



Editorial

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Technological Transformation: Growing Opportunities and Legal Response to Emerging Risks

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The development of digital technologies and their increasing introduction into various spheres of life opens up new perspectives for humanity, qualitatively transforming the possibilities and even the daily life of people. Automation of work and routine procedures using technologies such as artificial intelligence, machine learning and the Internet of Things increases their promptness and effectiveness, reduces costs and stimulates the development of new types of services and products. The role of the predictive function of analytical tools based on data processing algorithms is also growing.

The technological imperative will determine the future of humanity for many years to come. At the same time, one cannot but note the potential risks generated by it, which require both the scientific interpretation and the formation of legal solutions to overcome or minimize them.

One of such risks, which is already coming into life, is the deepening of the technological gap. The use of digital advantages is not available to all population groups and regions

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of the world. However, the digital inequality, as well as the technological one in general, have an impact on broader socio-economic processes and global development dynamics. It poses problems of ensuring the technological sovereignty of countries as an essential component of state sovereignty, economic growth, innovation activity, and social stability.

In the next issue of our Journal, the reader will find the works of researchers from 13 countries (Bangladesh, Brazil, Egypt, Great Britain, Hong Kong, India, Nigeria, Russia, Singapore, South Africa, the USA, Uzbekistan, and Zimbabwe). The articles are devoted to the problems of overcoming digital inequality, ensuring the cyber interests of states, and countering cybercrime, as well as categorization in the legal space of artificial intelligence (including in the copyright context), automation of legal activities, and development of metaverses.

The first article of the volume is “Intelligent robots, cyborgs, genetically enhanced individuals, chimeras: the future and the challenges of law” (**Irina Filipova (Russia–Uzbekistan)**). The article emphasizes the positive changes in society and law in the context of the digital and biotechnologies’ progress, which ensures the transition of society to the next technological order. Along with that, it states the individual, collective and existential risks brought by the emergence of new physical, digital and cyberphysical entities. The cognitive abilities of the latter can be comparable, and in certain parameters even exceed human ones. This allows for a targeted intellectual impact on technologically advanced integrated Society 5.0, the formation of which is inevitable. The reader will be interested by the legal trajectories of the functioning of intelligent robots and virtual personalities formulated in the article. The author also proposes some innovations in the legal status of technologically and genetically enhanced individuals.

The article “The rise of AI avatars: legal personhood, rights and liabilities in an evolving metaverse” (**Ben Chester Cheong (Singapore)**) continues the discussion of the issues of legal personality and the formation of an adequate legal regime for artificial intelligence. The article presents a new perspective on the problem of the legal personality of AI avatars, as well as addresses the issue of responsibility for their actions based on their differentiation into autonomous and creative entities. The scenarios of the future of the metaverse presented in this paper demonstrate the importance of finding a balance between innovation and the well-being of human civilization.

The development of generative artificial intelligence technologies, which we observe in music, literature, visual and other forms of art, expands the horizons of creativity. At the same time, it actualizes the issues of authorship of works created in this way, and the prospects for solving them are defined in the article “The evolving role of copyright law in the age of AI-generated works” (**James Hutson (USA)**). The author proposes a combined adaptive approach, which implies flexible intellectual property norms and the revised concept of authorship in the aspect of sustainable co-creation with artificial intelligence.

The latter is recognized as a creative tool that expands human capabilities and makes a fundamental contribution to the work originality.

Two other articles in this issue belong to the research cycle on the legal regime of artificial intelligence. The first one is devoted to solving the problem of the legal personality of artificial intelligence and the permissibility of using these technologies in legal activity under the Nigerian legislation (**Oluwaseye O. Ikubanni (Nigeria), Aderemi O. Oyebanji (Nigeria), Alade A. Oyebade (Nigeria)**). The proposals for improving the Nigerian legal framework are aimed at ensuring its compliance with the level of digital technologies development both in the country and in the world. The second article, based on a comparative legal study of digitalization of judicial proceedings in the UK, South Africa and Rwanda, presents a promising model of effective transition to digital technologies in the administration of justice in Zimbabwe (**Taurai Muparadzi (Zimbabwe – South Africa), Ricky Munyaradzi Mukonza (South Africa)**).

Several articles included in this volume are united by a common theme of legal provision of cybersecurity. One of them defines the applicability of the legitimate interests theory to improve legal mechanisms for protecting national interests in cyberspace (**Yassin Abdalla Abdelkarim (Egypt – United Kingdom)**). Another study in the field of international law (**Mohammad Minhazur Rahman (Bangladesh), Tapos Kumar Das (Bangladesh – Hong Kong)**) is devoted to categorizing cyber attacks in the legal sphere and defining legal measures to counter them. The use of preventive cyber countermeasures by states is conditioned by compliance with the principles of legality, due diligence, and proportionality, while ensuring cybersecurity is linked to observing the right to privacy and freedom of speech. An interdisciplinary sociological and criminological study of victimization as a result of cybercrime (**Aminu Muhammad Auwal (Nigeria), Suleman Lazarus (United Kingdom)**) deserves special attention. It analyzes survey results based on the three-part concept of cybercrime (Tripartite Cybercrime Framework), confirming the gap between the global North and the global South. It allows forming the conceptual gender, inclusive and contextual approaches to developing a national legal policy to counter cybercrime in Nigeria.

Another group of articles is devoted to the issues of personal data protection, which is becoming particularly relevant due to the development of digital technologies. An interdisciplinary research is presented in the article “Overcoming illegal cross-border transfer of personal data” (**Dmitry Bakhteev (Russia), Anna Sosnovikova (Russia), Evgeniy Kazenas (Russia)**). The cross-border transfer of personal data is shown both in historical and legal retrospect (including the genesis of the personal data phenomenon since the French Revolution and its subsequent evolution in the 19th and 20th centuries) and from the comparative legal method perspective (the Russian and international experience of legal regulation is analyzed). The work is complemented by the study of technical and technological aspects of data transmission. It allows shaping a model

to detect cross-border data transmission and make managerial decisions, mediated by the optimization of administrative and criminal legislation and represented by the introduction of specialized technical means for detecting unauthorized cross-border flows of personal data. Another article is devoted to the legal aspects of personal data protection in the context of markets digitalization and increasing digital competition (**Kolawole Afuwape (India)**). It denotes personal data as an integral component of the overall competitive market landscape. Based on an analysis of the digital markets' legal regulation, digital services and data management in the European Union, the author proposes approaches to ensuring data privacy in a digital competitive environment.

The persistent and rapidly deepening digital inequality acts as a barrier to the socio-economic and cultural development of countries, regions and the people inhabiting them. It contributes to the strengthening of the negative effect of the identified problems in the field of digitalization. The problem is aggravated in the countries of the global South, but it is also relevant for Russia. In this regard, readers will undoubtedly be interested in an article devoted to defining the legal foundations, existing barriers and parameters of international cooperation in overcoming digital inequality in the context of the transition from the knowledge economy to the data economy (**Ksenia Belikova (Russia), Dias Rafael (Brazil), Evgeniy Kazanba (Russia)**).

In the two years since its foundation, the Journal has managed to establish international cooperation and work with its foreign ambassadors in difficult foreign policy conditions. This work resulted in the publication of the legal research on digital transformations by authors from various countries. This is how we see the mission of the Journal of Digital Technologies and Law – to increase existing knowledge about digital innovations in law by attracting researchers and practitioners from Russia and other countries interested in discussing the most pressing issues on the digital agenda, to spread scientific achievements and experience, not only filling gaps in understanding and interpreting the technological transformation of law and the legal dimension of digitalization, but also forming peculiar points of growth of new knowledge and ideas about law and digital technologies.

The Journal of Digital Technologies and Law promotes scientific cooperation. In eight volumes of 2023-2024, we published the research results of 58 authors from 38 countries (Australia, Bangladesh, Belarus, Brazil, Bulgaria, Cape Verde, China, Cyprus, the Czech Republic, Denmark, Ecuador, Egypt, France, Great Britain, Greece, Hong Kong, Hungary, India, Iran, Italy, Kazakhstan, Macao, Malaysia, Mali, Morocco, the Netherlands, Nigeria, the Philippines, Portugal, Russia, Singapore, South Africa, Spain, Tanzania, Uganda, the USA, Uzbekistan, and Zimbabwe).

The high interest in the Journal of Digital Technologies and Law and its publications indicates the demand for scientific research and new achievements in this field among representatives of the global scientific community (Fig. 1).



Fig. 1. Geography of the visitors of the Journal of Digital Technologies and Law website (162 countries as of December 20, 2024)

We hope that the current issue of the Journal will attract the attention of a wide range of readers, and the published articles will inspire potential authors who wish to present their promising research achievements and developments in the field of digital technologies and law on the pages of our scientific periodical (Fig. 2).

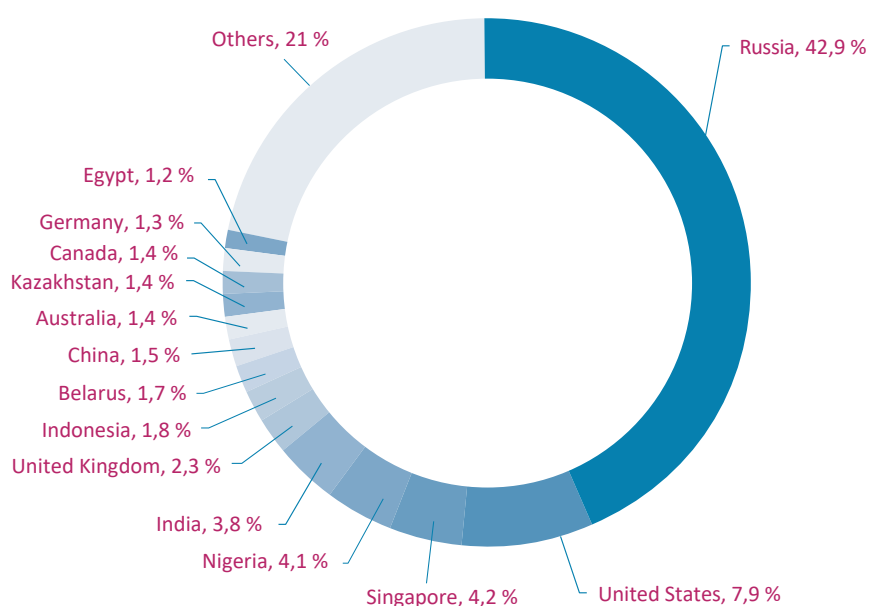


Fig. 2. Statistics of visiting the Journal of Digital Technologies and Law website (as of December 20, 2024)

We hope that in the coming year the international scientific dialogue within the Journal will continue, and new researchers of the problems of interaction between digitalization and law will join the multinational team of its authors – scientists and practicing lawyers, as well as specialists in related fields of knowledge.

We would like to thank the authors, whose articles served as the starting point for scientific discussions and the conceptual foundation for management decisions; the readers, whose inexhaustible interest in the Journal encourages us to move on; the ambassadors, whose activity expands the scope of cooperation with researchers from different parts of the world; the reviewers and members of the editorial board, whose work allows us to maintain a high standard of scientific publications!