



Analysis on the Rationality of Copyright Law Protection for Autonomously Generated AI Content

Haoran Tong

School of International Studies, Zhengzhou University, 450001, Zhengzhou, Henan, China

Email:15716737232@163.com

Abstract. In recent years, AIGC has developed rapidly, demonstrating its remarkable productivity in the field of creation. However, current legal frameworks have not fully adapted to the swift advancements in AI industry. Significant debates persist regarding whether autonomously generated AI content qualifies as works, and whether AI is an eligible creator. Copyright protection for autonomously generated AI content is both feasible. Firstly, autonomously generated AI content meets the constitutive requirements of a piece of work. Furthermore, from the perspective of philosophical theories of subjectivity and analyzing the provisions in the Copyright Law, the identification of the creator is not a prerequisite for copyright protection.

Keywords: Autonomously Generated AI Content, Copyright law, Originality

1 Introduction

Recently, breakthroughs in algorithm optimization and mass information processing technology have significantly enhanced the autonomous learning efficiency of AI. AI increasingly participating in the creative process, posing challenges to the current Copyright Law. The current autonomously generated AI content differs fundamentally from its predecessors. Treating it as a branch of traditional works and denying its eligibility for copyright protection no longer aligns with societal realities. Therefore, it is necessary to innovate legal protection theories based on new realities. Given the evolution of autonomously generated AI content in recent years, classifying such content is a prerequisite for more precise copyright protection. Based on the level of human involvement, autonomously generated AI content can be divided into machine-assisted works and autonomously generated works.[1] Stipulated in Article 5 of Regulations for the Implementation of the Copyright Law of the People's Republic of China, machine-assisted works are not within the scope of copyright protection. Therefore, this paper focuses solely on autonomously generated AI work.

2 Current Status of Copyright Protection for Autonomously Generated AI Content

2.1 Disputes Over Attributes of Works

Regarding the identification of whether autonomously generated AI content qualifies as a work, the academic community tends to deny its status as a work under the current Copyright Law, though that does not negate its value for protection.

2.1.1 Disputes Over Originality Standards.

The judgment of originality primarily involves a debate between objective and subjective standards, with the dividing line lying in the subject of originality determination. The former stipulates that the expression of the author's internal thoughts is the sole manifestation of originality, while the latter regards the reader as the ultimate decider of originality.

Under the subjective standard, originality should reflect a certain level of intellectual creativity and achieve a specific level of creation. Since AI-generated works are produced according to specific algorithms, selecting the best outcome from multiple possibilities. Consequently, it lacks the independent thought and intention of the author and cannot be considered a work. In contrast, the objective standard argues that originality should transcend the identity of the creator and instead examine whether the content exhibits originality from the perspective of the general public. Currently, the Modicum of Creativity is widely accepted in academia and judicial practice, though it has also sparked controversy. Critics argue that this standard provides indiscriminate protection to works of varying quality, potentially flooding the market with subpar creations. Some propose raising the threshold to filter out low-quality works. However, this approach could lead to a "double standard".

In juridical practice, China has not entirely denied the originality of autonomously generated AI content but has heard based on the extent of human contribution. In the *Filin Law Firm v. Baidu Inc. Copyright Infringement Case*, the court held that part of the article involved was generated by software rather than humans and thus lacked originality. Nevertheless, because the work incorporated the intellectual effort of software designers and users, it was deemed to be granted protection. Conversely, in the *Dreamwriter Copyright Infringement Case*, the court adopted the objective standard. Despite the article being generated by AI, it demonstrated the AI's ability to analyze and interpret stock market information, exhibiting originality and external expression. The court thus identified it as a work. Although these cases applied different standards, they converged on a key point: only when human contribution is demonstrated can autonomously generated AI content be identified as a work.[2]

2.1.2 Disputes Over the Attributes of Intellectual Achievement.

The debate over whether autonomously generated AI content qualifies as an intellectual achievement centers on whether the natural person involvement is a necessary condition.

The "denial theory" argues linking "intellectual achievement" exclusively to "natural persons" is untenable. As long as AI demonstrates "human-like" intellectual activities in creative process, its output should be recognized as an intellectual achievement [3]; Furthermore, since AIGC models are trained using Reinforcement Learning from Human Feedback (RLHF), their outputs inherently reflect human preferences[4], and thus qualify as human intellectual achievements. The "affirmation theory," however, holds that since autonomously generated AI content is produced by machines rather than humans, even if the algorithms and models embody human intellectual input, this input lacks a direct causal relationship with the generated content [5].

In juridical practice, Chinese courts tend to adopt the affirmation theory. In the first case in China involving copyright disputes over AI-generated images, although the court heard that current AI lacks legal capacity, the images involved generated by Stable Diffusion exhibited identifiable differences from prior works. Moreover, the natural person played a primary role in the creative process, with AI serving as a tool, The court thus identified the images as works.

3 Autonomously Generated AI Content Qualifies as Works

3.1 Autonomously Generated AI Content Exhibits Originality

China's current Copyright Law lacks a unified definition of originality, as well as scholars have diverse interpretations.

3.1.1 The Debate Between Objective and Subjective Standards.

The criteria of originality primarily involves objective and subjective standards, and different choices of standards lead to different conclusions[6]. The debate between these standards reflects a shift from author-centered to work-centered theory.

The author-centered theory and the subjective originality standard tightly link works to the author's personality, protecting only those works that reflect the author's individuality and intention. As the economy has developed, trademarks, trade names, geographical indications etc. that embody little or no human creativity have been protected by intellectual property. Insisting that copyrightable subject matters embody individuality no longer suits practical requirements. According to the historical expansion of the category of copyrightable subject matters, including autonomously generated AI content within the scope of works is not without precedent.

The work-centered theory has weakened the creative process, instead emphasizing the result—as long as the work contributes substantively to society, its attribute of work is recognized. This aligns with the reader-centered theory that readers interpret works. Under the objective originality standard, the widely accepted "modicum of creativity" principle holds that if a work is the product relying on creator's independent intellect and skills, it qualifies as original.[7] U.S. intellectual property practice adheres to the "Sweat of the Brow" doctrine, granting copyright protection to any content produced with minimal intellectual effort, absent plagiarism.

3.1.2 The "Modicum of Creativity" Standard is the Optimal Choice.

Some scholars question the "modicum of creativity" standard, arguing that its extremely low threshold could lead to low-quality creations. The low-cost and high-speed nature of autonomously generated AI content could incentivize free-riding behavior. If a large number of low-quality works flood the market without verification, which must cause that bad money drives out good money, contradicting the Copyright Law's purpose of incentivizing creation and dissemination.

This concern is not unfounded. However, applying a double standard to autonomously generated AI content could create both practical and legal principle problems. First, as mentioned earlier, modern works possess practicality and scientificity. For instance, the imaginary concept of "creative height" has hindered the development of China's cultural industries in areas[8], as the requirements of protection of sports events, live-streamed video games, short videos, and applied art. In addition, Nobuhiro Nakayama argues that requiring all works to express individuality while imposing higher creative requirements on certain works like computer programs, causes a double standard that is difficult to justify by laws and makes the judgement of individuality highly subjective which would grant judges excessive discretionary power, potentially undermining judicial authority[9]. Therefore, the "modicum of creativity" standard is the optimal choice given the tradeoff.

3.1.3 The Unicity of autonomously generated AI content Does Not Affect Its Attribute of Works.

Since autonomously generated AI content uses general models, the same model in the hands of different users may produce identical works. This unicity has been considered by scholars as a factor affecting the determination of works attribution.

In fact, the exclusive nature of copyright differs from that of patent rights. The exclusive nature of patent rights grants the subject exclusive control right over their innovations, legally preventing third parties from unauthorized commercialization, manufacturing, market circulation and so on. In contrast, copyright exclusive nature does not prohibit third parties from independently creating identical or similar works. Refer to the juridical practices of the U.K. and the U.S., if a product is objectively similar to a natural human work, it can be considered a work under copyright law[10]. Moreover, since different users employ the same AI model, the "author" of identical works is the same AI, and no "third party" is involved in copying or plagiarism. Thus, the notion of "infringement" is untenable.

In summary, the objective originality standard better aligns with the scientificity, practicability, and economy of modern works. Compared to higher originality standards, the application of "Modicum of Creativity" standard also offers precedent for copyright protection of autonomously generated AI content.

3.2 Autonomously Generated AI Content Qualifies as an Intellectual Achievement

From both technical and legal perspectives, autonomously generated AI content should be recognized as possessing the attribute of an intellectual achievement.

Technically, the creative processes of AI and humans share essential similarities. AI creation typically relies on existing data, analyzes users' needs, and then autonomously generates content. Furthermore, current AI models learn the styles and ideas of existing works in a short time and produce vast quantities of new works. DeepSeek, for instance, features a deep reasoning architecture, allowing users to observe the AI's thought process and then evaluate the quality. ChatGPT, in particular, differs from weak AI due to its training via RLHF, which embeds human preferences into its outputs. That is to say, autonomously generated AI content incorporates human intellectual input and qualifies as an intellectual achievement. Despite the speediness and efficiency of AI creation, its process is in essence not different from human learning from existing knowledge, ideas, and styles and applying their experience to solve problems and create.

Even if the essential similarities between AI and human creation processes are denied, using the process of AI creation to negate the intellectual achievement attribute is legally inappropriate. Under the Copyright Law's "idea-expression dichotomy", the methods and processes are irrelevant to its legal status as an intellectual achievement. Therefore, the process of AI creation does not affect the intellectual achievement attribute. Moreover, from the two-dimensional nature of "knowledge" and "property," the object of intellectual property should generate knowledge spillover, while the intellectual nature of natural person is not a necessary condition[11].

In short, the intellectual achievement attribute of autonomously generated AI content is undeniable from both technical and legal perspectives. Technically, AI invests intellectual effort that is essentially indistinguishable from human thinking. Legally, under the "idea-expression dichotomy" and the "knowledge spillover principle", the objective value of autonomously generated AI content meets the basic requirements for the object of intellectual property. Protecting autonomously generated AI content is not the subversion of traditional copyright law but an extension.

3.3 Autonomously Generated AI content Can Be Controlled and Dominated by Humans

Intellectual property is essentially a technical means of constructing property rights. As long as a creation possesses the value and scarcity required, can be controlled and dominated by humans, and cannot be included into other real rights, it can be regulated under intellectual property law. Therefore, if autonomously generated AI content meets the originality requirements and exhibits intellectual creation, the key to determining its legal status lies in whether it can be controlled by humans.

Some scholars argue that users lack creative intellectual labor in the AI creative process, sometimes merely pressing a button, and that AI replace natural people as the dominant power, whose outputs are unpredictable. In 2023, the Compendium of U.S.

Copyright Office Practices stipulated that works where the traditional authorship elements are entirely AI-generated and the human author lacks final creative control are ineligible for copyright registration.[12]

However, this argument overlooks the primary social reality[13], namely AI creation process. In reality, AI's initial outputs and final creations are often quite distant. Just as human creation needs to go through drafting, proofreading, revising, and finalizing, AI creation does so. What's more, compared to human creation, natural persons retain their dominant role in AI creation. Human intention is translated into instructions that guide the AI's orientation of creation. Moreover, precisely because autonomously generated AI content is unpredictable, human users must continuously evaluate, review, and modify it to achieve the desired final creation. This process virtually enhances users' control.

Admittedly, the market is flooded with AI-generated works of low quality, which are unmodified and unpolished by humans, that disrupt market order. Nevertheless, it's overgeneralized to deny the copyrightability of all autonomously generated AI content. Since these works primarily disturb market order, they should be regulated by relevant economic laws, such as the Anti-Unfair Competition Law.

4 Identification of Creator Eligibility Is Not a Necessary Condition for Copyright Protection of autonomously generated AI content

The challenge of determining creator eligibility is central to copyright protection for autonomously generated AI content. If human creation is deemed a prerequisite for a work, then autonomously generated AI content, lacking an author of natural person, cannot qualify as a work; Alternatively, if AI is recognized as a civil subject, it would violate the fundamental civil law principle of legal subject-object dualism[14]; Only copyright holders with the capacity for intention can respond to the incentive function of copyright law. Extending copyright protection to autonomously generated AI content would not encourage human creation, contradicting the law's original intention of incentivizing creation and dissemination. However, determining creator eligibility is not a necessary condition for copyright protection of autonomously generated AI content. Insisting that autonomously generated AI content lacks a human creator as a logical starting point for denying copyright protection will create a circular argument dilemma.[15] Therefore, based on the above analysis, autonomously generated AI content should be recognized as works with originality, automatically acquiring copyright upon creation. It actually has an "author", though which may be difficult to determine. But this does not preclude copyright protection.

First, new philosophical theories of subjectivity have shifted from anthropocentrism to polycentrization. In the posthuman era, the assumed sole subject status of humans in nature and society has been challenged.[16] From assisting human creation to autonomous creation, "machine authors" have disrupted the long-standing anthropocentric assumption that authors must be human. In light of this, American scholar N. Katherine Hayles refers to the AI era as the "posthuman era". The fading human origin of works

and the shift from author-centered theory to reader-centered theory has significantly reduced the importance of the natural person's expression, with meaning now interpreted by readers. Scholar Lu Haijun proposes a "creator-right holder" dual structure that neither undermines human legal subjectivity nor fuels excessive societal concern about AI. Thus, diminishing the human origin of AI works corrects anthropocentrism without the denial of human subjectivity.

Second, China's Copyright Law does not explicitly require that the creator of a work must be human, leaving room for further discussion on the originality standard for AI-generated works[17]. to how legal persons and other organizations are brought into copyright protection, as the applicable subject of intellectual property is expanding with the need of social reality, AI may eventually be included as an independent author or co-author into the copyright law.

Even if human authorship remains a necessary condition, autonomously generated AI content can still qualify, to say the least. Current AI remains in a transitional phase from weak to strong AI, lacking independent self-awareness. Thus, from instructions to setting conditions and intentions, human retains a decisive role, meaning such content can ultimately be traced back to a human.

In conclusion, determining creator eligibility is not a necessary condition for copyright protection of autonomously generated AI content. Whether the fading of creator, recognizing AI as the creator, or maintaining the natural person's authorship, protecting autonomously generated AI content is undeniably reasonable.

5 Conclusion

The rapid development of AI has already caused significant impact on creation. With the secondary principle, copyright law should adapt to social changes in order to address increasingly common AI-related copyright cases and issues through its own evolution. Although there remain controversies regarding the protection of AI-generated content under current copyright law, the analysis from perspectives of its attribute as a work and the unessential identification of creator eligibility reveals no jurisprudential obstacles to extending copyright protection to autonomously generated AI content. Furthermore, such protection better aligns with societal development needs. Utilizing copyright law to support the orderly and healthy development of the AI industry will contribute to maximizing AI productivity, playing a crucial role in China's process of building an intellectual property power-house.

Reference

1. Yang Lihua. (2021). Research on the Copyright of AI Products. *Modern Law Science*, 43 (4).
2. Si Xiao. (2023). The Arrival of the Singularity: Where is Copyright Law Heading in the ChatGPT Era—Responding to Relevant Arguments. *EXPLORATION AND FREE VIEWS*, (05), 79-86+178-179.

3. Li Weimin. (2018). Determining the Copyright Protection of AI's Works. *Oriental Law*, (03), 149-160. doi:10.19404/j.cnki.dffx.2018.03.015.
4. Cong Lixian & Li Yonglin. (2023). Work Identification and Copyright Ownership of Generative AI—The Case of ChatGPT's Work Application Scenario. *Journal of Shan-dong University (Philosophy and Social Sciences)*, (04), 171-181. doi:10.19836/j.cnki.37-1100/c.2023.04.015.
5. Wang Qian. (2017). Qualitative research on the Content of AI in Copyright Law. *Science of Law - Northwest University of Political & Law*, 35 (05), 148-155. doi:10.16290/j.cnki.1674-5205.2017.05.014.
6. Lu Binghong. (2020). Study on the Choice of Judgment Criteria for the Originality of AI Creations. *Inner Mongolia Social Sciences*, 41 (04), 102-108. doi:10.14137/j.cnki.issn1003-5281.2020.04.014.
7. He Huaiwen. (2020). Computer-Generated Works Under China's Copyright Law. *Journal of Zhejiang University (Humanities and Social Sciences)*, 50 (03), 45-62.
8. Lu Haijun. (2019). "Work" in the sense of copyright law - with AI products as the entry point. *Seeker*, (06), 74-81. doi:10.16059/j.cnki.cn43-1008/c.2019.06.009.
9. Nakayama, N. (2020). *Chosakukenho* (3rd ed.). Yuhikaku.
10. Xiong Qi. (2017). Copyright recognition of AI-generated content. *Intellectual Property*, (03), 3-8.
11. Huang Hui. (2007). Interpretation and transformation: An explanation of de-intellectualization of intellectual property. *Intellectual Property*, (01), 11-18.
12. United States Copyright Office. (2023, March 16). Copyright registration guidance: Works containing material generated by AI. *Federal Register*, 88 (51), 16192-16193. <https://www.federalregister.gov/documents/2023/03/16/2023-05321/copyright-registration-guidance-works-containing-material-generated-by-artificial-intelligence>
13. Feng Xiaoqing & Sun Xunjing. (2024). A Study on Intellectual Property Law Guarantees for New Quality Productive Forces. *Intellectual Property*, (07), 43-57.
14. Zhang Zhijian. (2022). Analysis of the Civil Legal Status of AI. *Private Law Re-view*, 41 (05), 106-122.
15. Hou Yuewei. (2024). Legal Attributes and Criminal Law Protection of Generative AI Outputs. *Jiangxi Social Sciences*, 44 (08), 101-112.
16. Sun Weiping. (2024). The Subject Status, Rights, Responsibilities and Obligations of Intelligent Robots. *Journal of East China Normal University (Philosophy and Social Sciences)*, 56 (01), 1-8+175. doi:10.16382/j.cnki.1000-5579.2024.01.001.
17. Li Xiebiao. (2024). Study on the path of copyright protection of AI products. *China Publishing Journal*, (05), 49-55.

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

