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ПРАВО ІНТЕЛЕКТУАЛЬНОЇ ВЛАСНОСТІ НА ПРОДУКТ ШТУЧНОГО ІНТЕЛЕКТУ

Анотація. *Штучний інтелект – відносно нове поняття, яке поступово впроваджується в життя суспільства. Вже сьогодні сучасні технології допомагають людині удосконалювати процеси виробництва готових продуктів у творчій сфері. Віднедавна штучний інтелект може виробляти певні продукти самостійно, без участі людини. При таких швидких темпах розвитку техніки, а також штучного інтелекту, законодавці не встигають доповнювати законодавчу базу, що захищає права інтелектуальної власності відповідними нормативно-правовими актами. Це означає, що на даний момент не визначено, кому належить право інтелектуальної власності на продукт штучного інтелекту. Мета дослідження полягає у визначенні таких понять, як «штучний інтелект», «право на інтелектуальну власність», в даній статті вивчена діюча нормативно-правова база в сфері авторського права на продукти штучного інтелекту. Вивчено існуючі теорії щодо штучного інтелекту і способів законодавчого регулювання питань в даній сфері. Для написання даної статті були застосовані такі методи дослідження: інтегральний метод наукового аналізу, метод синтезу, загальнонауковий метод класифікації, метод дедукції. Також були використані метод порівняльно-правового аналізу, юридико-телеологічні методи і метод правового регулювання. У статті виявлені проблеми міжнародної правової системи. Автор з'ясував, що на даний момент право інтелектуальної власності на продукти штучного інтелекту не регулюється правовими нормами. Система правового регулювання права на інтелектуальну власність потребує модернізації. Сучасні технології розвиваються дуже швидко, а правова система не встигає приймати відповідні закони для регулювання таких питань як право інтелектуальної власності на продукти штучного інтелекту, відповідальність за результати діяльності та можливості використання штучного інтелекту. З практичної точки зору, дана тема має глобальне значення. На сьогоднішній день штучний інтелект і сучасні технології успішно впроваджуються в суспільне життя. Вчені-програмісти вже сьогодні створюють програми штучного інтелекту, які роблять наше життя простішим; інвестори фінансують такі організації з метою збільшення капіталу. Однак питання приналежності прав на інтелектуальну власність на продукт штучного інтелекту залишається неврегульованим.*

Ключові слова: сучасні технології, програмне забезпечення, авторське право, результати інтелектуальної діяльності, правова система.

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INTELLECTUAL PROPERTY RIGHTS TO AN ARTIFICIAL INTELLIGENCE PRODUCT

Abstract. *Artificial intelligence is a relatively new concept that is gradually being introduced into the life of society. Even today, modern technologies help a person improve the production processes in the creative field. More recently, artificial intelligence can produce certain products on its own, without human intervention. With such a fast pace of technology development, as well as artificial intelligence, lawmakers do not have time to supplement the legislative framework protecting intellectual property rights with the appropriate regulations. This means that it is not currently determined who owns the intellectual property rights to the artificial intelligence product. The purpose of the study is to define such concepts as "artificial intelligence", "the right to intellectual property". This paper investigates the current regulatory framework in copyright for artificial intelligence products. The author studied the existing theories regarding artificial intelligence and methods of legislative regulation of issues in this area. To write this paper, the following research methods were applied: the integral method of scientific analysis, the method of synthesis, the general scientific method of classification, the method of deduction. Also, the method of comparative legal analysis, legal and teleological methods, and the method of legal regulation were used. The paper identified problems and shortcomings of the international legal system. The author established that at present the intellectual property rights to artificial intelligence products are not governed by legal regulations. The system of legal regulation of intellectual property rights requires modernisation. Modern technologies are developing very quickly, and the legal system does not have time to pass the appropriate laws to regulate issues such as intellectual property rights to artificial intelligence products, responsibility for the results of activities and the possibility of using artificial intelligence. From a practical standpoint, this subject is of global importance. Nowadays, artificial intelligence and modern technologies are being successfully introduced into public life. Scientists-programmers are already creating artificial intelligence software that makes everyday life easier; investors finance such organisations to increase capital. However, the issue of ownership of intellectual property rights to an artificial intelligence product remains unresolved.*

Keywords: modern technologies, software, copyright, results of intellectual activity, legal system.

INTRODUCTION

Every day technologies are being introduced more and more into the life of modern society. The humankind has faced the problem of insufficient legal regulation of issues related to artificial intelligence. Currently, the introduction of artificial intelligence into the life of society is only in its infancy, but even now exist precedents pointing at the necessity of improving the regulatory framework. Problems arise from the insufficient degree of study of such a concept as artificial intelligence. Law-

yers and scientists have only recently begun to think about this issue globally and actively discuss legal regulation in modern technologies and products of artificial intelligence. Modern legal literature contains no specific definition of the concept of "artificial intelligence". There is also no clear distribution of legal responsibility for the products of artificial intelligence, and the issue of rights to intellectual property produced in this way remains unresolved [1].

Developments in the field of artificial intelligence and robotics are among the most funded to date. International companies are investing billions of dollars in this area. Modern technologies allow introducing artificial intelligence into various spheres of human activity and constantly improving them. More and more tasks that humans used to perform are being delegated to software with artificial intelligence. Also, this technology allowed to solve problems that were previously not subject to human control or were difficult to handle. Development in the field of artificial intelligence can solve a set of difficult problems for humanity [2]. The first and foremost challenge is the ability to study the human brain, to understand the way it functions. The second, no less important task, is the ability to develop and implement programmes in everyday life of a person that will be useful in periodic or daily use.

Artificial intelligence is a technology based on an intelligent machine or intelligent computer software. Artificial intelligence provides a machine or software with the ability to perform creative functions that are inherent in humans. Artificial intelligence in systems of software and machines can copy human behaviour to performs the tasks assigned. This happens by means of collecting information and gradual learning based on the accumulation of acquired knowledge. Artificial intelligence technology is already being used in various industries [3]. For example, in programming chat bots, this technology is used to improve communication with a person. Artificial intelligence quickly analyses chatting behaviour and simulates appropriate responses. Artificial intelligence is also used to program "smart assistants" – this technology helps the software search and filter information from the Internet and optimise data and tasks. Also, artificial intelligence technology has long been used for recommendation systems at various sites on the Internet. For example, it is used to generate a list of recommended films, TV shows or programmes for viewers by analysing previously viewed content on a given resource.

Artificial intelligence technology cannot replace the human mind, since at present only the initial version of this technology has been invented. At this stage of development, artificial intelligence constitutes a valuable resource for business projects. It is aimed at empowering people, helping collect, analyse, and simulate a large amount of information. Artificial intelligence in search engines helps find the most accurate data. This process is possible because of the use of neural networks with numerous hidden levels. Currently, only weak artificial intelligence has been developed. It is also called narrow-purpose artificial intelligence. This is the only artificial intelligence that exists today. It can perform up to one task at a time [4]. These can be tasks such as: writing

an article based on the analysis of information and data, playing chess with the software user, monitoring and organising weather data. Artificial intelligence can function in real time and is capable of solving the specific task for which it is programmed. The artificial intelligence developed to date is incapable of thinking independently, like a person does – it can only perform the tasks provided for by the programme.

There is also a second type of artificial intelligence called general purpose intelligence or strong artificial intelligence. The design and development of this technology will open up new horizons for humanity. Such a programme will be able to think abstractly, devise strategies, use its own thoughts and memories, put forward innovative ideas. However, artificial intelligence is already developed enough to generate unique creative products based on the information gathered [5]. Thus, there is software endowed with artificial intelligence and capable of producing poetry, articles, and musical compositions by analysing and collecting existing data. Such works are unique, and accordingly, there are those who want to obtain intellectual property rights for these products. Intellectual property right is the property right to the result of intellectual, creative activity of one person or group of people. The authors' monopoly on the use of products of creative or intellectual activity by third parties is enshrined at the legislative level. Third parties can use the results of intellectual activity only with the permission of the creators thereof.

1. MATERIALS AND METHODS

To write this scientific paper, the author used various methods and techniques of scientific research. The methodology of this research includes the study, search, and analysis of publications, articles, books, scientific papers, and other scientific literature on the subject matter. The author also analysed the legal provisions that form the basis for regulating relations in society concerning issues of intellectual property, rights to intellectual property, as well as issues related to intellectual property rights to artificial intelligence products. During the study of the subject matter, the author used various generally accepted methods of scientific knowledge: dialectical, historical, Aristotelian, synthesis method, systemic method, methods of deduction, induction, and systemic data analysis. The author also used the formal legal method, the methods of analogy, legal modelling, and the method of comparative legal analysis.

The dialectical method was used for an objective and particular consideration of state-legal phenomena regarding the subject of intellectual property law. Connections and contradictions were identified, state-legal phenomena were assessed in terms of quantitative and qualitative aspects. The dialectical method is based on such methods of cognition of information as synthesis and analysis of data, as well as abstraction and the principle of ascent from abstract concepts to specific ones. The historical method was used to examine historical data and information about artificial intelligence and the legal protection of its products. The Aristotelian method constitutes a set of laws and methods of correct thinking, aimed at a more accurate and specific study of

the subject matter. The main techniques that are used in logic are analogy, hypothesis, deduction, and induction. Synthesis, as a method of scientific research, represents a mental or material connection of the parameters of one object, such as properties and features, identified through analysis into a single system. The system method, or the method of systems analysis of data, was used to study the concepts of artificial intelligence, since it is a new and not fully understood phenomenon. The use of the systemic method allowed the author to study the concept of artificial intelligence, as well as the regulatory framework that refers to the protection of intellectual property rights to artificial intelligence products, as an integral system. System analysis is one of the key methods of scientific cognition of state-legal phenomena, regulations acts and laws. It helps to structure and study the relations of the state legal system with social and other phenomena.

The method of deduction lies in directing the process of cognition from the general to the particular. With the use of this technique, the author formed ideas about specific artificial intelligence software. According to the method of deduction, the author considered the general features of development of artificial intelligence and technology in general. The induction technique is the opposite of the deduction technique. It lies in direction of thought process from particular facts and experience to general ones, that is, in the generalisation and drawing of conclusions. With the use of the induction technique, the author studied individual facts about the system of legal provisions and laws according to the subject matter and formed a general understanding of the international legal system in intellectual property law. These two techniques were complementary in the course of the study. The author used a formal legal, or dogmatic method to study the existing legal facts and regulations on the protection of intellectual property rights to artificial intelligence products. This method assumes a consistent and logical study of all of the above. With the help of this method, the author studied the legal provisions for protecting the products of artificial intelligence, sorted out legal responsibility and legal relations associated with the subject matter.

The analogy method helps to establish similarities in certain aspects between objects and concepts that are not identical. The analogy method provides probable knowledge, but does not provide reliable information. The method of legal modelling is used to build models of possible legal situations and find ways to solve them; this method helps to cognise and hypothetically solve certain legal situations. The final method used by the author during the research was the method of comparative legal analysis. This method allowed to study and compare legal documents and the regulatory framework of different countries, it helped to compare and draw conclusions about the degree of study of the problems and the quality of legal regulation of intellectual property rights in the context of artificial intelligence in Moldova and the world. To explore the theoretical side of the issue of artificial intelligence, the author used a theoretical basis, which includes the scientific articles of the following scholars: Moriggi [6], Clifford [7], Ponkin and Redkina [8], Ihalainen [9], Abbott [1], González [2], etc. The legal

basis of this paper is the Constitution of the Republic of Moldova[1], State Agency for Intellectual Property, the Code of Science and Innovation of the Republic of Moldova[2], the Law of the Republic of Moldova on Copyright and Related Rights No.139[3], international treaties and regulations governing intellectual property issues. The empirical base on which the content of this scientific paper is based includes information of a methodological nature, materials of judicial practice, recommendations of working groups in the countries of the European Union, as well as materials of scientific conferences on the subject of artificial intelligence.

2. RESULTS AND DISCUSSION

2.1 Artificial intelligence products

Artificial intelligence is capable of completely changing the processes of human life in particular and society at large. As a phenomenon, artificial intelligence is already launching revolutionary processes in technology. It changes and transforms literally all types of human activity, it modifies the process of communication, doing work, learning. Science and technology progress does not stand still, and the speed with which robotics and various artificial intelligence systems are being improved is steadily growing. Scholars are beginning to argue about the possibility of a new industrial revolution and the entry of humankind into a completely new technological era. Nowadays, robots and software can do more than just count numbers and perform simple tasks. The advancement of artificial intelligence has transformed software and systems – they are now capable of performing creative tasks and create products that would normally fall under the intellectual property law, as unique and human-made. The field of robotics and artificial intelligence is constantly transforming and developing very rapidly.

As noted earlier, the international legal system fails to timely modernise the legal aspects of new technologies and currently it is required to transform legislation in all spheres of public activity [10]. One area that definitely needs improvement is the area of artificial intelligence. International laws and regulations were not prepared for the fact that the product of intellectual activity would be produced not by a person, but by something else. Modern international legislation has not been prepared; it does not contain a specific definition of the owner of the rights to the product of artificial intelligence. Accordingly, there is no specific understanding of who owns the copyright for a verse generated by artificial intelligence – the person who wrote the software, the artificial intelligence itself, or the owner of the computer where such software was installed. Legal scholars have started raising these questions due to the emergence of real-world practical examples.

[1] Constitution of the Republic of Moldova. (1994, July). Retrieved from http://www.legislationline.org/documents/action/popup/id/16261/preview

[2] Code of Science and Innovation of the Republic of Moldova. (1994, July). Retrieved from https://cis-legislation.com/document.fwx?rgn=7758

[3] Law of the Republic of Moldova No 139 "On Copyright and Related Rights". (2010, February). Retrieved from http://agepi.gov.md/sites/default/files/law/national/l_139_2010-en.pdf

In Spain, programmers have developed an artificial intelligence project WASP (Wishful Automated Spanish Poet). This software creates poetry based on the poems of famous Spanish poets. It uses news from Internet sources, which allows it to make poems relevant, as they can be devoted to events that are currently taking place. The software is equipped with an extensive vocabulary, which allows it to generate literary works of really high quality. To obtain the final result, the software needs an operator, since the application itself generates only a draft version of the poem. The operator serves as a key link, refining the quality of the finished poem through certain sequential actions. Such actions, performed by a computer software, force the study of the legal side of this issue. In this case, the programmer created the software, the software generated a draft of the poem, and the operator finalised the poem. Let us suppose that someone decides to publish these poems. Who will be considered the author and who will own the intellectual property rights for this product? It is noteworthy that world leaders in technology and new developments have been funding this industry for a long time. Google plans to implement a project for an application that will write news reports and articles. This software will analyse all available media sources and produce finished news articles.

In 2016, a group of programmers and art historians from the Netherlands presented to the public a painting that was created with the use of artificial intelligence. This work of art was modelled by the software after analysing over three hundred paintings by Rembrandt. The scientists who developed this project consider the invention to be revolutionary and see the prospects for the practical application of this software. According to the results obtained, this software will open up opportunities for the restoration of partially lost works of art, thus expanding the opportunities for studying art and its history. Within the framework of the Shinichi Hoshi Literary Competition, the novel The Day a Computer Writes a Novel, written by artificial intelligence, qualified for the final selection stage. The software generated a literary novel with the use of the data provided by the developer. These were such data as the approximate plot line, gender of the main character, a set of phrases, as well as sentences that must be used in the writing process. The jury of the competition recognised the novel as worthy of public attention and drew the attention of the developers to the shortcomings of the software. Thus, one of the main shortcomings was the insufficient completion and underdevelopment of plot characters.

2.2 Legal provisions regarding the products of artificial intelligence

At the moment, scholars are discussing whether artificial intelligence can be the subject of intellectual property rights. The question is also open whether artificial intelligence can be responsible for the consequences of the influence of the product of its creativity on society, with the ensuing legal consequences. From a legal standpoint, artificial intelligence cannot claim intellectual property rights since it does not physically exist [11]. Scientists believe that at this stage in the development of artificial intelligence, there

are gaps in legislation between copyright and artificial intelligence software. Similar tendencies have already emerged during the invention and development of the Internet. During that period, legislation also lagged behind the pace of technological progress at times. At this stage, considering the speed of improvement of artificial intelligence, immediate and correct amendments to international and regional laws regarding intellectual property law and copyright are required. Artworks created with the use of artificial intelligence are not covered by copyright and legislation on intellectual property rights. Accordingly, the programmers who create such software will not have the opportunity to financially benefit from the creative products generated with the use of artificial intelligence. Considering this, developers will not have sufficient motivation to create and improve artificial intelligence and related software. This can serve as a catalyst for slowing down or stopping the development and modernisation of artificial intelligence software [12]. To prevent this scenario from unfolding, programmers need to obtain intellectual property rights for products created by artificial intelligence, as, for example, artists obtain the rights to their paintings.

European Parliament resolution of 16 February 2017 with recommendations to the Commission on Civil Law Rules on Robotics[1], indicates that, at present, the development of robotics is at such a stage when machines can perform more actions than those for which they were programmed. The document states that robots, and in particular artificial intelligence software, can currently perform certain actions inherent in a human individual; they can learn from the experience of tasks performed and mistakes made; they can make quasi-independent decisions. This level of development makes them similar to agents who can interact with the outside world, changing it. Accordingly, the system of legal legislation and the definition of legal responsibility for the action and inaction of such programmes should be promptly regulated. In this context, scholars and lawyers propose two possible models for resolving the issue of civil liability and legal rights of artificial intelligence programmes. Possible models for resolving the legal issue of artificial intelligence are presented in Table 1.

Table 1. Models of civil law regulation of artificial intelligence

Artificial Intelligence	**Artificial Intelligence**
Special type of property	Electronic person
Human property	Autonomous legal entity
The owner is responsible for causing damage	Independently responsible for the damage caused

It is necessary to provide mutually beneficial conditions for programmers and for society, which will benefit from the results of artificial intelligence at the legislative

[1] Civil Law Rules on Robotics. (2017, February). Retrieved from https://clck.ru/Q3wkV

level. If, according to regulatory documents, a programmer owns copyrights to products and this stimulates them to further work, then this should be consolidated in legislative provisions [13]. In case of regulating the machine as a separate object, the completed products will become part of the public domain. The second option is economically unprofitable for the developer and will likely lead to the suspension of development in this area.

2.3 Review of possible theories for the settlement of intellectual property rights to artificial intelligence products

For several years now, the countries of the European Union have been seriously thinking about resolving the issue of intellectual property for products produced by machines and software equipped with artificial intelligence. This matter is of strategic importance, since the areas of activity in which intellectual property rights are used on an ongoing basis account for more than 42% of the total economic activity in these countries [14]. The existing European regulations, such as the European Parliament resolution of 16 February 2017 with recommendations to the Commission on Civil Law[1].

Civil Law Rules on Robotics[2], do not have specific legal provisions that would be applicable to artificial intelligence software, however, they contain provisions that can be modified and subsequently applied to these new technologies. At the same time, scholars indicated the necessity of making several particular amendments. In their articles, I. V. Ponkin and A. I. Redkina [8] have repeatedly mentioned the need to make operational amendments to legislative acts [8]. The author of this paper agrees with their statement that currently the process and speed of development of laws in copyright has lagged behind the dynamics of development of artificial intelligence and other modern technologies. Back in 1997, R. D. Clifford, professor of law school in New York, outlined the necessity of changing the existing concepts of intellectual property law. He studied the development of autonomous creative software and made sound conclusions that it does not fit into the existing legislative provisions [7].

A. Moriggi [6] considers several possible options for the development of modern intellectual property law. He sees the emergence of modern creative programming as an incentive for analysis and revision. The most realistic option for resolving the issue of intellectual property of artificial intelligence software is the transfer of rights to the results of their activities to the software creators. The second option, as already indicated, is the transfer of all the results of activities to the public. From an economic standpoint, the second option is neither beneficial for programmers who develop such software nor for investors who expect a return on their investment in these projects. In his scientific works, Moriggi [6] draws public attention to the necessity of creating a comfortable environment for programmers and investors, and also points to the poten-

[1] European Parliament Resolution. (2017, February). Retrieved from https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52017IP0051

[2] Civil Law Rules on Robotics, op. cit.

tial for the global and regional economy that artificial intelligence technologies possess. Another problematic aspect in the issue of intellectual property can be a negative reaction and litigation initiated by third parties. Such problems may arise for developers of artificial intelligence software as a result of the self-learning of the software. It can analyse the data that consumers of these services upload and use it to generate new creative content [6].

K. Hristov [15-17] also raised the issue of copyright and artificial intelligence in his research. He believes that the recognition of artificial intelligence as the author of creative products will lead to the destruction of the entire legal system, in particular in the United States, since there will be more legal questions than answers [15]. In turn, such circumstances can provoke restrictions on the part of legislation and, as a result, lead to reduction of the scale of production of artificial intelligence technologies [18-20]. Another opinion concerning the problem of copyright protection for artificial intelligence products was put forward by the scientist and lawyer J. Ihalainen [9]. In his articles, he describes the theory that programmers who develop software for writing musical compositions can obtain almost unlimited rights to them. Care should be taken to introduce a provision in future amendments stating that products created by humans and software are separate objects of law. Such amendments are necessary to understand the difference between the contribution of a person and a programme to the creation of a particular creative product. Thus, the intellectual property rights to artificial intelligence products will be protected, but will not be considered in terms of authorship. Under such a system, the rights to each work written will be protected in common with trademark rights. This will protect the market from mass production of artificial intelligence products, providing an opportunity to develop this area [9].

CONCLUSIONS

The author study of the international legal framework, as well as the study of international scientific articles on the subject matter, showed very ambiguous results. The author discovered gaps in international and regional legislation, including the legislation of Moldova. Legal systems in different countries of the world are not ready for the legal regulation of artificial intelligence software, as well as for justifying the rights to the products of their activity. At the moment, the development of technologies in robotics, as well as in artificial intelligence software, is happening faster than the development of the legal system. Such conclusions are made by scholars all over the world. Scholars discuss issues related to the regulation of the legal aspects of activities of artificial intelligence software. However, they fail to come to an agreement in resolving this issue. Some believe that the products of the creative activity of artificial intelligence should be made part of public domain. Others strongly disagree with this concept, as it will slow down the development of technology. Such a concept would not provide creators and investors with income from the sale of these products. Accordingly, the former will not develop software, and the latter will not invest in these projects. Most scholars agree

that the regulatory framework is outdated and requires modernisation. The emergence of new technologies and the need for new legislation can provoke legislatures to reform and modernise the existing systems. The second concept of artificial intelligence copyright settlement lies in the transfer of all rights to the creator or operator of the software. It will also resolve issues related to accountability for the consequences of artificial intelligence software activities.

Consequently, the author found a complete lack of regulation of intellectual property rights to artificial intelligence products. The author established that the international legal system fails to match the pace of development of modern technologies in terms of adapting the regulations. The legal framework must undergo an immediate modernisation. Legislation in force must be audited and current intellectual property laws amended. As of today, technologies are rapidly developing, and to succeed in the legal regulation of all aspects of this area, it is recommended to develop a plan for the future, taking the technological progress and the possible emergence of new technologies and more advanced artificial intelligence software into consideration.

REFERENCES

[1] Abbott, R. B. (2017). Patenting the output of autonomously inventive machines. *Landslide,* 10(1), 1-11.

[2] González, M. J. S. (2017). Legal regulation of robotics and artificial intelligence: challenges for the future. *Law Review of the University of León,* 4, 25-50.

[3] Bridy, A. (2012). Coding creativity: copyright and the artificially intelligent author. *Stanford Technology Law Review,* 5, 1-28.

[4] Franco, L. (2015). Artificial intelligence. *Robotics Law Journal,* 1(1), 4-5.

[5] Petit, N. (2017). *Law and regulation of artificial intelligence and robots: Conceptual framework and normative implications.* Retrieved from https://cutt.ly/pdbmYJD.

[6] Moriggi, A. (2017). *The role of intellectual property in the intelligence explosion.* Retrieved from http://www.4ipcouncil.com/application/files/9615/1638/1031/The_Role_of_Intellectual_Property_in_the_Intelligence_Explosion.pdf.

[7] Clifford, R. D. (1997). Intellectual property in the era of the creative computer program: Will the true creator please stand up? *Tulane Law Review,* 71, 1675-1703.

[8] Ponkin, I. V., & Redkina, A. I. (2018). Artificial intelligence and intellectual property right. *Intellectual Property. Copyright and Related Rights*. *Intelligent Press,* 2, 35-44.

[9] Ihalainen, J. (2018). Computer creativity: artificial intelligence and copyright. *Journal of Intellectual Property Law & Practice,* 13(9), 724-728.

[10] Prakken, H. (2016). *On how AI & law can help autonomous systems obey the law: a position paper.* Retrieved from https://cutt.ly/XdbQdpK.

[11] Rossi, F. (2016). *Artificial intelligence: Potential benefits and ethical considerations.* Retrieved from https://cutt.ly/udbQOJv.

[12] Saiz, S. (2018). *Why does no country have a law on artificial intelligence?* Retrieved from http://www.expansion.com/juridico/actualidad-tendencias/2018/04/17/5ad63255ca4741fc228b457d.html.

[13] Thierer, A. D., Castillo, A., & Russel, R. (2017). *Artificial intelligence and public policy.* Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3021135

[14] Wittenberg, D. S. (2017). *Artificial intelligence in the practice of law.* Retrieved from https://www.americanbar.org/groups/litigation/publications/litigation-news/business-litigation/artificial-intelligence-in-the-practice-of-law/
[15] Hristov, K. (2017). Artificial intelligence and the copyright dilemma. *Journal of the Franklin Pierce Center for Intellectual Property,* 57(3), 431-454.
[16] Chimuka G. (2019). Impact of artificial intelligence on patent law. Towards a new analytical framework – [the Multi-Level Model]. *World Patent Information,* 59, Article number: 101926. https://doi.org/10.1016/j.wpi.2019.101926.
[17] Konyrbaev, N. B., Ibadulla, S. I., & Diveev, A. I. (2019). Evolutional methods for creating artificial intelligence of robotic technical systems. *Procedia Computer Science,* 150, 709-715. https://doi.org/10.1016/j.procs.2019.02.018.
[18] Shank, D. B., & Gott, A. (2019). People's self-reported encounters of perceiving mind in artificial intelligence. *Data in Brief,* 25, Article number 104220.
[19] Golding, L. P., & Nicola, G. N. (2019). A business case for artificial intelligence tools: the currency of improved quality and reduced cost. *Journal of the American College of Radiology,* 16(9), 1357-1361. https://doi.org/10.1016/j.jacr.2019.05.004.
[20] Webber, Sh.S., Detjena, J., Mac Lean, T. L., & Thomas, D. (2019). Team challenges: Is artificial intelligence the solution? *Business Horizons,* 62(6), 741-750.

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