

Research on Legal Protection Paths for AI-Generated Content in International Trade

Pesquisa sobre Caminhos de Proteção Legal para Conteúdo Gerado por IA
no Comércio Internacional

Bingyu Jia¹

ABSTRACT

AI-generated content(AIGC) has emerged as a new form of creation across various industries, promoting international trade while undermining the stability and uniformity of copyright protection in international trade and leading to unequal international protection of copyright. Through the analysis of the recognition of the copyrightability of AIGC under international copyright law, it is evident that there is a universal consensus among countries that human involvement is a necessary factor for granting copyright, and that AI itself cannot possess copyright. Under these circumstances, most countries appear to have already adopted or plan to adopt measures that consider AI developers or users as the authors of AIGC. In reality, various viewpoints acknowledging the copyrightability of AIGC lack legal basis and are not the most effective means to promote the development of the AI industry. The "works" protected by international copyright law must be creations of humans. Although AIGC may formally meet the requirement of "originality," it does not constitute a work. In order to respond to the practical needs of the development of the AI industry while maintaining the stability of the copyright system, it is advisable to incorporate AIGC into the protection of neighboring rights.

Key Words: International copyright law; Copyrightability; Neighboring rights AI-Generated Content

RESUMO

O conteúdo gerado por inteligência artificial (AIGC) surgiu como uma nova forma de criação em diversos setores, promovendo o comércio internacional, mas minando a estabilidade e a uniformidade da proteção de direitos autorais no comércio internacional e levando a uma proteção internacional desigual de direitos autorais. Através da análise do reconhecimento da possibilidade de proteção por direitos autorais do AIGC sob a lei internacional de direitos autorais, é evidente que há um consenso universal entre os países de que o envolvimento humano é um fator necessário para a concessão de direitos autorais e que a própria inteligência artificial (IA) não pode possuir direitos autorais. Nestas circunstâncias, a maioria dos países parece já ter adotado ou planeja adotar medidas que consideram os desenvolvedores ou usuários de IA como os autores do AIGC. Na realidade, vários pontos de vista que reconhecem a possibilidade de proteção por direitos autorais do AIGC carecem de base legal e não são os meios mais eficazes para promover o desenvolvimento da indústria de IA. As "obras" protegidas pela lei internacional de direitos autorais devem ser criações humanas. Embora o AIGC possa formalmente atender ao requisito de "originalidade", não constitui uma obra. Para

¹ Student of Law-Lanzhou University (Lanzhou,China). E-mail: jiabingyu321@163.com

responder às necessidades práticas do desenvolvimento da indústria de IA, mantendo a estabilidade do sistema de direitos autorais, é aconselhável incorporar o AIGC à proteção de direitos conexos.

Palavras-chave: Lei internacional de direitos autorais; Possibilidade de proteção por direitos autorais; Direitos conexos; Conteúdo gerado por IA

SUMMARY:

1. INTRODUCTION; 2. RECOGNITION OF COPYRIGHTABILITY OF AIGC IN INTERNATIONAL COPYRIGHT LAW; 2.1 PROVISIONS OF THE BERNE CONVENTION FOR THE PROTECTION OF LITERARY AND ARTISTIC WORKS; 2.2 PROVISIONS OF THE AGREEMENT ON TRADE-RELATED ASPECTS OF INTELLECTUAL PROPERTY RIGHTS; 2.3 PROVISIONS OF DOMESTIC LAWS OF VARIOUS COUNTRIES; 3. CONTROVERSIES ON THE COPYRIGHTABILITY OF AIGC; 3.1. DEBATE ON THE "FICTIONAL AUTHOR THEORY"; 3.2. DEBATE ON THE "TOOL OF CREATION THEORY"; 3.3. DEBATE ON THE "INVESTMENT INCENTIVE THEORY"; 4. THE RATIONALITY OF INCORPORATING AIGC INTO THE PROTECTION OF NEIGHBORING RIGHTS; 4.1. ALIGNING WITH THE INSTITUTIONAL PURPOSE OF NEIGHBORING RIGHTS; 4.2. MEETING THE DEMAND FOR BALANCE OF INTERESTS; 4.3. HAVING INSTITUTIONAL FLEXIBILITY; 5. CONCLUSION; 6. REFERENCES

1. INTRODUCTION

In recent years, the thriving development of the AI industry has brought innovation to the creative sector, with AIGC gradually emerging as a new form of creation across various industries. Since November 2022, generative AI, represented by ChatGPT from the American company OpenAI, has garnered widespread attention and heated discussion worldwide. Nowadays, generative AI has achieved a leap from "decision-making" models to "creative" models. Taking text creation as an example, it can capture information directly related to a query based on instructions from ordinary users, summarize it, and express similar viewpoints through word combinations and phrasing. It can be said that, in terms of both the process and outcome of creation, generative AI is highly similar to a student who does not propose new viewpoints.

However, while generative AI is transforming global trade by enhancing productivity, simplifying supply chains, and creating new opportunities for cross-border transactions, it also poses numerous issues and challenges for international copyright rules. The core question is whether AIGC should be granted copyright protection under international copyright law, and what impact this would have on international trade. If AIGC is not protected by international copyright law, what measures should countries take to protect AIGC? To promote the healthy and sustained development of the

generative AI copyright industry in international trade, this paper intends to analyze international copyright rules and existing academic viewpoints, to investigate whether AIGC should be granted copyright protection and its impact on international trade, and then explore suitable legal protection paths for AI-generated content. The contributions are strong, particularly in refuting popular arguments for AIGC copyright (fictional authorship, tool theory, investment incentive), and in grounding the rejection of copyrightability in established principles of human authorship. The limitations include limited engagement with emerging regulatory models (e.g., the EU AI Act).²

2. RECOGNITION OF COPYRIGHTABILITY OF AIGC IN INTERNATIONAL COPYRIGHT LAW

Based on the handling of AIGC copyright ownership issues according to international treaties as well as the laws and policies of various countries, there is a broad consensus among nations that human involvement is a necessary factor for granting copyright protection, and that AI itself cannot possess copyright.

2.1 PROVISIONS OF THE BERNE CONVENTION FOR THE PROTECTION OF LITERARY AND ARTISTIC WORKS

As the first global convention on copyright protection, the Berne Convention, although it does not explicitly define the scope of authorship, reveals through numerous texts from its drafting process that its core spirit lies in promoting human creative activities. The moral rights of authors stipulated in Article 6bis of the Berne Convention, as well as the succession of rights after the death of the author outlined in Article 7bis, are universally recognized as the legal basis for authors being limited to natural persons, and they have continuously influenced subsequent global copyright legislation. Evidently, the Berne Convention adopts an anthropocentric stance, holding that authorship can only be attributed to humans.³

² In <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32024R1689>. Last access: April 24, 2025.

³ In <https://www.wipo.int/wipolex/zh/text/283698>. Last access: April 2, 2025.

2.2 PROVISIONS OF THE AGREEMENT ON TRADE-RELATED ASPECTS OF INTELLECTUAL PROPERTY RIGHTS

Intellectual property rules, including those governing copyright, were introduced into international trade law in the mid-1980s. In 1994, the WTO concluded the TRIPS Agreement, which provided little guidance on how to address content generated by artificial intelligence, as it merely established "minimum" standards of protection and enforcement for intellectual property held by nationals of other WTO members, leaving WTO members with considerable latitude in determining how to appropriately implement these provisions (Shinyi Peng et al., 2021).⁴

Considering the varying levels of AI technological development among countries and the unique objectives of their copyright legislation, this legislative stance does possess a certain rationale. However, with the rapid advancement of AI technology, the lack of unified provisions in the TRIPS Agreement has, to a certain extent, compromised the stability and uniformity of copyright protection in international trade. Taking the "National Treatment Principle" in the TRIPS Agreement as an example, currently, only the United Kingdom explicitly stipulates that computer-generated content is protected by copyright. According to the National Treatment Principle, the UK should grant equivalent protection to other contracting parties. Regrettably, however, most contracting parties to the TRIPS Agreement have not explicitly established the copyrightability of AIGC in their domestic laws, leading to an awkward situation where other countries cannot reciprocate the national treatment to the UK, thereby creating a phenomenon of "unequal protection." With the internationalization of intellectual property protection, numerous disputes and controversies are bound to arise in the field of intellectual property trade in the future.

2.3 PROVISIONS OF DOMESTIC LAWS OF VARIOUS COUNTRIES

Regarding the approach taken by various countries to address the issue of AIGC copyright ownership, there is a widespread consensus among nations that human involvement is a necessary factor for granting copyright protection, and that AI itself cannot possess copyright. Under EU copyright law, an author must be a natural person, thus AI itself cannot possess copyright (Reto M Hilty et al., 2021). For example, The EU has proposed reforms to copyright law, suggesting that AI

⁴ In <https://www.wipo.int/wipolex/zh/text/305907>. Last access: April 2, 2025.

developers or users be considered the authors of AIGC, but this proposal is still under discussion. Similarly, US copyright law requires that an author must be a natural person, and AI cannot serve as the author of a work. When dealing with AIGC, US courts typically require human author involvement and that the work must exhibit human creativity. UK copyright law does not explicitly recognize AI as the author of a work, but there are cases suggesting that if AIGC is sufficiently original, the court may consider the user behind the AI as the author. Japanese copyright law does not clearly stipulate the copyright ownership of AIGC, but it is generally believed that AI cannot be an author.

3. CONTROVERSIES ON THE COPYRIGHTABILITY OF AIGC

In the widespread belief among countries that AI itself cannot hold copyright, most countries seem to have already deemed or plan to deem AI developers or users as the authors of AIGC. However, the approach of promoting the development of the AI industry through copyright protection lacks legal basis and is not the most effective path. Currently, there are roughly three viewpoints advocating that AIGC should be granted copyright, which will be refuted one by one in the following text.

3.1 DEBATE ON THE “FICTIONAL AUTHOR THEORY”

“Fictional Author Theory” posits that AI or its investors, developers, managers, and users can be fictionally deemed as authors, thereby recognizing AIGC as works. The first direction of this argument follows the historical logic of legal persons (juristic entities) being recognized as authors, by endowing AI with legal personality as the author of its outputs (Hui Huang et al., 2019). However, there exist fundamental differences between AI and legal persons. Legal persons, as legally fictional entities, form and express their will through governance structures such as boards of directors and shareholders' meetings. Their actions are attributable to the entity itself within statutory scope, and they bear legal liabilities with independent assets, possessing complete capacity for rights, conduct, and responsibilities. In contrast, AI lacks both mechanisms for autonomous will formation and independent assets to serve as a basis for liability. Essentially functioning as technological tools, they fail to meet the constitutive requirements for legal subjecthood. More fundamentally, treating AI as

an author would require resolving the issue of the term of protection. Given that AI systems theoretically have an indefinite lifespan, the author's life cannot be used as a basis for determining protection duration when AI is considered the author (Gonenc Gurkaynak et al., 2018). However, there is no consensus yet on an appropriate term of protection.

The second direction of this viewpoint is to fictionally designate stakeholders such as AI investors, developers, managers, or users as authors of AI-generated content, drawing analogies from regulations governing "works of legal persons" (Weimin Li, 2020). However, this fiction reverses the logical relationship. The premise of "considering a legal person or non-legal person organization as the author" is the existence of a work protected by copyright law, and a work protected by copyright law must be created by a human (Qian Wang, 2023).

3.2 DEBATE ON THE "TOOL OF CREATION THEORY"

"Tool of Creation Theory" maintains that AIGC is a work created by the developer or user of AI with the AI serving as an auxiliary tool, and humans are the authors of this content (Lixian Cong et al., 2023). Therefore, AIGC can be protected by copyright law as a work. However, this viewpoint ignores the requirement for "creation" under copyright law.

According to the provisions of the Regulations for the Implementation of the Copyright Law of the People's Republic of China, "creation" as mentioned in the Copyright Law refers to intellectual activities from which works are directly produced.⁵ The emphasis on "directly producing a work" highlights the free will of the civil subject in determining the expressive elements required to constitute a work. For example, in the context of fine art works, the most fundamental expressive elements include color schemes, brushstroke techniques, and compositional design. In contrast, "indirectly producing a work" includes giving instructions, guidance, opinions, or suggestions on the creative concept, style, goals, and methods of the work. Whether they can influence the expressive elements of the work depends on whether the author adopts the opinion and how it is implemented after adoption. As long as the creator's choices and judgments determine the expressive elements of the work, contributions from other sources that do not substantially alter or develop the expressive

⁵ In <https://flk.npc.gov.cn/detail2.html?ZmY4MDgwODE2ZjNjYmIzYzAxNmY0MDk4ODA2NjA0ZmM%3D>. Last access: April 2, 2025.

elements of the work only have an indirect relationship with the work. For instance, after the filming is completed, the film editor trims redundant dialogue to manage the film's runtime.

The expressive elements of AI-generated content (such as textual combinations, code structures, and image compositions) are autonomously generated by algorithms, neither pre-programmed by developers nor directly controlled by users. As neither developers nor users exercise free will in determining the expressive form of the work, AI-generated content struggles to qualify as a 'work' within the meaning of copyright law. The determination of rights 归属 therefore requires adjustment through special rules (such as neighboring rights or novel intellectual property regimes). This is akin to a homeowner who cannot claim that a house design independently completed by an architect is a "creation" of the homeowner simply because the homeowner commissioned the design, provided design inputs, or selected an excellent design proposal.

3.3 DEBATE ON THE “INVESTMENT INCENTIVE THEORY”

“Investment Incentive Theory” holds that in order to incentivize research and development, investment in AI technology, and promote industrial development, AIGC should be protected by copyright law (Chunming Xu et al., 2019). However, the utilization of AIGC follows distinct business models compared to traditional works. For instance, ChatGPT monetizes its offerings through the ChatGPT Plus subscription plan, API usage fees, and technical integration revenue streams. The non-classification of AIGC as 'works' under copyright law does not hinder investment in AI technologies.

4. THE RATIONALITY OF INCORPORATING AIGC INTO THE PROTECTION OF NEIGHBORING RIGHTS

If AIGC were to be directly placed in the public domain, it might trigger international market disorder and stifle industrial innovation. However, incorporating AIGC into the protection of neighboring rights can not only respond to the practical needs of industrial development but also maintain the stability of the copyright system.

4.1 ALIGNING WITH THE INSTITUTIONAL PURPOSE OF NEIGHBORING RIGHTS

Firstly, incorporating AIGC into the protection of neighboring rights aligns with the institutional purpose of neighboring rights. Although AIGC cannot constitute a work, it embodies intellectual inputs such as parameter adjustments and prompt selections by users, as well as economic resources invested by investors. The essence of neighboring rights lies in protecting the economic value generated by non-creative investments, rather than the original expression of a work (Anling Fei, 2024). For instance, the EU's Directive on the Legal Protection of Databases protects the substantial investments made by database producers through neighboring rights, and this logic can be extended to the protection of AIGC.⁶

4.2 MEETING THE DEMAND FOR BALANCE OF INTERESTS

Secondly, incorporating AIGC into the protection of neighboring rights meets the demand for a balance of interests. AIGC involves the interests of multiple stakeholders: developers need to recover R&D costs, users need to ensure the revenue from the use of generated content, and the public needs access to information. If AIGC is directly placed in the public domain, it may trigger international market disorder and inhibit industrial innovation. On the other hand, adopting copyright protection would lead to confusion in the institutional logic due to the lack of originality. Neighboring rights, through the establishment of limited exclusive rights such as shorter protection periods and restrictions on the exercise of rights, can not only provide economic incentives for users but also avoid excessive monopolies and safeguard the public interest.

4.3 HAVING INSTITUTIONAL FLEXIBILITY

Finally, incorporating AIGC into the protection of neighboring rights has institutional compatibility. As an important supplement to the copyright law system, the neighboring rights system provides an institutional foundation for the protection of AIGC with its flexibility and expansibility. From a historical perspective, neighboring rights have always been closely related to technological

⁶ In <https://eur-lex.europa.eu/eli/dir/1996/9/oj/eng>. Last access: April 2, 2025.

development, and their protected objects have gradually expanded from traditional performers' rights and phonogram producers' rights to non-work content such as databases and scientific publications. This institutional flexibility indicates that neighboring rights can break through the limitations of "work-centrism" and respond to the demand for benefit distribution brought about by emerging technologies. Specifically in China, the Copyright Law of the People's Republic of China does not provide a closed list of neighboring rights objects,⁷ and Article 123 of the Civil Code of the People's Republic of China does not limit the objects of neighboring rights either, which reserves space for the creation of new neighboring rights such as "the right of users of generated information."⁸

5. CONCLUSION

The "works" protected by copyright law must be the creative output of humans. While AIGC formally meets the requirement of "originality," it is not a sufficient condition for constituting a work. Firstly, as the saying goes, "The law has exceptions, but logic has no exceptions" (Xihe Li et al., 2016). In the absence of specific legal provisions, if AIGC is recognized as a work, then content originating from other non-human sources, such as animals, could also be deemed as works. Secondly, countries enact copyright laws to protect works to encourage their creation and dissemination. Only humans can understand the exclusive rights and protection mechanisms stipulated in copyright law and be motivated by them. Therefore, only human creative output can be protected as works under copyright law.

Copyright law has its specific legislative purposes, and works have always been inseparable from human authors. If one day AIGC surpasses any work created by humans based on their intellect and emotions, to the point that the world no longer needs human creation, then the right choice for humanity would be to acknowledge that the historical mission of copyright law has come to an end. Currently, policymakers worldwide are focusing on mitigating the potential negative impacts of generative AI, such as endangering public safety, bias, privacy violations, and threats to cybersecurity, as well as on the innovation and application of generative AI itself.

Incorporating AIGC into neighboring rights protection is essentially about achieving compatibility between technological dividends and legal order through institutional innovation. A

⁷ In https://www.gov.cn/guoqing/2021-10/29/content_5647633.htm. Last access: April 2, 2025.

⁸ In http://www.npc.gov.cn/npc/c2/c30834/202006/t20200602_306457.html. Last access: April 2, 2025.

new type of neighboring rights design centered on "generative information user rights" can not only respond to the practical needs of industrial development but also maintain the stability of the copyright system. In the future, it will be necessary to further refine the rules for the exercise of rights and gradually improve protection standards through judicial practice, ultimately forming unified protection rules internationally and achieving a dynamic balance among the interests of developers, users, and the public.

6. REFERENCES

- 丛立先,李泳霖.生成式AI的作品认定与版权归属——以ChatGPT的作品应用场景为例[J].山东大学学报(哲学社会科学版),2023,(04):171-181.DOI:10.19836/j.cnki.37-1100/c.2023.04.015. (Cong Lixian, Li Yonglin. (2023). Work Identification and Copyright Ownership of Generative AI - The Case of ChatGPT's Work Application Scenario. Journal of Shandong University (Philosophy and Social Science), (04), 171-181. DOI:10.19836/j.cnki.37-1100/c.2023.04.015.)
- 费安玲,喻钊.利益衡量视域下人工智能生成内容的邻接权保护[J].河北大学学报(哲学社会科学版),2024,49(04):116-127. (Fei Anling, Yu Zhao. (2024). On the Protection of Neighbouring Rights of Artificial Intelligence Generated Content under the Measurement of Interest Perspective. Journal of Hebei University (Philosophy and Social Science) , 49(04), 116-127.)
- Gurkaynak Gonenc, Yilmaz Ilay, Doygun Turker, Ince Ekin. (2018). Questions of Intellectual Property in the Artificial Intelligence Realm. The Robotics Law Journal. <https://roboticslawjournal.com/analysis/questions-of-intellectual-property-in-the-artificial-intelligence-realm-91908569>
- 黄汇,黄杰.人工智能生成物被视为作品保护的合理性[J].江西社会科学,2019,39(02):33-42+254. (Huang Hui, Huang Jie. (2019). The Rationality of Protecting AI-Generated Content as Works. Jiangxi Social Sciences, 39(02), 33-42+254.)
- Lee JyhAn, Hilty Reto, Liu KungChung. (Eds.). (2021). Artificial Intelligence and Intellectual Property. Oxford University Press. <https://doi.org/10.1093/oso/9780198870944.001.0001>
- 李伟民.职务作品制度重构与人工智能作品著作权归属路径选择[J].法学评论,2020,38(03):108-124.DOI:10.13415/j.cnki.fxpl.2020.03.009. (Li Weimin. (2020). Reconstruction of the System of Works Created in the Course of Employment and the Choice of Path for Determining the Ownership of Copyright in AI-Generated Works. Law Reviews, 38(03), 108-124. DOI:10.13415/j.cnki.fxpl.2020.03.009.)

李锡鹤.物权论稿[M].中国政法大学出版社:201611.873. (Li Xihe. (2016). Treatise on Property Law. China University of Political Science and Law Press.)

Peng Shinyi, Lin ChingFu, Streinz Thomas. (Eds.). (2021). Artificial Intelligence and International Economic Law. Cambridge University Press. <https://doi.org/10.1017/9781108954006>

王迁.再论人工智能生成的内容在著作权法中的定性[J].政法论坛,2023,41(04):16-33. (Wang Qian. (2023). The Qualitative Analysis of Content Generated by Artificial Intelligence in Copyright Law. Tribune of Political Science and Law, 41(04), 16-33.)

许春明,袁玉玲.论人工智能的法律主体性——以人工智能生成物的著作权保护为视角[J].科技与法律,2019,(02):1-6+18.DOI:10.19685/j.cnki.cn11-2922/n.2019.02.001.(Xu Chunming, Yuan Yuling. (2019). The Legal Subjectivity of Artificial Intelligence - From the Perspective of Copyright Protection of AI Products. Science Technology and Law, (02), 1-6+18. DOI:10.19685/j.cnki.cn11-2922/n.2019.02.001.)