And although in "De Profundis" Wilde's hero continues to stubbornly call himself an individualist, this individualism is of a completely different kind than his aesthetic individualism before 1895. The hero of this work is first among equals, part of a society of outcasts, one in the crowd.

At the end of his short analysis of Wilde's text, Ellman provides a third definition:

"The most important thing about De Profundis is that it is a love letter…" [Ellman; 574]

A letter is an act of mediated communication, essentially a substitute for live dialogue. Wilde was a master of this genre. It is in epistolary form that "De Profundis" appears before us.

The author observed all the formalities of the letter genre. At the beginning of the text, we see the address: "Her Majesty's Prison, Reading" and the salutation: "Dear Bosie!" The text ends with the words "Your devoted friend, Oscar Wilde." Wilde himself referred to this text as a letter. It is also significant that the full text of this work was first published as part of the book "The Letters of Oscar Wilde."

Letter writing is a genre on the border between literature as artistic creation and life. The penetration of life into art is an important feature of Wilde's late work. Such is "The Ballad of Reading Gaol," which begins with a concretizing dedication. Such is "De Profundis," in which the factual component (almost for the first time in Wilde's work) becomes no less important than the artistic.

However, the epistolary form is merely a format for a highly emotional monologue, constructed according to all the canons of dramatic art. Wilde, as Richard Ellman aptly observes, truly "questions a silent addressee and takes into account his anticipated answers." He also presupposes a third party, a listener-spectator, whom he continually brings up to date, retelling events necessary for understanding the "plot." This gives "De Profundis" the qualities of a dramatic monologue.

Dramatic discourse is present in "De Profundis" not only at the level of form but also at the level of motifs. The theme of theater arises metaphorically more than once: Wilde compares his life to comedy and tragedy, noting the importance of drama for his work [Wilde; 70].

At the same time, “De Profundis” stands on a par with Wilde’s philosophical and aesthetic prose. It is a dramatized epistolary essay devoted to the themes of Beauty, Love, and Suffering. The connection with the essay is maintained not only at the ideological, motivic, and compositional levels, but also at the level of the text’s graphic quality. As in his essays, in “De Profundis” the most important concepts, such as the aforementioned Beauty, Love, and Suffering, are given with a capital letter. Wilde acted in a similar manner in his only novel, The Picture of Dorian Gray, which we can confidently place on a par with such essayistic epic works as Huysmans’s “Versus” and André Gide’s “Early Viands” [Suslova; 89].

While Wilde explored the first two themes in depth in “Suffering,” this is a new theme for Wilde, a logical extension of his conviction that the purpose of life is self-realization. And while during his trial, the writer asserted that it is more enjoyable to realize oneself through pleasure than through pain, he now takes the exact opposite position. Suffering seems to replace Pleasure, which previously reigned supreme in his hedonistic aesthete philosophy. However, in “Suffering,” Wilde also finds a unique pleasure of purification, thereby transforming it into yet another aesthetic pose. Thus, Wilde’s philosophy, while remaining aesthetic, ceases to be hedonistic.

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论中国作曲家钢琴作品进入演奏和教学曲目
ON THE INTRODUCTION OF PIANO COMPOSITIONS BY CHINESE COMPOSERS INTO THE PERFORMING AND PEDAGOGICAL REPERTOIRE

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摘要：本课题的意义在于改进中国学生在音乐和器乐艺术方面的教学流程。音乐和器乐艺术教学的复杂性在于不仅需要掌握理论知识，还需要掌握实践技能。本文的研究旨在探索将中国作曲家的钢琴作品引入表演和教学曲目的方法。为实现这一目标，需要完成以下工作：研究中国钢琴艺术的发展历史，明确中国钢琴艺术及中国作曲家钢琴作品的特点，在音乐器乐艺术的语境下，探讨钢琴音乐演奏与教学中存在的问题，列举中国作曲家钢琴作品，分析中国作曲家钢琴作品进入演奏与教学曲目的过程，探讨中国作曲家钢琴作品进入演奏与教学曲目的难点，探讨中国作曲家钢琴作品进入演奏与教学曲目的方法，探讨中国作曲家钢琴作品在演奏与教学曲目中发展的方向与前景。本文的研究对象是中国作曲家钢琴作品，研究对象是演奏与教学曲目。

关键词：中国钢琴音乐、中国钢琴作品、音乐教育、演奏与教学曲目。

Abstract. *The relevance of this topic stems from the need to improve the teaching process for Chinese students in musical and instrumental arts. The complexity of teaching musical and instrumental arts stems from the need to master not only theoretical knowledge but also practical skills. The purpose of the research in the article is to determine the methods of introducing piano works by Chinese composers into the performing and pedagogical repertoire. To achieve this goal, it is necessary to complete the following tasks: to study the history of the development of piano art in China, to determine the features of piano art in China and piano works by Chinese composers, to identify the problems of performance and pedagogical work in teaching piano music in the context of musical and instrumental art, to give examples of piano works by Chinese composers, to analyze the process of introducing piano works by Chinese composers into the performing and pedagogical repertoire, to determine the difficulties of introducing piano works by Chinese composers into the performing and pedagogical repertoire, to determine the methods of introducing piano works by Chinese composers into the*

performing and pedagogical repertoire, to identify the directions and prospects for the development of the use of piano works by Chinese composers in the performing and pedagogical repertoire. The subject of the research in the article is piano works by Chinese composers, the object of the study is the performing and pedagogical repertoire.

Keywords: *Chinese piano music, Chinese piano compositions, music education, performing and teaching repertoire.*

Article outline:

Relevance of the introduction of piano works by Chinese composers into the performing and teaching repertoire

The history of the development of piano art in China

Features of piano art in China and piano works by Chinese composers

Problems of performance and pedagogical work in teaching piano music in the context of musical and instrumental art

Examples of piano works by Chinese composers

Analysis of the process of introducing piano works by Chinese composers into the performing and pedagogical repertoire

An analysis of the difficulties of introducing piano works by Chinese composers into the performing and pedagogical repertoire

Methods of introducing piano works by Chinese composers into the performing and pedagogical repertoire

Determination of directions and prospects for the development of the use of piano works by Chinese composers in the performing and pedagogical repertoire

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社会性属性是文化多样性的基础
ATTRIBUTES OF SOCIALITY AS THE BASIS OF CULTURAL DIVERSITY

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摘要：本文分析了社会性的属性。认为，对人类社会文化存在的科学研究需要克服日常意识的刻板印象，这种刻板印象并不区分人类的生物学和社会性。生产活动、意识和社会规范是社会性的属性，它们将人类探索世界的方式与所有其他生物体的生物学存在方式区分开来，也将人类文化与“野生”自然中的存在形式区分开来。

关键词：社会性属性、生产活动、意识、社会规范、社会、文化。

Abstract. *The article analyzes attributes of sociality. It is asserted that the scientific study of human socio-cultural existence requires overcoming the stereotypes of everyday consciousness which does not differ biological and social qualities of a human being. Productive activity, consciousness and social norms are the attributes of sociality that distinguish the human way of exploring the world from the biological way of existence of all other living organisms, and human culture from the forms of existence in the “wild” nature.*

Keywords: *attributes of sociality, productive activity, consciousness, social norms, society, culture.*

One of the stereotypes of everyday consciousness in understanding the social essence of a human being is that the biological and social qualities of a human being do not differ. Walking upright and consciousness, articulate speech, the volume and structure of the brain, the ability to produce tools and the structure of the hand are perceived as essentially identical signs of a human being. The knowledge that a human being, unlike other living beings, can produce tools, is not associated at the level of ordinary consciousness with an understanding of productive activity as an attribute of sociality; the understanding that a person is a rational being with consciousness is not accompanied by an understanding of the essence of consciousness; finally, it is extremely rare for norms to be called an attribute of sociality.

The scientific study of human socio-cultural existence requires overcoming the stereotypes of everyday consciousness and answering questions:

What does the term "sociality" mean in socio-humanitarian cognition?

What is the essence of sociality as a special quality inherent in the beings of the species *Homo sapiens*?

What are the attributes of sociality, i.e. the properties inherent in its essence?

Without answering these questions, it is impossible to create a solid foundation of all socio-cultural knowledge [2].

In the field of socio-humanitarian cognition, the term "sociality" and definitions derived from it denote exclusively non-biological features of human activity: social norms, social qualities, social relations, social institutions, etc.

The main extra-biological, extra-natural feature of human life activity is its productive nature. The emergence of the process of making tools, which occurred about 2 million years ago, was the beginning of anthropo-socio-cultural genesis, because: 1) the activity of making tools is not directly aimed at satisfying any instinct, which means that it is biologically useless; 2) each tool is a materialized extra-genetic experience of making it; 3) the process of improving tools is not determined by natural selection; 4) from the moment of the emergence of tools, the development of an emerging social being proceeds not through direct adaptation to the natural environment, but through adaptation to tools and tool-making activities, and only through tools – to the environment. Thus, the productive activity – the process of producing and using manufactured tools – becomes an attribute of sociality as a special quality of beings of the species *Homo sapiens* [1].

It is necessary to emphasize the crucial role of productive activity in the further development of the social essence of man, since it is thanks to productive activity, which is of an extra-biological nature, that a new, higher level of mental development begins to form – consciousness (reason, mind, thinking).

The impossibility of developing consciousness under the influence of biological factors has been confirmed by the study of human cubs isolated from society under unclear circumstances and found among animals. It is only in the process of productive activity that a new, extra-biological, i.e. social, attitude of the beings of the species *Homo sapiens* to the world arises, which is crucial for the formation of consciousness.

The creation of tools and other objects is associated with the transformation of natural materials. But not a single tool or object being created for the first time exists at the beginning of the process of their creation in a ready-made form. And even when a sample appears that can be reproduced, the result of the activity can exist by its beginning only in the form of a subjective image of the desired result, i.e. as the goal of the activity.

Setting goals is a specific social trait of a human being that is formed in the process of producing and transforming natural materials. Creating images of things

that do not yet exist and retaining them as goals of activity requires the ability to reflect the stable, repetitive, necessary and essential properties, connections and relationships of those natural phenomena that surround human being and serve as the source material of his productive activity.

Thus, the very nature of productive activity requires the development of abstract thinking as the ability to operate with concepts, i.e. images of necessary and essential properties, connections and relationships of reality phenomena.

With the emergence of thinking, psychic activity is transformed into conscious activity. The human psyche includes many complex reactions to the effects of the external and internal environment, forming a kind of bottomless reservoir of the unconscious, the elements of which only partially rise to the level of awareness. Most of the habitual, casual, thousands of times repeated actions are performed by a person in the "autopilot" mode, i.e. on the basis of stable conditioned reflex connections that do not require awareness. The moment of "turning on consciousness" coincides with the moment when a person enters into a certain attitude to reality. The sides of this conscious relationship are always, on the one hand, the person himself, his inner self, and on the other – the objectively given object of the external world.

Thus, consciousness is always a person's knowledge that he exists and that there is a world around him that is different from himself. It is knowledge that is the boundary separating the conscious from the unconscious in the human psyche. Due to the fact that the way consciousness exists is the knowledge of what exists outside of consciousness, and that the image of reality never merges in consciousness with the inner world of a person, consciousness is able to reflect the objectively stable properties of reality.

The process of formation of consciousness as a specifically human, socio-historical form of reflection of reality is inextricably linked with the process of formation of rationality as the ability to operate with concepts, i.e. to think. It is thinking (reason) that expresses the specifics of consciousness in comparison with the psyche of animals. All other psychological processes in humans as a socio-cultural, rather than a biological being, arise only on the basis of and in inseparable connection with thinking, reason.

So, productive activity as an attribute of sociality is inextricably linked with another attribute of sociality – consciousness, human reason. It is reason that is included by anthropologists in the name of the kind of living beings to which man belongs: *Homo sapiens*. However, both of these attributes could develop into stable qualities of a socio-cultural being only due to the emergence of a third attribute of sociality – extra-biological norms regulating human activity.

The process of anthropo-socio-cultural-genesis became possible only because biological laws of survival were replaced by social relations based not on biolog-

ical instincts, but on extra-biological – social norms. The most ancient and most fundamental norms have limited the manifestations of two basic instincts – food and sexual. Ultimately, the emergence, existence, and development of social existence resulted from the fact that unconditional biological instincts began to be opposed by limiting instincts social norms. This means that following a social norm is not a choice between "good" and "bad" sociality, but between sociality and animality, since social norms are an inherent property, i.e. an attribute of sociality, without which neither productive activity nor consciousness can exist [6].

Since productive activity was able to survive and develop in the natural world solely due to the emergence of a system of social relations, this activity is initially based on the cooperation of individuals. It is in the process of real, direct communication with each other that individuals learn and pass on from generation to generation the most fundamental skills, norms and rules of social life and at the same time develop symbolic means of expressing, storing and transmitting social information. The most important of these tools is natural language, articulate speech.

Natural language is inextricably linked with consciousness as an attribute of sociality, since it is a material form of the existence of ideal images of consciousness. With the help of language, thought acquires stable outlines, becomes an objective reality, can be expressed in words and transmitted to other people. Language acts as a consciousness practically given in communication, objectified in the word. Language serves as a means of exchanging thoughts, knowledge, and experience, connecting not only people of a given society or generation, but also people of different generations and historical eras.

The analysis of sociality attributes indicates that sociality is not an innate, genetically transmitted human quality. A person is born as just a "biological blank", the transformation of which into a socio-cultural being is possible only in the process of socialization, i.e., familiarization with a social form of existence in the process of upbringing and education. However, even in the life activity of a formed social being, sociality as a special quality of each specific action or deed is not guaranteed by anything other than a person's ability to realize his own actions and reproduce a social being in himself [5].

It should be emphasized that not all human activity as a living being is of a social nature. Very often, we do not see or discover in ourselves a social being, but only a special kind of animal acting according to the laws of natural selection. It is enough to look at acts of violence, cruelty and hatred to see through the socio-cultural "clothes" worn by the individuals who commit them the animal face of instinct, which exposes that these individuals are "of the same blood" as the inhabitants of Nature and that socio-cultural training only more or less successfully hides their biological origin and the essence.

The struggle between social and biological principles in man never stops, and the gap that exists between human and inhuman can be overcome by each of the

people in the blink of an eye, it is only necessary to succumb to the dictates of instinct. Therefore, even with a primitive stone axe in a poorly developed hand a creature of the species *Homo sapiens* breaks out of the realm of biological laws, as it begins to be guided by extra-biological norms. But it is enough to get out of control of these norms – and no technical achievements will save an individual from falling into the biological existence.

The attributes of sociality as a special quality inherent in the beings of the species *Homo sapiens* must be distinguished from the concrete historical forms of existence and manifestation of sociality in real space-time conditions. All the features of the manifestation of sociality characterize culture as a specific way of life of a particular subject [4].

No matter what characteristics representatives of a particular culture possess, only those who are guided not by instinct, but by the social norms, the rules adopted in human society, are considered to be a subject, a personality in any culture. These norms and rules may vary in both content and form, but they always exist and always limit the instinctive actions of the individual.

It is a social, not a natural, not a purely biological form of life activity and its attributes that unite all people – now living, who have ever lived, and those who will live in the future – into a single human race. The one we call a "man", whether he is a hunter or a citizen, an artist or an engineer, a Slav or an Aztec, differs from all other living beings in that he carries out productive, expedient, socially organized and normatively regulated activities, as a result of which a world of "second nature" arises, a man-made world filled with material and spiritual products of human creativity. And that special kind of material systems that originated and exists as a form of vital activity of living beings belonging to the species *Homo sapiens* is called society [3].

When we use the term "society" to refer to a group or community of human individuals, we mean that these individuals themselves form a society, not a herd, flock, or shoal, just because they are conscious, put a certain meaning into their activities, transform natural conditions in accordance with their goals, create material and spiritual means of their own existence and are guided by extra-biological, i.e. social, norms. It is these universal, invariant, and integral features of a human being's social nature that we call attributes of sociality.

Thus, the attributes of sociality are inherent in all people to the extent that they are people, not biological organisms. The attributes of sociality distinguish the human way of exploring the world from the natural way of existence of all other living organisms, and human culture from the forms of existence in the "wild" nature. Ultimately, society is the process and result of the joint life activity of individuals engaged in socio-cultural activities to explore the world around them.

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名字是东斯拉夫文化中家族历史和信仰的体现
THE NAME AS THE REFLEXION OF THE FAMILY HISTORY AND BELIEFS IN THE EASTERN SLAVIC CULTURE

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摘要：本文探讨了前基督教时代东斯拉夫地区命名的传统及其随着基督教传入而发生的变化，以及历史传统对当今命名趋势的影响。

关键词：名字、昵称、父名、姓氏、基督教、迷信、东斯拉夫地区。

Abstract. *The article covers the traditions of naming on the territory of Eastern Slavic lands in pre-Christian times and their changes with acceptance of Christianity, also the influence of historic traditions on the present-day naming tendencies.*

Keywords: *name, nickname, paternal name, family name, Christianity, superstition, Eastern Slavic lands.*

The name of a person is the first and the most ancient sign for them. According to anthropologists, humans started using personal names between 52 and 12 thousand years ago, when they started living in communities and felt the need to address one another directly. They believed that a person's name comes from a plant or an animal, the person can adopt the characteristics of the origin, and the origin becomes the person's protector.

A thousand years ago Slavic people didn't have Paternal names or Family names. They only had personal names and nicknames with clear meanings. Since the population of the land was not so massive at that time, it was easier to give a child a unique name. Acceptance of additional names is connected to the arrival of Christianity in the Eastern Slavic lands. Later it was necessary for registration of the lands and the population for taxation, enlistment or trade.

The first step of socialization of a newborn baby was the choice of their name. According to common beliefs, a person comes to this world keeping genetic inheritance of dozens of generations of different families, including their own. The baby has certain hair color, a certain shape of the nose, eyes, lips, certain skin color

and many other anthropological features. Looking at these features people thought they could predict the baby's destiny. The name was not only the person's marker, but also the marker of their place in social hierarchy. In Eastern Slavic culture, like in many other world cultures, the name was the key to success in life and the code of natural and spiritual connection with the ancestors. The name could also reflect personal features the family wanted to see in their new member. For example, a common Slavic name Lyudmila means "loved by people", Vladimir – "the master of the world", Vlada – "the owner", Vladislav – "the owner of glory", Nadezhda – "hope", Milana – "cute, sweet", Rodislav – "glorifying his family", Krasnomira – "the beauty of the world".

The representatives of higher class often had –slav (glory) or –mir (world) in their namesfor males and –slava and –mira for females.

When young girls got marries their husbands gave them new names as a symbol of a new life in a new family. King Vladimir the Red Sun (960 – 1015) wanted to marry the Princess of Polotsk, Rogneda. After rejection her burned the city down and killed her father and her brothers. He took her by force and gave her name Gorislava ("burning glory"), which she carried until she became a nun under the name Anastasia.

With the establishment of Christianity on Eastern Slavic lands at the end of the 10th century names of Greek, Jewish and Latin origin became more common. Names of Slavic origin were labels pagan and forbidden to use.

Another princess of Polotsk, Predslava, who lived in the 12th century, decided she didn't want to get married, and influenced by her aunt, she went to the monastery and became nun Efrosinia. Efrosinia built churches and monasteries, developed education, rewrote many books by hand and did a lot of charity work. Now she is the Patron Saint of Belarus.

It was only allowed to name babies only through the Church at baptism. People were not used to the new names and adapted them. This is how Johan turned to Ivan, Michael became Mikhail, Theodor was named Fedor, Iuliania was simplified to Ul'yana. Nowadays 85% of common names in Eastern Slavic countries (Russia, Belarus, Ukraine) have non-Slavic origin.

With the spreading of Christian naming traditions it became harder to tell people apart, since the choice if names was limited. Especially when it came to people of the same area, the same age or similar dates of birth. The name to the baby was given according to the Church calendar, where every day was devoted to definite saints or angels. For that reason some pre-Christian names came back.

There was a superstition that a newborn must not be given any name before baptism, so the evil spirits will not hear it and won't get to the newborn while the baby is not under the God's protection. But Christian and pre-Christian traditions were mixed in the minds of people, and very often people had two names: one

given in Church and the other one given in the family. Often parents could simply forget their own child's Christian name or didn't like it, so they used the name they gave the child.

If parents decided to name their child after a relative or an ancestor, they believed that the child could take the same path as the person whose name the child carries. It was important to give your child the name of a good person, kind, hard-working, lucky. They never gave the child the name of relatives who died early, or took their own lives, were addicted to alcohol or had some mental health issues. The same belief was popular in Christian names. If the child is named after a righteous person, they will have a good life, the name of a great martyr will bring bad luck and lots of sufferings in life.

And the names of fathers were turned to paternal names of the child. For example, We have a boy, named Ivan, and his father's name is Pyotr. So, the boy's name is Ivan Petrov (son of Pyotr). Later he became Ivan Petrovich. We have a girl, named Tatiana, her father's name is Fedor. So, she is Tatiana Fedorovna. By the 12th century all the high class people have names and paternal names, 100 years later this tradition was accepted in all classes. Historically it happened, that Eastern Slavic people were the first to establish paternal names, but in many countries they are not used.

Another superstition says that the father and the son can't carry the same name, and the mother and the daughter must never have the same name, or one of them will go to heaven too early, usually, the younger one. There is a story of the Polish actress Barbara Brylska. She gave her daughter her name, and the girl died in a car accident at the age of 20. So, in order not to shorten anyone's life span, children were often given names of their grandparents. Elder children were named after the father's side, younger children carried the names of their mother's parents. This tradition was really strong in Belarus where honoring elderly people is very common.

If the family faced the situation when children died one after another, the parents could give the next born child name Adam or Eve to honor the first people, or they could name the baby after the father or the mother, hoping that the older family member would carry the curse, and the younger member would survive to continue the line. Or parents could give the child the name of the oldest local person, believing that the child would live a long life as well.

Twins were often given similar names for them to have similar destinies: Masha and Dasha, Sasha and Pasha, Mikhail and Matvey, etc.

Nowadays many parents in Belarus try to choose the name that sounds nice in combination with the child's paternal name and last name, others try to give the child the original name, that is not so common. That's how old-fashioned names gain their popularity again. Sometimes, by the name of the child we can guess the

parents' political views: Slavic or Western name, uncommon for Eastern Europe (Michelle, Robert, Rodrigo, Bella, etc).

The idea of family names, or last names appeared in Ancient Rome, originally word "familia" denoted family property, later people, relatives and slaves.

By the 15th century it was common for a person to earn their rank not by their personal achievements, skills and talents, but by the achievements of the previous generations of their family. This rule existed till the 20th century. It was the time when family history really mattered. To have a certain position or rank a person needed to prove that their family was reliable and served well to the king and the country. In order to keep connection with famous ancestors, people established family names.

There is a Belarusian legend about the origin of an old family name Khrebtovich. In the 12th century the Duke of Novogrudok was defeated in a battle. Most of this army dies, the Duke was wounded badly. Luckily, the two remaining soldiers didn't leave him, but decided to carry him back to Novogrodok on their spines. One soldier dies on the way, the other managed to carry the Duke back to his castle on his spine ("khrebet"). And for that he was given the land and the family name Khrebtovich.

In the 15th century merchants and gentry had family names, or last names. After 1861, when serfdom was cancelled in Russia, peasants also must have last names to form documents, so they could migrate to another place for a better life.

The first general population census was held in 1897. This was the time when family names parted from nicknames peasants still had and the three-component names were established: personal name, paternal name and family name, or last name.

There are still common surnames, formed from personal names: Ivanov, Petrov, Emelianenko, etc. Often family names were made from professions (Kuznetsov, Bondar, Pastukhov), places of origin of the family (Tul'skiy, Minskiy, Rostovskiy), names of animals and birds (Voronov, Utkin, Kulikov), animals (Medvedev, Zaytsev, Volkov, Bykov) and nicknames (Sirotka, Lapot', Piskun).

Having a three-component name has a great psychological meaning. It was seen as three layers of energetic defense where the weakest layer is the personal name. By having paternal name the person has the defense of their parents, and the last name mobilizes the whole clan. At times we can hear that someone doesn't like their name and they want to change it. But there's a strong belief that changing the name leads to rapid changes in the future, and no one can tell whether the changes are for the better or for the worse. Legally a person can change their name at the age of 18.

But what about women who get married? Should they change their last name or keep their maiden name? There was just one correct answer: take the husband's

last name. After the wedding a girl turned into a woman and started a new life in a new family. So, she went under protection of a new clan and had a nickname after her husband's name or nickname: Platonikha (the wife of Platon), Liavonikha (the wife of Liavon), Matrosikha (the wife of "matros", a sailor), and such like. She could get her personal name back after her husband's death.

Today, most women in Belarus follow this tradition and change their last name after marriage. But it is not compulsory. If a woman likes her last name better or when changing the last name is too troublesome due to bureaucracy (in international marriages, for example), or if she is a celebrity who made her name already, she can keep her maiden name. There are also cases when the spouses and their children carry double last names: the wife's maiden name and the husband's last name.

The name are not only words in documents. It carries the history and energy of the family, it shows the world where the person belongs, who was before them, who stands behind their back. The name is a part of the inner code that shows who we are and what we are, where we are from and where we go. No surprise, that many psychologists say, that all people feel pleased when they hear their names called out.

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消费社会中的神经营销心理技术是对大脑的欺骗
PSYCHOTECHNOLOGIES OF NEUROMARKETING IN CONSUMER SOCIETY AS A DECEPTION OF THE BRAIN

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摘要：本文探讨了心理技术如何通过操纵手段欺骗大脑，并指出神经营销技术对大脑的负面影响。消费社会中心理疾病的增多与通过操纵手段增加多巴胺的分泌有关。操纵性社会环境的营造是西方消费社会模式的体现。为了增强心理抵御操纵的能力，建议加强精神教育和情商培养。社会人性化是我们时代的必然任务。

关键词：大脑欺骗，大脑奖励系统，神经营销心理技术，情商，操纵性社会环境。

Abstract. *The article presents the manipulative use of psychotechnologies to deceive the brain. The negative impact of neuromarketing techniques on the brain is noted. It is stated that the rise in psychological illnesses in consumer society is linked to the increased production of dopamine through manipulation. The creation of a manipulative social environment is a reflection of the Western model of consumer society. To increase mental resilience to manipulation, it is proposed to strengthen spiritual education and the development of emotional intelligence. The humanization of society is a necessary task of our time.*

Keywords: *brain trickery, brain reward system, neuromarketing psychotechnologies, emotional intelligence, manipulative social environment.*

Advances in psychology are applied not only to a wide range of psychotherapeutic, sociocultural, pedagogical, and other humanitarian problems, but also to the construction of a manipulative social environment in general and the management of human behavior as potential market consumers in particular. Applied aspects of psychotechnology are being developed within the framework of neuromarketing, one of the leading techniques of which is the use of the brain's natural response to positive stimulation in the form of rewards. In evolutionary terms, this is a means of motivation and correct choices that promote survival [3]. The production of dopamine stimulates an improved mood, heightened desires, and increased motivation.

This psychotechnology is a feedback loop that involves guiding any action toward a predetermined outcome. Every moment is subjectively assessed as unsuitable for a break or stop, requiring repetition. The cycle has no endpoint, yet creates the illusion of a necessary completion. The brain's reward system is characterized by the release of dopamine to encourage continued effort toward achieving a given goal, driving a compulsive (obsessive) desire to repeatedly repeat a given action.

This principle of the brain's reward system is most clearly used in marketplaces, the gaming industry, and even in the formation of a given image within the context of public opinion management [4,], [5]. Gamification elements that precede shopping in hypermarkets, by engaging potential buyers in game-like activities such as contests with points, the opportunity to become leaders, unexpected bonuses, wins, and prizes, help maximize investments. In particular, customer loyalty systems, which represent game elements, are used. Essentially, the consumer is forced to make purchases on certain days or hours. The unexpectedness and unpredictability of receiving a reward increases the production of dopamine. Natural curiosity promotes focusing attention on the game aspects of reality, but training emotional intelligence allows one to block manipulative stimuli [1], [2]. The limbic system of the brain, which is figuratively called the basic emotional processor, is responsible for a faster response to stimuli compared to consciousness. The challenge in countering neuromarketing manipulation is recognizing true and false rewards, and subsequently, controlling emotions and desires, curbing urges, planning actions, and making decisions. Gamification can also be used to teach self-control skills for educational, motivational, developmental, and other purposes.

It's important to remember that exaggeration of the value of a reward occurs when there's a risk of losing an object. Anticipating or fearing frustration of needs prompts a person to strive to retain the object that evokes pleasure. Fear of loss often outweighs the desire to preserve or fulfill desires. Depending on the personality type, the current mental state, and the specifics of the current situation, the reaction to frustration can manifest itself in emotions such as anger, fear, or despair. The conflict between conscious and unconscious intentions manifests itself in a person's behavioral pattern. Ultimately, mental overstrain leads to nervous and mental exhaustion and loss of desire.

Thus, dopamine-stimulating techniques allow for the manipulation of consumer attention and are used to hack the natural functioning of the brain's limbic system. The rise in psychological illnesses in a consumer society is linked, in part, to the artificial production of dopamine through manipulation. In such cases, the brain is tricked into anticipating pleasure. Psychotechnologies are both a means of creation and a weapon of consciousness destruction, depending on their intended purpose, raising the challenge of increasing the humanization of society and con-

sciously rejecting the model of overconsumption. The dopamine-driven market architecture is dangerous for the mental health of society as a whole and the psyche of individuals. Spiritual education in line with traditional Russian values, the development of emotional intelligence, and the strengthening of self-discipline, combined with elements of asceticism, can help overcome the negative impact of the Western lifestyle and the manipulation of consciousness.

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摘要：本文简要介绍了19世纪最杰出、最独创、最具创造力的人物之一——亚历山大•奥西波夫娜•伊希莫娃（Alexandra Osipovna Ishimova）的生平。她是一位才华横溢的俄罗斯儿童文学作家和翻译家，曾担任1842年至1863年期间在圣彼得堡出版的儿童杂志《星星》（Zvezdochka）的编辑，在俄罗斯儿童文学史上占有重要地位。

关键词：儿童教育，作家，翻译家，编辑A.O.伊希莫娃。

Abstract. *The article presents brief biographical information about one of the most bright, original and creative personalities of the 19th century, a talented Russian children's writer and translator, editor of a magazine published in St. Petersburg during the period from 1842 to 1863children's magazine "Zvezdochka" Alexandra Osipovna (Iosifovna) Ishimova, who occupies a worthy and honorable place in the history of Russian children's literature.*

Keywords: *children's education, writer, translator, editor A.O. Ishimova.*

With the arrival of the outstanding teacher and innovator K.D. Ushinsky (1824–1871) (Fig. 1) at the St. Petersburg Imperial Smolny Institute for Noble Maidens, the teaching process of various academic subjects improved significantly, which was immediately noticed by the students.

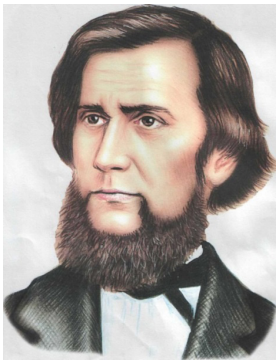

Figure 1. *Konstantin Dmitrievich Ushinsky.*

Thus, Maria Uglichaninova, a graduate of the Smolny Institute for Noble Maidens, recalled in her memoirs about her years of study: “In the ‘blue’ class, we made do with the children’s magazine ‘Zvezdochka’” [Uglichaninova M.S., 2017]. Today’s schoolchildren and high school students are not familiar, or are only slightly familiar, with the publications of children’s magazines in Tsarist Russia devoted to issues of their humanities education. One of such magazines, specially created for institutes for noble maidens, was the children’s magazine ‘Zvezdochka’, published monthly in Russian in St. Petersburg from 1842 to 1863 [Stykalina O. S., 2004;Brockhaus and Efron Encyclopedic Dictionary. T. IXa.-P. 777-778].It was one of the first magazines for children. At that time, other magazines were also published for children in Russia: Children’s reading, Children’s reading for the heart and mind, Friend of youth, Fun and Stories, Sincere word, Toy, Little World, Snowdrop, Family evenings, Path, Work and play [Kolesova L. N., 2014].

The leadership of the editorial board of the magazine “Zvezdochka” was entrusted to an outstanding Russian professional writer and translator Alexandra Osipovna Ishimovat (December 25, 1804 (January 6), 1805 – June 16, 1881) (Fig. 2)[Averianova L. N.2003; Antipova I. A., 2003;Bykov P. A., 1995: Fainstein M., 1989].

Figure 2. *.Alexandra Osipovna IshimovA.*

The active employees of the journal, its authors and assistants of A.O. Ishimova were Russian philologist, linguist, literary scholar, folklorist, lexicographer, Doctor of Russian Literature, Academician of the St. Petersburg Academy of Sciences

Figure 3. *Yakov Karlovich Grot.*

Professor Yakov Karlovich Grot(December 15 (27), 1812 – May 24 (June 5), 1893) (Fig. 3) [Vengerov S. A., 1893; Ospovat A. L., 1992].

Besides him, a children's writer collaborated with the magazine. Anna Petrovna Sontag(July 6, 1785 – March 18, 1864) (Fig. 4) [Beketova N. A., 1927; Nikolaev A. S., 1989].Her "Sacred History for Children, Selected from the Old and New Testaments," which went through nine editions and for which she received the Demidov Prize, was particularly successful. Also well-known are her "Magic Tales" (1868), "A Gift for Children" (1861), and "Christmas Eve" (1864). Incidentally, Walter Scott, after reading Anna Sontag's Russian translation of his "Edinburgh

Dungeon," favorably remarked: "It provides pleasant nourishment for my authorial vanity." Anna Sontag's collections, "A Gift to the Children" (1861), "Christmas Eve" (1864), "Fairy Tales" (1868), and others, enjoyed great popularity. But she achieved her greatest fame thanks to "Sacred History for Children, Selected from the Old and New Testaments" (1837).

Figure 4. *Anna Petrovna Sontag.*

I worked a lot in the magazine and Augusta Voronova (real name and surname Anna Dmitrievna Ulyanova, married name Werner(January 7, 1813 –?)[Bykov S. N., 1989; Masanov I. F., 1960]. She is Voronova is the author of the short story "Tsarskoye Selo" and the novellas "A Tale of the Past," "Bertha Hohenbusch," "My Grandfather and My Grandmother," and others. Voronova also compiled a children's "Russian Alphabet" and wrote the book "The First Step. Reading for Young Women."

To develop children's memory, the magazine featured short poems in French, German, and English that could be easily memorized. Various riddles and charades were also published. To develop children's literacy, the magazine published children's letters with errors, with corrections in the notes. Over the years of Zvezdochka's publication, many stories were borrowed from foreign literature. Almost every issue featured notes recommending children's reading, both Russian and foreign, primarily religious and monarchist books. The most famous are "Stories of an Old Woman", "Sacred History in Conversations for Little Children", "The Bell", "First Reading and First Lessons for Children", and "Stories from Sacred History for Peasant Children".

In addition to the original works of A. O. Ishimova, as editor, she published many translations of various children's books from English and French on the pages of the magazine "Zvezdochka". The magazine "Zvezdochka" did not contain fairy tales, because A. O. Ishimova believed that they would only "burden children's imaginations with the whims of spoiled taste" and form "harmful or even erroneous ideas in the mind and imagination. "Translations by A.O. Ishimova, the first Russian professional children's writer and translator, was highly valued by V.G. Belinsky, N.A. Dobrolyubov, A.S. Pushkin and other famous literary figures. Thus, **V.G. Belinsky** [Belinsky V.G., 1979] noted the merits of Ishimova's translations, in particular her main book, "The History of Russia in Stories for Children," which was based on N.M. Karamzin's "History of the Russian State."

N.A. Dobrolyubov was quite critical of both the publications that were published in the pages of Ms. A.O. Ishimova's magazines, as well as the volume and cost of the magazines. [Dobrolyubov N. A. Collected Works in Nine Volumes. Volume Five. Articles and Reviews (July–December 1859). Moscow–Leningrad, State Institute of Art and Literature, 1962]. Thus, he writes: "The dimensions of 'Zvezdochka' are rather meager. Six books published in the first half of this year comprise two volumes of 214+213 pages. However, the annual price of the magazine is 5 rubles per issue. Meanwhile, for 6 rubles, 'Detsky Zhurnal' gives 150 pages each month, and 'Podsnezhnik' and 'Sobesednik'—200 or more pages." Further, "Unfortunately, the editors of 'Zvezdochka' and 'Rays' think very little about the contemporary movement of ideas and remain, as before, very devoted to lofty abstractions and ideal aspirations that have no practical application. In both magazines published by Mrs. Ishimova, we find almost no echo of contemporary social phenomena and the various questions raised recently in our country and in Europe."

As for A.S. Pushkin, on January 27, 1837, literally a few hours before the tragic duel, he wrote his last letter to Ishimova: "Dear Empress Alexandra Osipovna, I deeply regret that I will not be able to attend your invitation... Today I accidentally opened your 'History in Stories' and, involuntarily, became engrossed in it. This is how one should write!"

The magazine had sections on belles letters, science, criticism, and miscellany. Famous writers of the time contributed to the magazine, but the largest number of publications were by A. Ishimova herself. The magazine consisted of two sections—one for younger and one for older children. In 1850, the magazine underwent a reorganization: the older section was separated into a separate magazine for young women, "Rays" (from 1850 to 1860), while "Zvezdochka" (Little Star) remained a magazine for younger children. In 1851, the magazine's design changed. The top of the cover was taken over by an eight-pointed star, combined with the magazine's title, and beneath it, children reading and playing outdoors. In 1857, the cover was updated again, largely resembling the previous one, but with a different children and setting. Along with this new design, the previous, unillustrated title page was also used. In 1860, significant adjustments were made to the magazine's design again: the cover now depicted a mother and children reading the magazine together, and the texts were occasionally accompanied by color illustrations.

In January 1845, in a review of six children's books by A. O. Ishimova, V. G. Belinsky noted: "*"And what a delight—Ms. Ishimova's 'Reading for Young Children'! What rules, what pure morality, so many instructions, and what striking examples, taken from the world of children's books, support all this!... The book*

<…> is filled with maxims, and children can easily gain from its wisdom for their entire lives."

The creative legacy of A.O. Ishimova and K.D. Ushinsky in the field of education and upbringing of children is still in demand today, as evidenced by the publication of the book "Easter of Our Childhood."

It should be noted that among the winners of the Demidov Prize were three children's writers-A. O. Ishimova (in 1841), L. A. Yartsova and A. P. Sontag [Mezenin N.A., 1987]. Scientific works nominated for the prize were reviewed by academicians, and their reports were published in books published by the Imperial Academy of Sciences on the awarding of prizes established by P.N. Demidov.

With her works, she tried to teach children who read kindness, rejection of selfishness, and strove to instill in them a love of work and nature, and a respectful attitude towards the cultural heritage of their ancestors.

Soviet and Russian philologist, source scholar and historiographer, Doctor of Historical Sciences, professor **Elena Viktorovna Chistyakova** (November 16, 1921 – March 2, 2005)writes: "A first acquaintance with Ishimova's early works allows us to conclude that she made a significant contribution to the history of Russian culture as a popularizer of Russian history, as an excellent stylist who combined scientific presentation with figurative language, as a teacher who used visual aids in teaching and sought to combine history with modernity, and, finally, as a champion of women's education."

Here are some of A. O. Ishimova's works that have survived to this day:

1845 - collection "Reading for children of the first age";

1846 - "Vacation 1844 or Trip to Moscow";

1847 - "Konchaka, the Tatar Princess";

In 1856 - "First reading and first lessons for children";

1867 - a textbook of Russian history for girls, "Abridged Russian History";

1876 - encyclopedia on natural history "Stories for children from natural history";

1878 - "Stories from Sacred History for Peasant Children";

1881 - "On the Lord's Prayer for Little Children" and "To Russian Children".

It can be concluded that A.O. Ishimova's journalistic work as a translator and publisher of children's magazines significantly contributed to the education of Russian children and is an excellent example of philanthropy.

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为儿童音乐学校的残疾学生创造环境条件和教育轨迹
CREATION OF ENVIRONMENTAL CONDITIONS AND EDUCATIONAL TRAJECTORIES FOR STUDENTS WITH DISABILITIES IN A CHILDREN'S MUSIC SCHOOL

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注释：本文详细探讨并描述了补充教育环境中残疾儿童的神经生理学特征及其实际意义。此外，本文还阐述了补充音乐教育体系的目标和宗旨，以及在儿童音乐学校中根据残疾学生的具体需求，为他们量身定制个性化课程的可能性。

关键词：儿童音乐学校的培训，残疾学生教学的具体要求，残疾儿童的神经生理学特征，以及在儿童音乐学校和儿童艺术学校中为残疾学生开发适应性课程的具体要求。

Annotation. *This article examines and describes in detail the neurophysiological characteristics and practical implications for children with disabilities in supplementary education settings. It also describes the goals and objectives of the supplementary music education system and the possibility of teaching such students in children's music schools using individual, tailored programs tailored to their specific needs.*

Keywords: *training in a children's music school, the specifics of teaching students with disabilities, neurophysiological characteristics of children with disabilities, the specifics of developing adapted programs for students with disabilities in children's music schools and children's art schools.*

The training of students in the supplementary education system includes instruction in playing musical instruments, musical literacy, sight-reading, ensemble playing skills, mastering the basics of accompaniment, and the necessary skills for independent work.

Identifying a child's giftedness during the learning process allows for the targeted development of their professional and personal qualities necessary for continuing their professional education.

The existing curricula at the Children's Music School are developed in accordance with federal state requirements for additional pre-professional general education programs in the field of musical arts and are aimed at providing students with an artistic education, as well as aesthetic education and spiritual and moral development.

The course of study is 8 years as part of the Pre-Professional Music Arts Program or 4 years as part of the General Arts Development Program.

Teachers are entrusted with the responsible task of ensuring the musical development of their students. Individual lessons provide the necessary conditions for the careful, comprehensive study and development of each child. Students' musical development goals are outlined in individual plans.

In the supplementary education system, the greatest emphasis is placed on preparing gifted children for admission to secondary and higher education institutions offering professional educational programs in the field of musical arts. Therefore, classes should develop a comprehensive set of knowledge, skills, and playing abilities that enable them to perform musical works in accordance with the required level of musical literacy and stylistic traditions, as well as an understanding of the reasons for the success or failure of their own academic endeavors, the identification of the most effective methods for achieving results, and much more.

In music education, of course, a range of teaching methods is used, and individual instruction is inextricably linked to the student's development, taking into account his or her age and psychological characteristics.

Starting from the first grade, during the school year, the student must study not only 20-25 musical works of various forms, but also master musical theory disciplines, as well as choir classes, where they are also introduced to and master the choral repertoire.

From their first year of study, students must independently learn musical pieces of various genres and styles, independently overcome technical difficulties in learning musical pieces, as well as sight-read and transpose musical pieces of various genres and forms, and more.

From the very first lessons, they need to be able to analyze musical notation from the first encounter, perceiving it graphically: I see a note and press a key, without having to remember its name. Practical lessons begin with proper posture at the instrument, as well as self-control and sound awareness.

Currently every year, the supplementary education system is seeing more and more students with disabilities, both primary and secondary.

Modern research in cognitive neuroscience allows for a deeper understanding of the neurobiological underpinnings of various developmental disorders in children. The use of methods such as electroencephalography (EEG) and functional magnetic resonance imaging (fMRI) provides a unique opportunity to identify specific patterns of brain activity and functional connectivity characteristic of various disorders. These findings are not only of theoretical significance but also of direct practical value for the development of individualized learning and development strategies for children with disabilities. EEG studies of motor function in some children with ASD have revealed specific disturbances in cortical networks. One key area of study is the mu rhythm (8-13 Hz) generated in the sensorimotor cortex. Typically developing children exhibit mu suppression both during action execution and when observing the actions of others, which is associated with the mirror neuron system. However, in children with ASD, the picture is heterogeneous. While some studies do find a lack of mu suppression during movement observation, others find no significant differences compared to controls, particularly when children observe the actions of familiar people.

Children with ASD, particularly those with high-functioning autism, also exhibit weaker movement-related potentials during the preparatory phase, suggesting a deficit in the supplementary motor area, which plays a key role in planning voluntary movements. Functional connectivity studies show that children with ASD exhibit increased connectivity in the left parietal-central areas during practical tasks, compared to typically developing peers. This may reflect compensatory mechanisms or less efficient neural network organization.

Effective interventions and practical implications

• Targeted motor interventions

Corrective programs should include exercises aimed at developing motor planning and imitation skills.

• Using visual support

To compensate for the lack of internal planning, the use of step-by-step visual instructions and action algorithms is effective.

• Building on strengths

It is necessary to identify and use the preserved cognitive and sensory channels for learning and social adaptation.

The largest meta-analysis of structural and functional studies of ADHD in children and adolescents found no consistent, statistically significant abnormalities in specific brain regions.

This suggests that the pathophysiology of ADHD lies not in a persistent regional abnormality, but in a disruption in the interactions of distributed brain networks. However, more focused analyses reveal abnormal activity in components of the frontostriatal pathway (left pallidum/putamen, left inferior frontal gyrus), dysfunction of which is associated with symptoms of hyperactivity, impulsivity,

and inattention. An important conclusion is the extreme methodological heterogeneity of ADHD studies, which complicates the identification of universal neurobiological markers.

Research shows that children with ADHD, in addition to cognitive deficits, often exhibit difficulties in the social-emotional domain, including emotion recognition and behavior regulation. A systematic review of social-emotional interventions for deaf and hard-of-hearing children (who are also at risk for social-emotional problems) indicates the effectiveness of programs aimed at developing emotional literacy and social skills. This suggests that targeted development of social-emotional intelligence may be an important component of helping children with ADHD, compensating for deficits associated with dysfunction of the frontostriatal pathways.

Effective interventions and practical implications

• Development of management functions

Training executive functions through cognitive training, games with rules and behavioral therapy methods.

• Structuring the external environment

Create a predictable, organized environment with clear rules, minimized distractions, and the use of timers.

• Targeted development of social-emotional intelligence

Implementation of programs aimed at developing emotional literacy and social skills.

Many students at the Children's Music School and the Children's Art School, especially at the initial stage, have speech impairments, which particularly pose difficulties in choir classes in the instrumental performance department, as well as solo and ensemble singing in the vocal departments.

Effective interventions and practical implications

• Early stimulation of language development

Active use of rhythmically organized speech, songs and poetry to stimulate the theta rhythm associated with speech processing.

• Focus on left-brain networks

Classes should be aimed at activating and strengthening connections in the left hemisphere, for example, through fine motor skills and rhythmic exercises.

• Differential diagnostics

Identifying atypical connectivity patterns may allow for early intervention.

• Universal support for attention functions

Correctional programs should include components aimed at developing voluntary attention and cognitive control.

In children with various visual impairments, cross-modal plasticity occurs—brain areas normally responsible for processing visual information begin to process tactile and auditory information, which can enhance these modalities.

Children with visual impairments demonstrate significantly lower levels of daily moderate and high intensity physical activity (less than 30 minutes per day), which is due to internal barriers such as spatial orientation and fear of movement.

Effective interventions and practical implications:

• Structured training programs

Planned and controlled exercises, such as balance training and others.

The use of audio-tactile exergames in work will enable students with disabilities to achieve moderate levels of physical activity while enjoying it. Incorporating social-cognitive interventions based on social-cognitive theory, which teach children self-regulation, goal-setting, and overcoming barriers, into work with these students can increase their physical activity levels.

Deafness causes a massive restructuring of the brain. Areas of the temporal cortex that normally specialize in processing auditory information (the primary auditory cortex) begin to process visual and tactile information. This phenomenon is called cross-modal plasticity.

The basis of cerebral palsy is damage to the motor areas of the cortex, pyramidal tracts or subcortical structures, which leads to a disruption in the planning, control and execution of voluntary movements.

The brain of a child with cerebral palsy has difficulty processing and integrating sensory information (proprioception, tactile sensations) to correct movements, which exacerbates motor difficulties.

Secondary impairments associated with damage to other areas of the brain are often observed, such as dysarthria, cognitive and sensory impairments, and decreased speech intelligibility. Difficulties with attention, visual-spatial processing, and other specific learning profiles may also be present. Decreased speech intelligibility limits communicative participation, which can lead to social isolation, reduced quality of life, and emotional difficulties.

Therefore, if a student with disabilities is entering the supplementary education system, it is imperative to consider a number of factors when developing adapted or original curricula. Furthermore, such curricula must employ a highly individualized approach, taking into account the specific needs of each student and the child's specific neurophysiological profile. For example, motor planning deficits in ASD, impaired theta connectivity in language disorders, and the specific features of frontostriatal networks in ADHD. All of this will not only influence positive outcomes in supplementary education for children with disabilities but also ensure effective interventions.

The child's brain, especially at an early age, exhibits high levels of neuroplasticity in response to stimuli. Active interaction with an enriched environment promotes the formation of new neural connections and improves motor function. Sensory and motor deprivation slows development, while a complex, varied, and stimulating environment accelerates it.

Effective interventions and practical implications:

• Principles of motor learning and enriched environments

Creating an enriched environment that encourages active, motivated, and varied movement leads to significant improvements in motor function. This is consistent with the principles of neuroplasticity: the brain changes in response to active experience.

• Purposeful physical activity

The most effective methods are not passive ones, but active, functional training focused on various tasks.

Across a variety of disorders, early development during the period of maximum brain plasticity is critical to achieving the best results in all areas.

If a child has multiple diagnoses, it is necessary to conduct a comprehensive neurophysiological assessment that takes into account the interaction of various disorders and their cumulative effect on the organization of brain networks, since the neural correlates of comorbid conditions are more common and complex.

Support and active involvement of parents in the educational process are an integral component of the successful development of a child with disabilities.

Thus, a modern approach to supporting children with disabilities requires interdisciplinary collaboration between educators, psychologists, special education teachers, and neurologists to create environmental conditions and educational trajectories that not only adapt to external requirements but also specifically stimulate the development and restructuring of essential neural networks in the brain.

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专业发展中的非正式学习：术语、特殊性以及专业社群的重要性
INFORMAL LEARNING IN PROFESSIONAL DEVELOPMENT: TERMINOLOGY, SPECIFICITY, AND THE IMPORTANCE OF PROFESSIONAL COMMUNITIES

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摘要：本文探讨了非正式学习在建筑行业管理人员职业发展中的作用。强调灵活、适应性强且以实践为导向的学习方法的重要性，包括在职培训、指导、辅导、参与专业社群以及利用数字资源进行自我教育。本文指出，非正式学习有助于培养专业能力、沟通能力、管理能力、软技能、职业认同感和学习文化。本文还强调了将此类学习方法融入企业和双元制教育项目的重要性，以确保其能够适应现代挑战、数字化以及劳动力市场的技术变革。

关键词：非正式学习、职业发展、企业教育、在职培训、指导、辅导、专业社群、双元制教育、软技能、数字化、职业能力。

Abstract. *This article examines the role of informal learning in the professional development of construction sector managers. It emphasizes the importance of flexible, adaptive, and practice-oriented learning methods, including on-the-job training, mentoring, coaching, participation in professional communities, and self-education through digital resources. It notes that informal learning contributes to the development of professional, communication, and management competencies, soft skills, professional identity, and a learning culture. It also emphasizes the importance of integrating such learning methods into corporate and dual educational programs, which ensures adaptation to modern challenges, digitalization, and technological changes in the labor market.*

Keywords: *Informal learning, professional development, corporate education, on-the-job training, mentoring, coaching, professional communities, dual education, soft skills, digitalization, professional competence.*

Informal learning is becoming an increasingly important area of professional development for construction sector managers, given the rapid changes and technological advances that are creating a fundamentally new paradigm for manage-

ment activity and requiring new approaches to developing professional competencies.

Informal education is a structural element of corporate education. It is important to understand that this form of educational activity expands the possibilities of additional forms of professional retraining, creates a new quality of in-house educational space, focused on flexibility, individualization and practical orientation, and expands its didactic capabilities.

By expanding the possibilities of corporate training, informal education is becoming a vital tool for developing employees' professional, communicative, and managerial competencies due to its flexibility, practical focus, and high adaptability to the real-world conditions of management. One key aspect is on-the-job learning, which provides employees with the opportunity to master specific skills directly while performing work tasks, thereby ensuring faster and more effective knowledge acquisition. Sharing experiences within professional communities plays a significant role, including participation in forums, industry chats, Telegram channels, and informal meetings where relevant cases, practices, and solutions are shared. Self-education through digital resources—webinars, podcasts, video channels, and articles—also facilitates continuous knowledge refreshment and familiarization with new technologies and approaches.

In the context of developing communicative competencies, informal education provides ample opportunities to develop argumentation skills, active listening, and clear expression through participation in informal discussions and brainstorming sessions. The development of management skills is also closely linked to informal education opportunities. Mentoring and coaching within informal interactions allow managers to share experiences, develop team potential, and foster a culture of support [11].

Informality also has a sociocultural dimension, manifested through informal practices of learning, communication, and organization. In this sense, it is a reaction to institutional closure, the bureaucratization of education, and the standardization of thinking. Informal forms of interaction—from digital platforms to local initiatives—create space for the horizontal exchange of knowledge, for the independent construction of identities, and for emancipation from normative pressures. Thus, informality not only describes specific social phenomena but also performs a critical function in relation to established forms of educational activity and knowledge transfer [6]. In this regard, the concept of informality in scientific discourse is becoming increasingly relevant, especially within the framework of interdisciplinary research in the humanities and social sciences. Informality is viewed not only as a characteristic of educational or communicative practices, but also as an epistemological category that allows us to rethink the very nature of cognition of objective reality.

We can conclude that informality in scientific discourse is not an accidental, marginal phenomenon that provokes chaos and creates an excessive diversity of educational practices, but an essential element of the modern scientific and pedagogical paradigm. It allows pedagogical science to be more open, flexible, sensitive to the educational context, and capable of self-criticism. In this sense, informality is not a rejection of scientific and pedagogical methodology, but rather its complement – a way to return pedagogical science and practice to their humanistic roots, the search for truth not only through formulas but also through dialogue, experience, and the meaning of educational activity. Informality is not a peripheral element of informal education, but its essential characteristic, ensuring freedom of thought, openness to experience, and flexibility in the choice of forms and means of instruction. In this sense, informality is not only a pedagogical category but also the philosophical foundation of the educational process, oriented toward the individual as an autonomous, reflective, and creative subject. In the corporate context, informal learning manifests itself through practices such as on-the-job training, team-based learning, participation in internal workshops, informal consultations, job rotation, and self-learning through digital resources. It does not require strict institutionalization, but can be strategically supported by the company through the creation of a favorable learning environment, access to knowledge, and the encouragement of reflection and development. It fosters a learning culture in which employees not only perform tasks but also continually improve their competencies, analyze their own actions, and generate new ideas [8].

Informal education plays a special role in developing so-called soft skills—communication, critical thinking, emotional intelligence, collaboration, and leadership. These skills are difficult to formalize, but they are crucial for effective teamwork, decision-making, and change management. Through informal interactions, collaborative problem-solving, and participation in cross-functional projects, employees gain experience that cannot be imparted through traditional educational models.

Among the main forms of informal learning, on-the-job training stands out. It occurs while performing professional tasks and is an important component of professional development, ensuring the acquisition of knowledge, skills, and competencies while performing work functions. It takes place outside of formal training programs and does not have a clearly defined structure or certification, but is extremely effective due to its practical focus, contextuality, and direct connection with real production tasks. In today's world, where changes occur rapidly and the demands on employees are constantly increasing, informal learning in the workplace is of particular importance as a means of adaptation, professional development, and the development of innovative potential. The main forms of informal learning in the workplace include observing the actions of experienced colleagues,

participation in team projects, informal consultations, discussion of production situations, mentoring, job rotation, and independent processing of professional information. During the training process, employees learn by gaining new knowledge and experience, learning through reflection, collective interaction, and team solving of practical problems. This type of learning, natural and continuous, is integrated into everyday work activities and does not require special organizational design [3]. This approach also fosters the development of soft skills such as communication, critical thinking, collaboration, time management, and stress resilience. These competencies are difficult to formalize, but they are crucial for effective professional performance, making informal learning systems even more relevant, as they allow for rapid responses to changing technologies, updated standards, and new customer and market demands [10].

Currently, many organizations support informal learning through the creation of a favorable learning environment and substantive aspects of the educational process, including openness to knowledge sharing, encouragement of self-learning, access to information resources, and the development of internal communities of practice. Companies recognizing the value of informal learning invest in developing a corporate culture that encourages learning as part of daily work activities, which ultimately increases staff efficiency, reduces turnover, and promotes career growth [2]. It is also worth noting that informal learning in the workplace is not only a means of professional development but also an important factor in organizational development. It ensures flexibility, rapid knowledge acquisition, motivation for self-development, and the development of competent, adaptive personnel. Another common form is self-education, which involves independent search, processing, and understanding of information. Such forms of learning are characterized by flexibility, voluntary participation, and a high level of personalization. Self-education involves independently acquiring knowledge through reading literature, watching educational videos, taking online courses, participating in professional communities, while informal learning occurs in the process of daily activities [1].

An important form of informal learning is participation in communities of practice—groups of people united by shared professional or interest goals. These communities facilitate the exchange of experiences, discussion of problems, and collaborative problem-solving, which facilitates collective learning and the development of professional identity. Communities of practice can exist in both physical and digital environments, particularly in the form of forums, social networks, and professional platforms [7].

Teaching and coaching are also forms of informal learning. They involve individual interaction between an experienced specialist and a student with the aim of imparting knowledge, providing support, developing skills, and shaping profes-

sional thinking. These forms are particularly effective in corporate environments, where not only technical competence but also leadership, communication, and strategic thinking skills are crucial. Coaching, in contrast to mentoring, focuses not on the transfer of knowledge but on the development of personal potential. The coach acts as a facilitator, helping the training participant understand their own goals, resources, and ways to achieve them. The primary coaching tool is questions that stimulate reflection, self-awareness, and decision-making. Coaching is particularly effective in developing soft skills—leadership, emotional intelligence, strategic thinking, and change management. It is widely used in business, human resources management, psychological counseling, and educational settings [4].

Informal educational events such as conferences, seminars, workshops, and discussion groups also contribute to informal learning. Participation in such events allows one to acquire new knowledge, become familiar with current trends, exchange ideas, and expand professional networks. Although these events may have elements of formality, learning occurs primarily through unstructured interaction and reflection.

Of particular importance in the field of informal learning are educational programs for workplace education, which are an important tool for developing the professional competence of employees in the modern conditions of the transformation of the labor market and the digitalization of production processes [9].

Dual education, which combines theoretical training in educational institutions with practical work experience at enterprises, is becoming increasingly widespread in Russia. According to the conceptual principles of dual education, up to 50% of the training time is devoted to practical work in the workplace, allowing students to adapt to real-world production conditions and develop professional skills [5]. Furthermore, corporate training programs, internal training, mentoring programs, and microlearning programs focused on specific professional tasks are being actively implemented in Russia. Thus, workplace education programs are not only a means of professional development but also a strategic resource for human capital development. They ensure flexibility, rapid knowledge acquisition, motivation for self-improvement, and the development of competent, adaptable personnel capable of effectively responding to the changes and challenges of modern production.

As can be seen from the above, informal learning encompasses various forms that provide a flexible, adaptive, and contextually relevant educational process. Its importance is growing in today's world, where the ability to learn independently, quickly absorb new knowledge, and interact effectively are key factors for professional success and personal development.

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建筑业管理人员非正规教育发展：国际经验分析
INFORMAL EDUCATION FOR THE DEVELOPMENT OF MANAGEMENT PERSONNEL IN THE CONSTRUCTION INDUSTRY: AN ANALYSIS OF INTERNATIONAL PRACTICES

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摘要：本文探讨了将非正式教育方法应用于建筑行业管理人员职业发展的国际经验。强调灵活、实践导向的学习方法的重要性，例如导师指导、参与专业社群、自学和数字平台。本文分析了英国、美国、德国、芬兰、中国和日本的非正式学习模式，并指出了它们的特点、优势和局限性。结果表明，非正式学习能够培养管理能力、适应能力、战略思维和职业流动性，并整合社会、技术和文化资源，从而提升职业发展的有效性。

关键词：非正式教育、职业发展、管理人员、建筑行业、导师指导、专业社群、数字学习、国际经验、培训模式、能力。

Abstract. *This article examines international experience in applying informal education methods to the professional development of management personnel in the construction industry. It emphasizes the relevance of flexible, practice-oriented learning methods, such as mentoring, participation in professional communities, self-study, and digital platforms. It analyzes informal learning models in the UK, USA, Germany, Finland, China, and Japan, identifying their characteristics, advantages, and limitations. It demonstrates that informal learning fosters managerial competencies, adaptability, strategic thinking, and professional mobility, and integrates social, technological, and cultural resources to enhance the effectiveness of professional development.*

Keywords: *Informal education, professional development, management personnel, construction industry, mentoring, professional communities, digital learning, international experience, training models, competencies.*

In the context of radical changes occurring in the construction industry, driven by technological advancement, digitalization of processes, and the increasing complexity of management tasks, the need for continuous professional develop-

ment of management personnel is significantly increasing. Traditional forms of professional development often fail to adapt to new challenges, making it crucial to turn to informal education methods, which have proven themselves to be an effective tool for developing management competencies in public sector sectors that require prompt decision-making, efficiency, and effectiveness.

International experience demonstrates that informal educational practices—such as mentoring, participation in professional communities, self-education, and digital learning—play a key role in developing the competencies necessary for the effective management of construction organizations in the context of the industry's dynamic development.

An analysis of international experience using informal education methods in the professional development of construction management demonstrates that informal learning, as a form of knowledge acquisition outside of formal educational institutions, has deep historical roots. Its origins stem from the natural human need for self-development, sharing experiences, and adapting to changes in the social environment. A retrospective analysis allows us to trace how informal learning has evolved from traditional forms of mentoring to modern digital platforms that significantly expand the informal learning space, engaging a wide range of construction management professionals.

With the development of information technology in the late 20th and early 21st centuries, informal learning has taken on new forms: online courses, video tutorials, forums, social networks, and podcasts. These tools have enabled millions of people worldwide to acquire knowledge without participating in traditional educational programs. UNESCO has repeatedly noted in its reports the importance of recognizing informal learning as part of a lifelong learning system. In particular, the Hamburg Declaration (1997) noted that informal learning contributes to the development of democratic societies, inclusion, and sustainable development [11].

Informal learning, as demonstrated in the works of A. Taug, is an independent activity carried out outside of formal educational institutions, often without clearly defined goals, but with a high level of motivation and practical focus [10]. In the construction sector, this is manifested through the participation of management personnel in professional forums, the exchange of experience in project teams, and the development of new technologies through practice rather than through formal training.

International experience demonstrates the high effectiveness of informal learning methods in the professional development of management in the construction sector. These methods foster the development of adaptive, competent, and strategically minded managers capable of responding to complex technological and social challenges. Researchers believe that informal education, as a flexible and personally oriented form of learning, is increasingly becoming important in mod-

ern society. Public organizations are key players in its implementation, playing a vital role in ensuring access to knowledge, developing civic competencies, and supporting lifelong learning [5]. Let's consider several national models of informal learning for management specialists in the construction sector.

The English model of informal learning is an important component of educational policy based on the principles of inclusiveness, lifelong learning, and a focus on societal needs. The English model is characterized by a high level of institutionalization, state support, and the active participation of local authorities, public organizations, and volunteer initiatives. A distinctive feature of the English model is that informal learning is often integrated with formal qualifications, allowing participants to obtain certificates recognized by employers. Learning Communities—educational communities where learning occurs through interaction, exchange of experience, and joint activities—are also active in the UK. This contributes to the formation of social capital, strengthening civic engagement, and the development of local initiatives [4]. The English model of informal learning exemplifies the effective integration of educational, social, and technological resources. Its experience can be useful to countries seeking to develop lifelong learning, strengthen social cohesion, and improve the quality of human capital.

The American model of informal learning is an important component of the educational system, based on the principles of flexibility, accessibility, and a focus on individual needs. The American model is characterized by decentralization, a variety of forms, and the active participation of civil society in creating educational opportunities outside of formal institutions [6]. One of the key features of the American approach is the recognition of informal learning as a legitimate means of acquiring knowledge and skills, despite the decentralized nature of the model. Decentralization is manifested in support of self-education programs, corporate training, public initiatives, library projects, online courses, and educational platforms. Workplace Learning Programs, implemented directly at enterprises, are widespread in the United States. For example, employees can participate in Workplace Learning programs, which include mentoring, training, experience sharing, library programs, and educational initiatives of public organizations, all of which facilitate professional growth without formal educational process. This approach allows employees to acquire new knowledge without interruption from work. Such programs are supported by both private companies and government agencies, in particular through the Lifelong Learning Accounts (LiLA) initiative [9].

The German model of informal learning Germany is one of the leading examples of countries where informal learning is integrated into the general educational system and is actively supported at the state level. The German model is based on the principles of dual education, lifelong learning, and social partnership, which ensures flexibility, practical focus, and accessibility of educational opportunities

for all segments of the population [6]. One of the key forms of informal learning in Germany is the activity of Volkshochschule – people's universities, operating in most cities and communities. These institutions offer a wide range of courses: language, cultural, technical, health, digital, and aimed at adult students. Education here does not require mandatory certification, but promotes personal development, social integration, and professional mobility [7]. Informal learning is also implemented through professional development programs at enterprises, mentoring, participation in professional communities, online courses, and educational initiatives of public organizations. Within the dual education system, students combine theoretical training in vocational schools with practical training at enterprises, which creates conditions for informal acquisition of knowledge through experience [3].

The Finnish informal learning model is recognized as a global leader in education, and its informal learning model is an integral component of the overall educational system. One of the key features of the Finnish model is phenomenon-based learning, which involves studying real-world phenomena rather than individual subjects. Students explore topics of interest in an interdisciplinary context, using digital tools, group work, game-based methods, and independent projects. This promotes the development of critical thinking, research skills, and self-reflection. Informal learning in Finland is also implemented through digital platforms such as Wilma, Pedanet, and Google Classroom, which allow students and teachers to interact outside the classroom, share materials, receive feedback, and keep educational diaries. Teachers have freedom in choosing teaching methods and tools, allowing them to adapt the educational process to the needs of a specific group of students [1]. The Finnish informal learning model is an example of the successful integration of educational, social, and technological resources. She demonstrates that learning can be flexible, engaging and deeply personal when it is based on trust, freedom of choice and real-world experience.

The Chinese model of informal education is a unique example of the combination of deep cultural traditions, Confucian philosophy, and modern technological innovation. In China, informal education is viewed not only as a supplement to the formal system but also as an independent tool for developing personality, professionalism, and social responsibility. In modern China, informal learning is actively supported by the state as part of its education modernization strategy. According to research, the Chinese educational system focuses on developing critical thinking, creativity, and an unconventional approach to problem solving, which are characteristic features of informal learning. Particular attention is paid to developing individuals who combine individuality with a high level of professional competence [12]. Informal learning is implemented through numerous educational platforms, community initiatives, digital classrooms, and corporate

training. China is actively integrating artificial intelligence into the educational process, creating personalized educational trajectories that allow learning to be tailored to the needs of each student.

The Japanese model of informal education in corporations is a unique phenomenon, combining traditional cultural values with modern approaches to human resource management. It is based on the principles of lifelong learning, collectivism, mutual respect, and continuous improvement, creating a unique educational environment within organizations. Unlike Western models, where informal education is often implemented through external courses, online platforms, or professional communities, in Japan it is integrated into employees' daily activities and is an integral part of corporate culture [2]. One of the key elements of the Japanese model is on-the-job training (OJT), which involves acquiring knowledge and skills directly through the performance of professional duties. Young employees learn through observation, participation in production processes, and performing tasks under the guidance of experienced colleagues. This approach promotes not only professional growth but also a deep understanding of corporate norms and values. A mentoring system, known as the "senpai-kohai" relationship, plays a key role in knowledge transfer, where senior employees (senpai) informally teach juniors (kohai). This model is based on hierarchy, respect, and the mentor's personal responsibility for the development of the mentee. It promotes stronger interpersonal bonds, builds trust, and maintains a high level of motivation. Another characteristic element is the practice of job rotation, which allows employees to gain experience in different departments of the company. This contributes to the development of multidisciplinary competencies, broadens their professional horizons, and deepens their understanding of the organization's internal processes. Rotation is viewed not only as a personnel strategy but also as a tool for informal learning through experience [8]. The concept of continuous improvement (kaizen) is the foundation of the Japanese educational model. Employees are encouraged to engage in daily self-training, seek ways to optimize processes, and make suggestions for improvement. Kaizen fosters a culture in which learning is not episodic, but a continuous process encompassing all levels of the organization. Large Japanese corporations often establish their own education centers or corporate universities, where seminars, training sessions, and group discussions are held. While these forms of training may have some formal elements, they are mostly focused on developing practical skills, sharing experiences, and fostering team cohesion. Assessment of learning outcomes is often informal, emphasizing the reliance on intrinsic employee motivation.

Thus, an analysis of international informal education models reveals that, despite a shared recognition of the importance of lifelong learning, approaches to organizing, supporting, and integrating informal learning vary significantly. The

United States and Great Britain demonstrate significant private sector involvement, particularly from corporations and professional associations actively implementing certification systems, micro-qualifications, and continuous professional development. This allows professionals to flexibly adapt to changing labor markets, but simultaneously creates challenges regarding the alignment of such qualifications with formal educational standards. Germany exemplifies a strong dual system, where informal learning is closely intertwined with vocational training but has limited flexibility in recognizing informally acquired competencies. Finland, by contrast, focuses on personalized educational trajectories and provides government support for lifelong learning, although it faces challenges in motivating adults. In Asian countries such as China and Japan, informal education is actively developing through digital platforms and corporate mentoring, but the quality of content and accessibility to the general population remain problematic.

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