Revista Jurídica

Submetido em 18/01/2024
Aprovado em: 15/04/24
Avaliação: Double Blind Review
ISSN: 2316-753X

LEGAL STATUS OF INTELLECTUAL DELIVERABLES: THE AUTHORSHIP OF AI-GENERATED WORKS

Ildar Begishev
Kazan Innovative University named after V. G. Timiryasov, Russia. Orcid id: https://orcid.org/0000-0001-5619-4025 E-mail: begishev@mail.ru

Elena Kirillova
Southwest State University, Russia. Orcid id: https://orcid.org/0000-0001-7137-901X
E-mail: debryansk@mail.ru

Ivan Otcheskiy
University of Tyumen, Russia. Orcid id: https://orcid.org/0000-0002-5765-5732
E-mail: otcheskiy-ie@mail.ru

Andrey Lyubanenko
University of Tyumen, Russia. Orcid id: https://orcid.org/00000-0003-1708-7862
E-mail: a.v.lyubanenko@utmn.ru

Natalia Krause
University of Tyumen, Russia. Orcid id: https://orcid.org/0009-0003-5975-5459
E-mail: N_krause@mail.ru

Oksana Anikeeva
University of Tyumen, Russia. Orcid id: https://orcid.org/0000-0002-4581-1902
E-mail: anikeeva72@list.ru

ABSTRACT

Objective. The study considers the authorship of works created by artificial intelligence and proposes an alternative concept within which legal relations in the field of AI-based copyright can be regulated.

Methods. The research methods are based on the analysis of a limited number of studies selected according to special parameters and comprehensively reviewed. The authors also use the method of analogy and comparative analysis.

Results. The main concepts of AI authorship and the features and characteristics of strong AI are considered. Based on the study results, it is concluded that strong AI capable of creating unique and original works can be defined as a quasi-subject with limited rights and responsibilities.

Conclusions. AI as a quasi-subject should be recognized as an authorized, but not obligated, subject of legal relations. In copyright law, it may have the right to authorship and publication of the work. The creators of AI and third parties involved in its creation and use must exercise property rights.

Keywords: artificial intelligence, intellectual deliverables, legal personality, responsibilities, creative work, copyright protection.

Submetido em 18/01/2024
Aprovado em: 15/04/24
Avaliação: Double Blind Review
ISSN: 2316-753X

1. INTRODUCTION

At the present stage of technological progress, artificial intelligence has great potential in the field of copyright (Bonadio et al., 2023; Kazantsev, 2023; Muyang et al., 2023). AI systems generate creative works (literary, musical, visual, and virtual) that are theoretically subject to copyright (Kirillova et al., 2021; Shumakova et al., 2023; Zhdanova, 2023a). For example, AI writes articles for the Esquire magazine (Singapore) and creates a “new” Rembrandt portrait. There are competitions for artistic works written by AI (Gaffar & Albarashdi, 2024). A real sensation was the completion of the unfinished piece of Dvořák’s piano composition in E minor by the AIVA AI (Burova et al., 2021). After this, AIVA was officially registered as a composer in France and Luxembourg, thereby the artwork created by this AI received protection, and the AI was recognized as the author (Akhmetshin et al., 2018; Leheza et al., 2022; Quintais et al., 2024).

Despite the existing precedents, discussions continue among scholars about the right of authorship to works created by AI as there are opposing opinions. For example, AI does not have creative thinking (Akhmetshin et al., 2024; Sturm et al., 2019) and cannot express itself, so it is difficult to recognize it as the author of the creative works generated (Hristov, 2016). Another group of experts rightly notes that AI is rapidly evolving (Gurinovich et al., 2023) and is already capable of creating unique (Hacohen and Elkin-Koren, 2023) works (Friedmann, 2024) which are comparable to those works created by talented people (Zhang et al., 2023). Several questions arise: is a work created by AI an object of copyright (Koros et al., 2023; Zhdanova, 2023b), how to regulate the authorship of works (Bortnyk et al., 2023) created by AI, and whether such works should be protected as copyright objects (Semenova et al., 2023; Wen et al., 2024). Thus, the authorship of works created by AI or with its participation requires a comprehensive study to develop legislative norms that can protect both the creators of AI and the creative objects it generates.

2. LITERATURE REVIEW

Experts are debating whether AI has copyrights. Researchers note that AI can create the following intellectual deliverables with human participation or autonomously: musical works, literary works, works of fine art, photo and video works, and other creative works. When identifying the authorship of works created by AI or with its help,

Submetido em 18/01/2024
Aprovado em: 15/04/24
Avaliação: Double Blind Review
ISSN: 2316-753X

experts emphasize several concepts to determine the right of authorship. We have analyzed the following main theories:

– ***The machine-centric theory***, in which AI is the author of the creative work (Bonadio et al., 2023; Gaffar & Albarashdi, 2024; Matulionyte, 2023; Quintais et al., 2024);

– ***The theory of hybrid authorship***, according to which AI is a co-author of the creative work (Friedmann, 2024; Hacohen and Elkin-Koren, 2023; Lemley, 2023; Norberg & Norell, 2023; Wen et al., 2024; Zhang et al., 2023);

– ***The work-for-hire theory***, according to which artificial intelligence is defined as an employee who creates some work as commissioned (Griffin et al., 2023; Kompa et al., 2023; Koros et al., 2023; Vyas et al., 2023);

– ***The anthropocentric theory***, when AI acts as a tool in creative work and does not have any rights (Abbott & Rothman, 2023; Aplin & Pasqualetto, 2019; Catanzaro, 2023; Hristov, 2016; Stech, 2023; Sturm et al., 2019);

– ***The theory of zero authorship*** proposes that there is no authorship when AI creates any works (Hristov, 2020; Levendowski, 2018; Schönberger, 2018);

– ***The contamination theory*** is designed to regulate complex situations when there is a different combination and influence of AI creating works (Ananto, 2023; Hayes, 2023; Laskowska-Litak, 2023; Shtefan, 2021).

To determine the scope of copyright, experts classified AI according to its creative potential into the following categories:

– AI has little influence on the creation process, it simply edits the work, corrects stylistic errors, and plays an insignificant role (Ahuja, 2020; Díaz-Noci, 2020; Ihalainen, 2018; Wu, 1997);

– AI influences the result of intellectual activity, but to a limited extent, partially writes the text, processes images, complements musical works, etc. (Murray, 2023; Palace, 2019; White & Matulionyte, 2019);

– AI independently generates creative work that has both novelty and uniqueness (Bracha, 2023; Demir, 2023; Lee, 2023; Roos, 2023; Selvadurai & Matulionyte, 2020; Tan, 2023).

Based on this classification, scientists distinguish between strong and weak AI. Weak AI is not capable of creating works independently that claim legal protection. Therefore, it makes no sense to discuss the rights of weak AI.

Submetido em 18/01/2024
Aprovado em: 15/04/24
Avaliação: Double Blind Review
ISSN: 2316-753X

AI capable of autonomously creating works has the following characteristics: self-organization (Xiao, 2023); the learning ability (Margoni, 2018; Sun, 2021); the self-learning ability (Okorie, 2023); the ability to think rationally.

The study aims to consider the basic concepts of authorship of works created by AI and propose an alternative to regulate legal relations in the field of copyright with the participation of AI.

3. METHODS

To determine the authorship of works created by AI and the possibility of their copyright protection, we selected those studies by researchers from different countries that have a long-term impact on the research trends. This article used a desk review and comparative analysis of works. For a comprehensive analysis, studies were selected that contained definitions of the right of authorship of works created by AI, works created by AI as an object of copyright, the legal status of AI, and the concept of authorship of works created by AI.

When searching for documents, we followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) standards. The PRISMA consists of four stages: the selection of articles, screening, deciding on their eligibility, and finalizing the list of studies for inclusion in the systematic review.

Step 1: Data collection

We selected scientific works on the following topics: the authorship rights of AI, the creation of works by AI, concepts of AI authorship, and the protection of works created by AI. We conducted a bibliographic search in Scopus, Web of Science, and Google Scholar. A total of 251 publications were collected across several categories.

Step 2. Data filter using selection criteria

Studies were selected according to the following criteria:

1. The authors have at least three publications on the topic “Copyright in AI” and “Copyright protection for works created by AI” written over the past 10 years;

2. More than 50% of research on legal topics in the total number of publications by these authors;

Submetido em 18/01/2024
Aprovado em: 15/04/24
Avaliação: Double Blind Review
ISSN: 2316-753X

3. The author's profile must indicate that their publications are thematically related to legal sciences;

4. Their scientific works must have been written between 1990 and 2024.

Using this approach, more than 251 publications were initially selected.

Step 3. Data filter after reading the text

We read the full text of articles, whose titles and abstracts made it difficult to determine the relevance of the topic. After careful sampling, 51 papers were selected.

This methodology allowed us to identify the main concepts of AI authorship and propose the concept of authorship of works created by AI to regulate legal relations in the field of copyright with due regard to the participation of AI in the creation of such works.

4. RESULTS

Experts have identified the typical features of strong AI: self-organization (Margoni, 2018), the ability to learn (Sun, 2021) and self-learn (Okorie, 2023), and rational thinking. Supporting this opinion, we add that strong AI should have such a quality as autonomy. AI can be autonomous so that it does not require constant human intervention to complete its tasks. Its autonomy can be achieved through the use of machine learning algorithms and neural networks, which allow the system to independently learn and adapt to new data. This helps AI make decisions and perform creative tasks (create music, literary works, visual art, and virtual objects) without human intervention. AI must perceive, analyze, evaluate, and simulate images (processes), as well as have cognitive-analytical abilities and creative potential (Selvadurai & Matulionyte, 2020).

Considering these qualities, AI can be classified according to its creative potential and direct impact on the subject of copyright (Table 1).

Submetido em 18/01/2024
Aprovado em: 15/04/24
Avaliação: Double Blind Review
ISSN: 2316-753X

Table 1. Types of AI by impact on the copyright object

AI is a tool for generating creative works	A person is the author of a creative work, the influence of AI is minimal, it can be used, for example, as an auto-editor (Ahuja, 2020; Díaz-Noci, 2020; Ihalainen, 2018; Wu, 1997)
Public ownership of a creative work	AI generates a creative work according to a given algorithm and this work can be used by anyone for free (White & Matulionyte, 2019)
AI is a co-author	AI creates a work together with a person, while AI must have autonomy and the ability to think analytically and creatively (Murray, 2023; Palace, 2019)
AI is the author	A person does not participate in the creation process; artificial intelligence creates a creative work independently (Bracha, 2023; Demir, 2023; Tan, 2023)

Thus, AI can be the author of a creative work only if it is new and original (Roos, 2023), creative (Lee, 2023) and independent (Xiao, 2023). AI should have the freedom of choice in decision-making when creating a potential work.

These characteristics allow it to be classified as a strong AI and address the possible recognition of the right of authorship for AI by lawyers and legislators.

5. DISCUSSION

When analyzing the works selected, we identified the main concepts of AI authorship. According to the machine-centric theory, AI is the author of the works created. Scholars assume that if AI independently generates a literary, artistic, or musical work, with minimum human participation, the author of such a work will be AI (Matulionyte, 2023). This approach can minimize emerging questions about copyright ownership. However, AI lacks the fundamental features of a subject of law: will (Butler, 1982), expression of will (Zatarain, 2017), and interest (Maggiore, 2018). Therefore, AI cannot be considered an analogue of a real person (Hristov, 2020). The mechanical application of this theory may give rise to more legal conflicts, create difficulties in law enforcement and have a socio-ethical impact of dehumanization on a person as a subject of law (Laskowska-Litak, 2023). Therefore, it is inappropriate to give AI a fully legal personality in order to protect intellectual property.

Many scholars support the anthropocentric theory, according to which the author of a creative work created by AI is a person (Stech, 2023), i.e., AI creators, developers or users (Abbott & Rothman, 2023). Under this approach, AI is a tool for creating intellectual deliverables (Aplin & Pasqualetto, 2019; Catanzaro, 2023). At the

Submetido em 18/01/2024
Aprovado em: 15/04/24
Avaliação: Double Blind Review
ISSN: 2316-753X

initial stage of creating AI, this approach suited everyone. As AI was developing and acting independently in the generation of creative works, experts, lawyers, and legislators began to question the right of authorship and protection of AI-created works (Hayes, 2023). Since AI is capable of self-learning, the result may not coincide with the original intentions of its creators. Using this approach, it is very difficult to determine the author: the creator, owner, or user of AI (Ananto, 2023).

In conformity with the work-for-hire theory proposed by some scholars (Griffin et al., 2023), AI acts as an employee who produces a creative work (Kompa et al., 2023) regarded as a work for hire within the framework of these legal relations. This approach cannot radically change existing laws. It is required to slightly adjust current legal norms (Vyas et al., 2023). However, a more detailed examination of this approach reveals that when creating a work for hire, the rights to it belong to the author, and the employer has only exclusive rights. Therefore, the legal personality of AI is questioned again.

The theory of hybrid authorship is proposed to apply to works created by AI. Under this theory, AI acts as a co-author when creating intellectual deliverables (Lemley, 2023). In practice, the situation is as follows: the co-authors of a creative work are the creator, the user, and the AI itself. According to existing laws, the institution of co-authorship involves assigning the rights and responsibilities to each co-author through a signed agreement (Norberg & Norell, 2023). Does the agreement concluded with AI make sense and what rights should be assigned to it? To what extent exclusive rights, personal copyrights, and rights that determine economic benefits can implement such a variant of co-authorship?

The theory of zero authorship seems to be the most rational. It claims that authorship should not be assigned to works created by AI. Such works should go into the public domain regardless of creative contribution and value (Levendowski, 2018). According to the developers of this theory, AI does not have legal personality and does not need copyright rights (Schönberger, 2018). In the future, this approach will destroy an economic incentive to create AI that is capable of creativity.

Among the existing theories of AI authorship, none can fully regulate legal relations in the field of copyright protection of AI-generated works. To attract investment in the development of AI capable of generating creative works, it is necessary to develop legal provisions that can regulate the scope of AI-related

Submetido em 18/01/2024
Aprovado em: 15/04/24
Avaliação: Double Blind Review
ISSN: 2316-753X

copyrights (Naqvi, 2020). It is advisable to consider an approach in which it is possible to assume AI authorship.

When developing the concept of authorship of works created by AI, it is necessary to consider that, on the one hand, AI has a potential to create unique and original objects of copyright (Shtefan, 2021). On the other hand, AI has no economic goals for the sale of created works. In addition, AI does not need recognition, approval or motivation (Kudinov, 2022). Thus, to regulate legal relations in the field of copyright with the participation of AI, a new legal institution is required since AI has specific qualities and features that have no analogues. Accordingly, AI as the producer of creative works that require protection can be defined as a quasi-subject with limited rights and responsibilities. AI as a quasi-subject may have some elements of legal personality but does not have the status of a full-fledged subject of law. It is an artificial construct that is defined for the convenience of law enforcement. AI as a quasi-subject should be recognized as an authorized, but not obligated, subject of legal relations in copyright law. This is stipulated by circumstances when the legal construct of a quasi-subject is intended to replace subjects of law in exceptional cases necessary for law enforcement. However, it is impossible and inappropriate to endow a quasi-subject with all elements of right and legal capacity.

The author's rights are a set of personal non-property and property rights (Zibner, 2019). Personal non-property rights include the right to authorship, integrity, and publication of the work (Kasap, 2018). Exclusive rights are as follows: the right to transfer and use the work both commercially and freely (de Souza, 2021). Thus, AI capable of generating creative works may have the right to authorship and publication of the creative work, while its creator and people involved in the production of creative works with the participation of AI must exercise property rights.

6. CONCLUSIONS

Based on the study results, we concluded that to resolve legal relations in the field of copyright with the participation of AI, it is necessary to develop the concept of AI authorship. It is worth mentioning that only strong AI with the following qualities can generate creative works:

– Self-organization;

– Ability to learn and self-learn;

Submetido em 18/01/2024
Aprovado em: 15/04/24
Avaliação: Double Blind Review
ISSN: 2316-753X

– Rational thinking;

– Autonomy;

– Ability to accumulate experience and use it to make creative works;

– Ability to model images, processes, and situations;

– Cognitive and analytical abilities.

AI capable of creating unique creative works can be defined as a quasi-subject with limited rights and responsibilities. AI as a quasi-subject should be recognized as an authorized, but not obligated, subject of legal relations. In copyright law, it may have the right to authorship and publication of the work, while the creators of AI and third parties involved in its creation and use must exercise property rights.

The study is limited by the sample size. In total, the articles initially used 266 monographs, reports, and statistics. After careful consideration, 51 works were selected that described the main concepts of AI authorship and possible prospects for the development of strong AI with creative potential.

Further research on AI authorship needs to consider the possible integration of AI and the use of its inventions in patent law.

REFERENCES

Abbott, R., & Rothman, E. (2023). Disrupting creativity: Copyright law in the age of generative artificial intelligence. Florida Law Review, 75(6), 1141-1201. https://dx.doi.org/10.2139/ssrn.4185327

Ahuja, V. K. (2020). Artificial intelligence and copyright: Issues and challenges. ILI Law Review, Winter Issue 2020, 270-285.

Akhmetshin, E., Fayzullaev, N., Klochko, E., Shakhov, D., & Lobanova, V. (2024). Intelligent data analytics using hybrid gradient optimization algorithm with machine learning model for customer churn prediction. Fusion: Practiceand Applications, 14(2), 159-171. https://doi.org/10.54216/FPA.140213

Akhmetshin, E. M., Kovalenko, K. E., Ling, V. V., Erzinkyan, E. A., Murzagalina, G. M., & Kolomeytseva, A. A. (2018). Individual entrepreneurship in Russia and abroad: Social and legal aspects. Journal of Entrepreneurship Education, 21(Special Issue 2), 1-12.

Ananto, M. M. (2023). Legal position artificial intelligence art generator in copyright law. Jurnal Ilmu Sosial dan Pendidikan, 7(4), 2938-2947.

Aplin, T., & Pasqualetto, G. (2019). Artificial intelligence and copyright protection. In R. M. Ballardini, P. Kuoppamäki, & O. Pitkänen (Eds.) Regulating industrial Internet

Submetido em 18/01/2024
Aprovado em: 15/04/24
Avaliação: Double Blind Review
ISSN: 2316-753X

through IPR, data protection and competition law (pp. 92-93). Alphen aan den Rijn: Kluwer Law International.

Bonadio, E., McDonagh, L., & Dinev, P. (2023). Copyright in works created by artificial intelligence: Between creativity and investments. In E. Bonadio, & P. Goold (Eds.) The Cambridge handbook of investment-driven intellectual property (pp. 73-85). Cambridge: Cambridge University Press.

Bortnyk, N., Dobkina, K., Bezzubov, D., Khorvatova, O., Palamarchuk, S., & Bakhov, I. (2023). Legal methodological approaches in researching elements of public safety ensuring. Revista Relações Internacionaisdo Mundo Atual, 2(40), e-6526.

Bracha, O. (2023). The work of copyright in the age of machine production. The University of Texas Law, Legal Studies Research Paper. https://dx.doi.org/10.2139/ssrn.4581738

Burova, I. L., Volkova, M. A., & Lenkovskaya, R. R. (2021). E-justice in civil cases and economic disputes in the Russian Federation. Juridicas CUC, 17(1), 629-648. https://doi.org/10.17981/juridcuc.17.1.2021.22

Butler, T. L. (1982). Can a computer be an author - Copyright aspect of artificial intelligence? Hastings Communications and Entertainment Law Journal, 4(4), 11.

Catanzaro, Z. (2023). Beyond incentives: Copyright in the age of algorithmic production. NYU Journal of Intellectual Property & Entertainment Law, 13(1), 1-55.

de Souza, P. V. (2021). Artificial intelligence and copyright. De Legibus-Revista de Direito da Universidade Lusófona Lisboa, 1, 12.

Demir, M. S. (2023). AI-induced copyright infringement: Application of legal neutrality based on the qualitative similarity criterion. 839M3 LL.M. Dissertation, School of Law, Politics and Sociology, University of Sussex, Sussex. https://dx.doi.org/10.2139/ssrn.4689391

Díaz-Noci, J. (2020). Artificial intelligence systems-aided news and copyright: Assessing legal implications for journalism practices. Future Internet, 12(5), 85. http://dx.doi.org/10.3390/fi12050085

Friedmann, D. (2024). Copyright as affirmative action for human authors until the singularity. GRUR International, 73(1), 1-2. http://dx.doi.org/10.1093/grurint/ikad133

Gaffar, H., & Albarashdi, S. (2024). Copyright protection for AI-generated works: Exploring originality and ownership in a digital landscape. Asian Journal of International Law. http://dx.doi.org/10.1017/S2044251323000735

Griffin, J., Noussia, K., Nedeva, S., Zervoudakis, S., Lux, J., & McNamara, J. (2023). Artificial intelligence (AI) and watermarking to transform copyright arbitration and dispute resolution for three-dimensional (3D) printing: An empirical analysis. European Journal of Law and Technology, 14(2), 1-28.

Submetido em 18/01/2024
Aprovado em: 15/04/24
Avaliação: Double Blind Review
ISSN: 2316-753X

Gurinovich, A., Lapina, M., Kazantsev, D., & Lapin, A. (2023). Problems of legal regulation of the risks of using robotic and infocommunication technologies from the point of view of information security. Revista Juridica, 1(73), 805-830.

Hacohen, U. Y., & Elkin-Koren, N. (2023). Copyright regenerated: Harnessing GenAI to measure originality and copyright scope. Harvard Journal of Law & Technology, 37(2). https://dx.doi.org/10.2139/ssrn.4530717

Hayes, C. M. (2023). Generative artificial intelligence and copyright: Both sides of the black box. https://dx.doi.org/10.2139/ssrn.4517799

Hristov, K. (2016). Artificial intelligence and the copyright dilemma. Idea, 57(3), 431-454.

Hristov, K. (2020). Artificial intelligence and the copyright survey. Journal of Science Policy & Governance, 16(1). http://dx.doi.org/10.2139/ssrn.3490458

Ihalainen, J. (2018). Computer creativity: Artificial intelligence and copyright. Journal of Intellectual Property Law & Practice, 13(9), 724-728. https://doi.org/10.1093/jiplp/jpy031

Kasap, A. (2018). Copyright and creative artificial intelligence (AI) systems: A twenty-first century approach to authorship of AI-generated works in the United States. Wake Forest Journal of Business and Intellectual Property Law, 19(4), 335-380. https://doi.org/10.31235/osf.io%2Fgnyha

Kazantsev, D. (2023). Copyrights to the results of artificial intelligence activity and means of their protection. Journal of Digital Technologies and Law, 1(4), 909-931. https://doi.org/10.21202/jdtl.2023.39

Kirillova, E. A., Zulfugarzade, T. E., Blinkov, O. E., Serova, O. A., & Mikhaylova, I. A. (2021). Perspectivas de desarrollo de la regulación legal de las plataformas digitales. Jurídicas CUC, 18(1), 35-52. https://doi.org/10.17981/juridcuc.18.1.2022.02

Kompa, B., Hakim, J. B., Palepu, A., Kompa, K. G., Smith, M., Bain, P. A., & Beam, A. L. (2023). Correction to: Artificial intelligence based on machine learning in pharmacovigilance: A scoping review. Drug Safety, 46(4), 433. http://dx.doi.org/10.1007/s40264-023-01273-9

Koros, C., Kitili, J., Nzuki, C., & Karanja, N. (2023). The right to research and copyright law in Kenya: Text and data mining. Strathmore University, Centre for Intellectual Property and Information Technology Law (CIPIT). https://cipit.strathmore.edu/right-to-research-and-copyright-law-in-kenya-text-and-data-mining/

Kudinov, M. A. (2022). K voprosu ob intellektualnykh pravakh na proizvedeniya, sozdannye iskusstvennym intellektom [On the issue of intellectual rights to works created by artificial intelligence]. Novyi yuridicheskii Vestnik, 2(35), 7-10.

Laskowska-Litak, E. (2023). When worlds collide: Copyright law, technology, and legislative drama. In B. Brożek, O. Kanevskaia, & P. Pałka (Eds.) Research handbook

Submetido em 18/01/2024
Aprovado em: 15/04/24
Avaliação: Double Blind Review
ISSN: 2316-753X

on law and technology (pp. 160-173). Edward Elgar Publishing. http://dx.doi.org/10.4337/9781803921327.00018

Lee, J. Y. (2023). Can an artificial intelligence chatbot be the author of a scholarly article? Journal of Educational Evaluation for Health Professions, 20, 6. https://doi.org/10.3352/jeehp.2023.20.6

Leheza, Y., Korniakova, T., Soldatkin, I., Rozmosh, V., & Opatsky, R. (2022). Administrative, financial, criminal-legal and theoretical-methodological aspects of regulating social relations. Journal Cita Hukum, 10(3), 437-446. https://doi.org/10.15408/jch.v10i3.27809

Lemley, M. A. (2023). How generative AI turns copyright law on its head. SSRN Electronic Journal. https://dx.doi.org/10.2139/ssrn.4517702

Levendowski, A. (2018). How copyright law can fix artificial intelligence's implicit bias problem. Washington Law Review, 93, 579-630.

Maggiore, M. (2018). Artificial intelligence, computer generated works and copyright. In E. Bonadio, & N. Lucchi (Eds.) Non-conventional copyright (pp. 382-399). Edward Elgar Publishing.

Margoni, T. (2018). Artificial intelligence, machine learning and EU copyright law: Who owns AI? CREATe Working Paper 2018/12. SSRN Electronic Journal. http://dx.doi.org/10.2139/ssrn.3299523

Matulionyte, R. (2023). Generative AI and copyright: Exception, compensation or both? In Intellectual property forum: Journal of the Intellectual and Industrial Property Society of Australia and New Zealand (pp. 33-40). Melbourne: Intellectual and Industrial Property Society of Australia and New Zealand Inc.

Murray, M. D. (2023). Generative and AI authored artworks and copyright law. Hastings Communications and Entertainment Law Journal, 45(1), 27-44.

Muyang, G., Sekerin, V., Efremov, A., Gorokhova, A., & Gayduk, V. (2023). Legal basis for the development of an industrial Internet platform in the context of digital transformation. Revista Juridica, 3(75), 667-678.

Naqvi, Z. (2020). Artificial intelligence, copyright, and copyright infringement. Marquette Intellectual Property Law Review Marquette, 24(1), 15-51.

Norberg, K., & Norell, O. (2023). The influence of artificial intelligence on songwriting: Navigating attribution challenges and copyright protection. University essay from KTH/Skolan för elektroteknik och datavetenskap (EECS).

Okorie, C. (2023). Copyright, data mining and developing models for South African natural language processing. Joint PIJIP/TLS Research Paper Series 117. American University Washington College of Law. https://digitalcommons.wcl.american.edu/research/117

Submetido em 18/01/2024
Aprovado em: 15/04/24
Avaliação: Double Blind Review
ISSN: 2316-753X

Palace, V. M. (2019). What if artificial intelligence wrote this: Artificial intelligence and copyright law? Florida Law Review, 71(1), 217-242.

Quintais, J. P., Katzenbach, C., Schwemer, S. F., Dergacheva, D., Riis, T., Mezei, P., & Magalhães, J. C. (2024). Copyright content moderation in the European Union: State of the art, ways forward and policy recommendations. IIC-International Review of Intellectual Property and Competition Law, 55, 157-177. https://doi.org/10.1007/s40319-023-01409-5

Roos, J. (2023). Artificial intelligence: Copyright & consequences: Master's thesis. Utrecht University, Utrecht, the Netherlands.

Schönberger, D. (2018). Deep copyright: Up-and downstream questions related to artificial intelligence (AI) and machine learning (ML). In De Werra, J. (Ed.) Droit d'auteur 4.0 / Copyright 4.0 (pp. 145-173). Geneva: Schulthess.

Selvadurai, N., & Matulionyte, R. (2020). Reconsidering creativity: Copyright protection for works generated using artificial intelligence. Journal of Intellectual Property Law & Practice, 15(7), 536-543. http://dx.doi.org/10.1093/jiplp/jpaa062

Semenova, V., Petukhov, N., Skachkova, M., & Trenev, N. (2023). Innovation as a necessary condition for the formation of the knowledge economy: A view from Russia. Revista Relações Internacionaisdo Mundo Atual, 2(40), e-6527.

Shtefan, A. (2021). Creativity and artificial intelligence: A view from the perspective of copyright. Journal of Intellectual Property Law & Practice, 16(7), 720-728. http://dx.doi.org/10.1093/jiplp/jpab093

Shumakova, N., Lloyd, J., & Titova, E. (2023). Towards legal regulations of generative AI in the creative industry. Journal of Digital Technologies and Law, 1(4), 880-908. https://doi.org/10.21202/jdtl.2023.38

Stech, M. (2023). Copyright thickness, thinness, and a Mannion test for images produced by generative artificial intelligence applications. Boston College Intellectual Property & Technology Forum Journal. https://dx.doi.org/10.2139/ssrn.4704079

Sturm, B. L., Iglesias, M., Ben-Tal, O., Miron, M., & Gómez, E. (2019). Artificial intelligence and music: Open questions of copyright law and engineering praxis. Arts, 8(3), 115. http://dx.doi.org/10.3390/arts8030115

Sun, H. (2021). Redesigning copyright protection in the era of artificial intelligence. Iowa Law Review, 107, 1213-1251.

Tan, D. (2023). Copyright in the age of disruption. Singapore Journal of Legal Studies, September 2023, 226-231.

Vyas, N., Kakade, S., & Barak, B. (2023). On provable copyright protection for generative models. https://doi.org/10.48550/arXiv.2302.10870

Submetido em 18/01/2024
Aprovado em: 15/04/24
Avaliação: Double Blind Review
ISSN: 2316-753X

Wen, R., Zhai, Y., & Cui, J. (2024). Research on copyright ownership based on template writing works. Open Access Library Journal, 11(1), 1-13. https://doi.org/10.4236/oalib.1111159

White, C., & Matulionyte, R. (2019). Artificial intelligence painting the bigger picture for copyright ownership. SSRN Electronic Journal. https://dx.doi.org/10.2139/ssrn.3498673

Wu, A. J. (1997). From video games to artificial intelligence: Assigning copyright ownership to works generated by increasingly sophisticated computer programs. Aipla Quarterly Journal, 25(1), 131-178.

Xiao, Y. (2023). Decoding authorship: Is there really no place for an algorithmic author under copyright law? IIC-International Review of Intellectual Property and Competition Law, 54(1), 5-25. http://dx.doi.org/10.1007/s40319-022-01269-5

Zatarain, J. M. N. (2017). The role of automated technology in the creation of copyright works: The challenges of artificial intelligence. International Review of Law, Computers & Technology, 31(1), 91-104. http://dx.doi.org/10.1080/13600869.2017.1275273

Zhang, D., Xia, B., Liu, Y., Xu, X., Hoang, T., Xing, Z., & Zhu, L. (2023). Navigating privacy and copyright challenges across the data lifecycle of generative AI. https://doi.org/10.48550/arXiv.2311.18252

Zhdanova, O. (2023a). Mechanism of securitization of exclusive rights to intellectual property objects with the release of digital financial assets. Journal of Law and Political Sciences, 39(4), 235-252.

Zhdanova, O. A. (2023b). Digital financial assets as links between the innovation, intellectual property, and financial markets. Journal of Law and Political Sciences, 36(1), 81-93.

Zibner, J. (2019). Artificial intelligence: A creative player in the game of copyright. European Journal of Law and Technology, 10(1), 1-16.