

DEVELOPMENT OF THE SPHERE OF LEGAL REGULATION UNDER THE INFLUENCE OF DIGITAL TECHNOLOGIES

DESENVOLVIMENTO DA ESFERA DE REGULAMENTAÇÃO LEGAL SOB A INFLUÊNCIA DAS TECNOLOGIAS DIGITAIS*

Sergey Zenin
Tyumen State University, Tyumen, Russia
sszenin@utmn.ru

Arkady Kornev
Kutafin Moscow State Law University, Moscow, Russia
kornev@mail.ru

Sergey Lipen
Kutafin Moscow State Law University, Moscow, Russia
lihensergey@mail.ru

Denis Shepelev
Kutafin Moscow State Law University, Moscow, Russia
shepdv@yandex.ru

Oleg Tanimov
Kutafin Moscow State Law University, Moscow, Russia
oleg.v.tanimov@mail.ru

Abstract: The aim of this study was to development of the sphere of legal regulation under the influence of digital technologies. This research has been done in a descriptive way, in which the authors examine the issue by examining documents. Basically, a legal research deal with the discovery of the truth and in this way investigates the issue and tries to find ways to answer the questions and objectives by using the evidence. According to the reviews and results obtained, it can be said that legal activity today must be based on a combination of proper professional and technological knowledge to be innovation-oriented. The technological component of activity in any legal profession is not a tribute to fashion, but the need for time. Also, it is possible to make an easily provable assumption that technological civilization concerning the legal sphere will require serious changes in the subjects (spheres) of legal regulation and the content of the professional legal activity.

Keywords: State. Activity. Legislation. Innovations. Society. Law. Technologies. Traditions. Civilization.

Resumo: O objetivo deste estudo foi o desenvolvimento da esfera da regulamentação legal sob a influência das tecnologias digitais. Esta pesquisa foi feita de forma descritiva, na qual os autores examinam a questão através de documentos. Basicamente, uma pesquisa jurídica trata da descoberta

* Artigo recebido em 20/09/2022 e aprovado para publicação pelo Conselho Editorial em 18/12/2022.

da verdade e desta forma investiga a questão e tenta encontrar maneiras de responder às perguntas e objetivos usando as evidências. De acordo com as análises e resultados obtidos, pode-se dizer que a atividade jurídica hoje deve ser baseada em uma combinação de conhecimentos profissionais e tecnológicos adequados para ser orientada para a inovação. O componente tecnológico da atividade em qualquer profissão jurídica não é um tributo à moda, mas à necessidade de tempo. Além disso, é possível fazer uma suposição facilmente comprovável de que a civilização tecnológica relativa à esfera jurídica exigirá sérias mudanças nos assuntos (esferas) de regulamentação jurídica e no conteúdo da atividade jurídica profissional.

Palavras-chave: Estado. Atividade. Legislação. Inovações. Sociedade. Direito. Tecnologias. Tradições. Civilização.

1. INTRODUCTION

The evolution of society, as a rule, is viewed through the prism of the social life organization, in which a key role is played by one or another method of production or the organization of the economic life of society. Its progress has always been associated with industrial revolutions, which gave impetus to productive forces and industrial relations. Industrial revolutions, in turn, were carried out based on significant discoveries in science, which made it possible to organize the system of production of material goods differently. For example, there was an industrial and agrarian revolution at the same time in England, the birthplace of the modern mode of production, which was previously called capitalism. The second freed up a large number of human resources, which had to find their application in industry. Science, which was formed about three hundred years ago, began not only to produce knowledge but also to actively offer to introduce it into production. Technologies are becoming a determining factor in the competitiveness of a country or geographical region. Thus the traditional civilizations are being replaced by technological. It is generally believed that technological civilization originated within the framework of a European (Western) cultural project, which differs from all others in its innovative nature. The development of technologies requires adequate legal regulation. This problem is seriously changing the nature of legal activity in the broadest sense of the word. By virtue of what has been said, the stated topic of the presented research today seems to be highly topical. Undoubtedly, its theoretical and practical significance. Legal science, being a very ancient science, with its centuries-old and decades-old scientific traditions, does not always react vividly to the needs of the time. The problems of traditions and innovations, continuity, and novelty in the development of scientific knowledge are well known. Today, the understanding of state sovereignty and the administrative activity of the state, democracy, human rights, and law as the main regulator of public relations is being modified in one way or another in the era of the fourth technological revolution. Approaches to many aspects of lawmaking, law enforcement, and law protection legal activities are constantly changing and becoming more complicated with the emergence of new technological opportunities that bring the processes of digitalization of public relations with them.

2. METHODS

Modern jurisprudence applies a wide range of cognitive structures. The laws and categories of dialectics continue to be actively used, which serve as a cognitive tool for understanding the state-legal reality, establishing cause-and-effect relationships between phenomena. This is also served by the positivist methodology, which focuses on the study of concrete facts and the derivation of laws of objective reality, along with the materialistic approach, the philosophical and ideological basis of both general theoretical, historical, and branch legal studies. The law regulates relations in various spheres: natural, social, technological, etc. Because of this, universal methods that are included in the methodological arsenal of various sciences – the functional method, the method of system analysis, mathematical (cybernetic), structural, also find application in legal research in general, and in this case, in particular. Private methods of legal science play a special role. A characteristic of legal phenomena is given with the help of the formal legal (descriptive) method. The concrete sociological method allows showing the conditionality of legal categories by social factors. The comparative legal method helps to establish similarities and differences between the legal institutions of different states and legal systems. The differences between various cultures in which the processes of digitalization of public policy and law are developing can be analyzed using a culturological approach. The economic analysis of law contributes, among other things, to the study of the processes of the influence of developing technologies on the political and legal system of society. Political analysis can reflect the influence of political ideologies and interests on lawmaking, law enforcement, and law protection activities.

3. RESULTS

With all the discussion of the historical process – cyclical, linear, ascent from less progressive to more progressive forms of organization of social relations, the position remains unchanged, according to which any changes in a particular sphere of society are predetermined by the events of past eras. Today, no one doubts that we live in a time of rapid development of technology, the technological sphere in general. Nevertheless, humanity is still vulnerable. It depends both on natural systems and on the processes that occur directly in society.

People were afraid, first of all, of natural disasters at previous historical stages. Floods, lightning strikes, earthquakes, droughts seriously complicated the primitive existence of ancient people. However they were aware of themselves as a part of nature, and they had no thoughts of changing it. Until, of course, a certain historical period.

Thus, today nature can still be a surprise and 2021 was no exception. There is a drought somewhere, and there have been torrential rains in some regions, for example, in Germany. As a result, dozens of people died, many were missing. The economy has been significantly damaged by many billions of dollars. The residents of this country, the first economy in Europe, are asking the perplexed question "How could this happen in such a developed country?". Everyone has somehow got used to the fact that natural and social disasters happen in other regions, poor and technologically backward.

That's the point, that nature will not be curbed anyway. All the technologies that modern civilization has developed are powerless against nature. There are growing dangers within the society itself along with threats of nature. By the way, technology is a boon and a threat at the same time. Nothing can be done about it. If the program allows controlling an aircraft without the participation of pilots, from the ground, then where is the guarantee that someone will not be able to interfere in this process and turn the plane into a "live bomb". Any possible scenarios that may become widespread in connection with experiments with the human genome are generally beyond our imagination.

However, as they say, life does not standstill. Evolution continues with all its pros and cons. The task of science is to understand what is happening and predict the development of the future. It doesn't look as encouraging as it seemed a couple of years ago. A person has firmly internalized boundless faith in progress, globalization, technology, and comfortable guaranteed consumption. Everything turned out to be much more complicated than it seemed.

Historians of science and industrial revolutions, as a rule, do not look far into the depths of centuries. They prefer to look for the beginning of the observed processes in the recent past. This is both right and wrong at the same time.

In this regard, the Academician of the Russian Academy of Sciences V.S. Stepin expressed a convincing idea that man-made civilization began long before computers and even long before the steam engine. Its threshold can be called the development of ancient culture, first of all, the polis culture, which gave mankind two great discoveries – democracy and theoretical science, the model of which was Euclidean geometry. These two discoveries – in the sphere of regulation of social relations and in the way of cognition of the world – have become important prerequisites for the future, a fundamentally new type of civilizational progress (Stepin, 2014).

The modern Australian historian John Hirst (2020, p. 23) thinks almost in unison: "... the veneration of the ancient Greeks for mathematics was continued in the scientific revolution, which in turn paved the way for technological innovations".

Traditionally, European civilization has been characterized as technological. However, A.J. Toynbee (2003) impartially but correctly called the culture of Europe a synthesis of technology and nationalism. It was technological superiority that allowed European states to colonize vast spaces far beyond the European continent. The natives, he believes, were simply part of the flora and fauna of

the conquered territory for the European conquerors. Hence such a barbaric attitude towards everything non-European.

No European civilization would ever have developed if it were not for ancient Greece and Rome. Greece, with its complex social structure, polis cities, and the development of scientific knowledge, albeit in the form of individual thinkers, created a special type of society that was focused on innovation. Although the Greeks did not use the word "progress", and perceived time as a kind of cycle, it was they who laid the foundations of what would later be called a man-made civilization.

It is fundamentally different from traditional civilization. Where tradition prevailed, many generations of people (in this sense, the East is indicative) found and mainly reproduced the same structures of social life. The political and socio-economic forms remained unchanged in the Eastern societies of the previous historical epochs: power in the person of a pharaoh or a king and a disenfranchised mass. Even the highest dignitaries were completely unprotected in the legal sense of the word. Neither their life nor their property.

Technogenic civilizations are another matter. There was a different organization of political life from traditional, despotic societies. The policy consisted of heterogeneous layers and classes.

V.S. Stepin (2014, p. 58) writes the following: "The most important, and indeed epochal, world-historical change associated with the transition from a traditional society to a technogenic civilization is the emergence of a new system of values. The value is considered to be innovation itself, originality, and generally new".

It is generally believed that a man-made civilization has existed for more than three hundred years. It is characterized by constant variability, production, and perception of the new, progressive. In a word, it does not standstill. At the same time, it is characterized by aggressiveness, the desire to impose and change what does not fit into its coordinates of values and ideological guidelines. In this sense, there has long been talking of a clash of civilizations, as the world-famous sociologist Samuel Huntington (2005) wrote a book about.

V.S. Stepin (2014) believes that technogenic civilization is defined in its very being as a society that is constantly changing its foundations. Therefore, in its culture, the *constant generation of new samples, ideas, concepts* is actively supported and appreciated (highlighted by us – auth.)

As a rule, the concept of such a complex phenomenon as civilization is used in Russian literature, which was formulated by A.J. Toynbee (2003). In its most general form, civilization is understood as a set of economic, social, political, religious, psychological, and other features that distinguish one type of society from another.

The famous French historian F. Braudel believed that civilization is characterized by culture. It is a collection of cultural characteristics and phenomena.

Such a category as civilization was also addressed in Russian pre-revolutionary literature. This is, first of all, N.Ya. Danilevskii and K. Leontiev. However, they used such construction as the "cultural-historical type". It was he who set the parameters of a particular civilization. N.Ya.

Danilevskii believed that the beginnings of a civilization of one cultural and historical type are not transmitted to peoples of another type. Each type develops it for itself. In his opinion, no universal civilization exists and cannot exist. There is also no universal civilization. The general understanding is not much different from the modern one: "Civilization is a broader concept than science, art, religion, political, civil, economic and social development taken separately, because civilization contains all this in itself" (Danilevskii, 1991, p. 203).

That's the position. It can be accepted or not, but it exists. Although time makes its own adjustments.

In connection with the pandemic, about which little is known yet, many researchers, both in Russia and in other countries, have stated the collapse of the so-called globalization policy and all that it brought with it, that is, the typification of political, economic, social and other systems. The system of the international division of labor, the global organization of the economy of modern civilization, has also collapsed, as they believe.

This is how P. Hanna (2019, p. 236) characterized modern civilization in one of his books, which has become very famous: "Looking at the world through the prism of interdependence generates a new vision of our self-organization as a biological species. The global infrastructure has transformed the world system from isolation to internationalization, from nations to nodal centers. Infrastructure is like a nervous system connecting all parts of the planet's organism; capital and law are blood cells flowing through its veins. Strong interconnections actively shape the world outside of states, a global society that is more than the sum of its parts. Just as the world has evolved from vertically integrated empires to horizontally interconnected countries, today it is transforming into a global network civilization, which map of connecting corridors will replace traditional maps with national borders".

Now it is difficult to say how the development of the future civilization will go. They have already managed to declare the imminent death of the national state with its sovereignty and borders, the ownership of natural resources to all mankind, and so on. We will not specify to whom specifically. This is already clear to every thinking person. Thus, perhaps N.Ya. Danilevskii (1991) is right in some ways. Few people would like to dissolve into the "universal". It is worth agreeing with him in the characterization of an integral part of European civilization, namely English.

He believes and hopes that many will agree with him. An essential, predominant feature in the English national character is the love of self-activity, for the comprehensive development of personality, individuality, which manifests itself in the struggle against all obstacles opposed by both external nature and other people. Struggle, free competition is the life of an Englishman: he/she accepts them with all their consequences, demands them for himself/herself as rights, does not tolerate any restrictions, even if they serve him/her as a relief, finds pleasure in them. Starting from school, an Englishman leads this struggle – and where life does not provide sufficient elements for it, he/she creates them artificially (Danilevskii, 1991).

Perhaps, in this context, we see points of contact between N. Danilevskii and A.J. Toynbee. Nevertheless, there is reason to say that there is something that others would like to use in any civilization. We don't know who invented the wheel, but it's a truly great discovery. In this regard, we should also talk about technologies. Everyone, without exception, wants to get access to technology. Not everyone succeeds. In general, from a technological point of view, the world has been more or less "ordered" for a long time. Some define goal-setting and principles of technological development, others develop technologies. Still, others use them. Provided that they are allowed to them or they can buy them. This requires funds. Not every country has them. Therefore, there should be no illusions. Technologies, discoveries, inventions are organically woven into the fabric of civilizational development. Today, only those countries that can become a leader in the development of technologies, including digital ones, have all the chances to be successful and competitive.

The information society has been talked about in the literature for a long time and with good reason. It is difficult to "tie" it to the national state. Information has become an important resource of the economy and development as such.

In this regard, P. Hanna believes that "information development" – the ability to increase self-esteem through access to information – has become a fundamental condition for both self-improvement and productivity growth.

Connecting to global flows creates jobs and ensures well-being. It was not the Indian economy that unleashed the talents of the country's population, but its connection to digital supply chains, which allowed the country to make an amazing transformation from an importer to an exporter of services. Moreover, countries exporting profitable services, such as programming, functional transaction support, X-ray, and medical consultations, receive a double benefit from attracting much more investment in these sectors of the economy: more investment means more exports (Hanna, 2019).

4. DISCUSSION

Technology is currently the most characteristic of our civilization. As before, many issues that are of a global nature remain unresolved. It seems that some of them will only get stronger. The development of the technologies themselves creates many problems, as mentioned above.

Thus, Klaus Schwab, who does not need any special ideas, calls on the world community to pay attention to some really important issues.

Firstly, it is critically important to be aware of the seriousness and pervasive impact of technology. Technologies are involved in every aspect of human life, they help us interact with each other, support our economy, affect our health and the environment, and allow processing information on which the work of organizations and individuals depends.

Secondly, thinking about a personal or organizational goal can give a clearer perspective on the use of technology. Scientific and technological research requires freedom to go beyond existing boundaries, but we must also try to reconcile new opportunities with the desire for the well-being of society.

Thirdly, the priority of values allows turning beliefs into actions. Strengthening faith in the values proclaimed by the organization can be of great help in this. An ethical code or simply an organizational concept outlining a purposeful value-oriented approach to technology can contribute to the formation of an appropriate culture in an organization or even in an entire profession or industry (Schwab, 2018).

It has to be stated that today no country in the world has a transparent and reliable mechanism for regulating relations in the field of technological development. Even the most advanced states in this aspect have not yet been able to solve these and other problems related to technology. In this sense, K. Schwab (2018, p. 53) is right: "Given the unprecedented speed of technological and social changes during the Fourth Industrial Revolution, one cannot hope that the desired outcome can be obtained solely with the help of state legislation and economic incentives".

Due to the serious lag of the legal sphere from the technological one, the problem of values has become relevant in the academic environment today all over the world. The law is a conservative category in every sense of the word. Especially as one of the social regulators. The task of law is to stabilize social relations in a particular area. Subjects of law get used to this, so their activity proceeds in stereotypical legal forms. It's always been that way. However, the world has changed today. We proceed from the fact that modern technological civilization is constantly changing the foundations of its existence (academician V.S. Stepin). The law is simply unable to keep up with these innovations. There was a time when the law was considered a universal social regulator. Therewith, it has never "reproduced" itself in isolation from other institutions. Rene David (1996, p. 23), speaking about the general features of the countries of Romano-Germanic law and common law countries, notes that "the law was influenced by Christian morality both there and here, and the philosophical currents that dominated since the Renaissance brought to the fore the ideas of individualism, liberalism, the concept of subjective rights".

In other words, the law has never regulated social relations outside of connection with religion, morality, ethics, etc. Now the union of law with other regulators is becoming more important than ever. Technologies, solving certain problems, can create other, more frightening ones. The situation in genetics is particularly alarming. Genomic research can lead to the creation of an artificial human in the full sense of the word. It would seem, the question of what (whom) to consider a person may arise again. If so, then there is a problem of awareness of society, its institutions, subsystems, etc.

Because of this, values should become a guideline for the legal regulation of technological development. In history, technological revolutions have always created the problem of further coexistence.

John Hirst, in his international bestseller "A Brief History of Europe", rightly believes that the events of the twentieth century were largely predetermined by two factors: nationalism, intellectual roots of which were formed in Germany, and industrialization, which began in Britain. Nationalism pushed people to war, and industrialization made it terrible. Weapons were once made by hand. However, high-precision production allowed it to be produced massively and quickly (conveyor). It is quite natural that "... it was weapons that were first made in this way – sixty years before cars" (Hirst, 2020, p. 239).

The Russell-Einstein Manifesto was signed on December 23, 1954, by ten major scholars, Nobel Prize laureates. In particular, it says: "In the tragic situation facing humanity, scholars should gather at a conference to assess the danger that has emerged as a result of the creation of weapons of mass destruction... In this case, we are not acting as members of a particular nation, continent, or religion. As human beings, members of a biological species – a person whose continued existence is called into question..." (Usachev, 1997, p. 245).

As history shows, contracts, agreements, memoranda, and other legal acts cannot serve as a guarantee that the parties who signed them will strictly comply with them. The expert community is so actively appealing to values exactly for this reason. And the interesting thing. Technological civilization, as it seems to us, should preserve the values that were created by previous eras. However, an equally important task is to create new value orientations.

The analysis of modern scientific literature shows that there is a complete consensus on this issue. It is important not to lose it and move in this direction. Otherwise, humanity will only aggravate its situation. The desire to consume as much material goods as possible has already led to negative natural consequences. The situation will only worsen if we do not draw the necessary conclusions.

Jean Baudrillard (2020, p. 123) believes that "A consumer society is such a society of teaching consumption, social training in consumption, that is, a new and specific way of socialization that has appeared in connection with the emergence of new productive forces and the monopolistic restructuring of the economic system with high productivity".

Modern society is distinguished by a special kind of social communication. If earlier communications were increasingly based on the symbolic, now it is based on technology.

Figuratively speaking, J. Baudrillard considers the car a symbol of the industrial era, but the emblem of post-industrial society, in his opinion, can be called a gadget.

Currently, the technologization of society is most evident in the spontaneous spread of digital technologies. They, like other technological innovations, not only solve problems but also create them.

Chris Skinner, the author of the book "Digital Man", is generally optimistic about the introduction of digital technologies in all spheres of society and human life. Since no one will be able to escape the net shortly, human rights, in his opinion, will be better respected. In general: "Every person's life from birth will be recorded digitally, everyone will have access to insurance, savings, and loans, all basic needs will be met, for which an unconditional basic income can be assigned" (Skinner, 2019, p. 113).

C. Skinner, it seems to us, somewhat exaggerates the influence of technologies, in particular, digital ones. He seriously believes that one of the reasons for the poverty of a huge number of people around the world is their lack of opportunity to use the services of banks using information and communication networks. Well, the basic income is mentioned here since robotization in the future may lead to the fact that people simply will not have a job. Therefore, some analysts believe that the coming inequality between people will be dictated by the factor of whether or not they have a job. Indeed, such threats exist. That is why the problem of basic income has become so relevant. It is clear that mass unemployment is a serious social and political threat. Therefore, the politicians of the leading economies of the world have included this issue in the current agenda.

K. Schwab tries to capture the essence of the problem as much as possible. Although it must be owned, he has critics. He is suspected of providing intellectual services to the global financial elite. Even if that's the case, he's doing pretty well. It exposes several legal difficulties using the example of blockchain technology. K. Schwab (2018, p. 119) writes "The following are of primary importance among the issues that need to be addressed: legal uncertainty, building infrastructure for the blockchain, lack of standards, "last mile" problems related to tangible goods, possible contradictions with state and interstate laws on the information. Cryptocurrencies are still at an early stage of development, so the problems of environmental damage, the use of blockchain technology by criminal organizations, and other general issues have not yet been resolved".

5. CONCLUSION

Legal regulation is influenced by the development of technologies, in particular, digital ones. In this context, the sphere of legal regulation is being consolidated. The following are most in need of legal influence and regulation: distributed ledger technologies or blockchain; internet of things; artificial intelligence and robots; advanced materials; additive manufacturing and multidimensional printing; biotechnology; neurotechnologies. As a result, there is a convergence of the physical, biological, and digital worlds.

Legal regulation of technological development will also require serious changes in the content of the legal activity. Traditionally, legal activity is considered as a kind of any professional activity. Therefore, it is the activity of professional lawyers, mainly in the field of lawmaking, law enforcement, and law protection.

The main thing in the transformation of legal activity in the context of regulating the development and application of technologies is that it should take on an increasingly creative and innovative character. The basis of any innovation, according to D. Bell, is theoretical knowledge. In other words, scientific baggage. Skills and abilities cannot serve as any basis for innovation.

It can be said that legal activity today must be based on a combination of proper professional and technological knowledge to be innovation-oriented. The technological component of activity in any legal profession is not a tribute to fashion, but the need for time.

As a result, it is possible to make an easily provable assumption that technological civilization concerning the legal sphere will require serious changes in the subjects (spheres) of legal regulation and the content of the professional legal activity.

ACKNOWLEDGEMENT

The article was prepared with the financial support of the Russian Foundation for Basic Research as part of the scientific project No. 18-29-16114.

REFERENCES

- Baudrillard, J. (2020). *Obshchestvo potrebleniya* [Consumer society]. Moscow, Russia: AST, 384 p.
- Danilevskii, N. Ya. (1991). *Rossiia i Evropa* [Russia and Europe]. Moscow, Russia: Kniga, 574 p.
- David, R., & Joffre-Spinozi, K. (1996). *Osnovnye pravovye sistemy sovremennosti* [The main legal systems of modernity]. Moscow, Russia: Mezhdunarodnye otnosheniya, 400 p.
- Hanna, P. (2019). *Konnektografiya. Budushchee globalnoi tsivilizatsii* [Connectography. The future of global civilization]. Moscow, Russia: Mann, Ivanov and Farber, 432 p.
- Hirst, J. (2020). *Kratkaya istoriya Evropy* [A brief history of Europe]. Moscow, Russia: Bombora, 320 p.
- Huntington, S. (2005). *Stolknovenie tsivilizatsii* [Clash of civilizations]. Moscow, Russia: AST, 603 p.
- Schwab, K. (2018). *Tekhnologii chetvertoi promyshlennoi revolyutsii* [Technologies of the fourth industrial revolution]. Moscow, Russia: Eksmo, 320 p.
- Skinner, C. (2019). *Tsifrovoi chelovek. Chetvertaya revolyutsiya v istorii chelovechestva, kotoraya zhatronet kazhdogo* [Digital person. The fourth revolution in human history that will affect everyone]. Moscow, Russia: Mann, Ivanov and Farber, 304 p.
- Stepin, V. S. (2014). *Istoriya i filosofiya nauki* [History and philosophy of science]. Moscow, Russia: Akademicheskii proekt, 424 p.
- Toynbee, A. J. (2003). *Tsivilizatsiya pered sudom istorii* [Civilization before the court of history]. Moscow, Russia: Airis-press, 592 p.
- Usachev, I. G. (Ed.). (1997). *Antologiya mirovoi politicheskoi mysli: v 5 tomakh* [Anthology of world political thought: In 5 volumes], Vol. 5. Moscow, Russia: Mysl, 839 p.