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A study on copyright issues of AI-generated works in China

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Abstract. This article discusses the copyright issues involved in China's artificial intelligence-generated works, focusing on two core controversial points: "copyrightability" and "copyright attribution". The article systematically reviews the different views of academic circles and judicial practice at home and abroad: in terms of copyrightability, supporters believe that the works generated by artificial intelligence meet the basic standards of originality and intellectual creation, while opponents emphasize that they lack human subjectivity and direct intellectual control. In terms of copyright attribution, the main views include the theory of artificial intelligence attribution, the theory of artificial intelligence user attribution and the theory of investor attribution. The author believes that the works generated by artificial intelligence should be copyrighted, and proposes to adopt the practice of "user ownership as the principle". This method will include clarifying the legislation on the nature of the work, establishing a traceability mechanism, and limiting the protection period to a certain range to balance innovation incentives and public interests, so as to provide theoretical reference for China's artificial intelligence copyright framework.

Keywords: works generated by artificial intelligence, copyright, copyrightability, copyright attribution statement

1. Introduction

With the rapid development of generative artificial intelligence technologies such as ChatGPT and DeepSeek, generative artificial intelligence has completely changed the "passive processing" creation mode of traditional artificial intelligence. Nowadays, it can independently generate various contents including text, images and videos. By 2024, the scale of related industries in China will reach 580 billion yuan [1]. This new "data-based algorithm-driven creation" model challenges the copyright legal logic of traditional "human originality creation", which poses a major test to the legal framework with "originality" as the core [2]. Based on this, this article aims to solve two core problems: whether the content generated by AI meets the definition of "works" in the Copyright Law, and the attribution of content generated by AI. The purpose is to provide theoretical support and institutional reference for the copyright protection of AI-generated content in China, and strive to achieve a balance between human innovation and artificial intelligence technological progress.

This article is divided into four main parts. The first part introduces the concept of artificial intelligence and reviews the current situation of the academic community in artificial intelligence research. The second part mainly discusses whether the works generated by artificial intelligence are qualified for copyright protection, which is a prerequisite for legal protection under the copyright law. The third part examines the

attribution of artificial intelligence-generated works. The last part summarizes the research results of this article and puts forward suggestions to strengthen the protection of artificial intelligence-generated works.

2. The concept and research status of generative artificial intelligence

Generative artificial intelligence is an important branch in the field of artificial intelligence. This is a technology based on algorithms and models to generate content such as text, images, audio, video and code. Unlike the analytical function of traditional artificial intelligence, generative artificial intelligence can learn and generate new content through its own logic. Unlike traditional artificial intelligence, the latter only processes and analyzes input data, while generative artificial intelligence can learn and simulate the intrinsic patterns of phenomena. It generates new and logically coherent content based on user input [3]. Traditional artificial intelligence interprets and analyzes input information to draw conclusions, while generative artificial intelligence creates unknown information to generate novel content. The two are not mutually exclusive, but complementary and applicable to different fields.

The development of generative artificial intelligence began with the computer-generated music work Elijah Suite in 1957. After the 1990s, artificial intelligence turned into practical applications, and finally the first novel generated by artificial intelligence was born in 2007. The introduction of GANs generated in 2014 accelerated technological progress. Models such as DALL-E and ChatGPT significantly improve the quality and diversity of generated content, making it possible to perform various tasks efficiently. At present, artificial intelligence technology has been widely used in various fields, but it also faces some challenges, including difficulties in defining copyright, potential risks of abuse and high computing costs.

There are two main academic views on the current situation of China's copyright research on works generated by artificial intelligence. One view is that the works generated by artificial intelligence do not meet the definition of "works" in the copyright law. This view believes that such results are the products of algorithms, rules and preset templates - essentially "mechanical results". They cannot reflect the unique personality and innovative thinking of human creators, so they do not meet the core requirements of "works" in the copyright law [4]. Some scholars also emphasize the view of "people-oriented" and emphasize that the basis of copyright protection is to protect the intellectual achievements of human beings. The content created by non-humans lacks the source of "diversity, scarcity and value", so it should not be included in the category of works [5]. Another point of view advocates the adoption of "objective standards of originality", which believes that the judgment of the work should focus on the originality of the content itself, rather than the natural human attributes of the creator. Wu proposed that the content generated by artificial intelligence, which meets the standard of "independent creation + minimum creativity" and is no different from human works in appearance and expression, meets the substantive requirements of "works" in the Copyright Law [6]. Yang further pointed out that artificial intervention (such as data input and parameter setting) in the process of artificial intelligence generation injects "personal elements" into the content, and the identity of the work should not be denied only because of the uniqueness of the creator [7]. In addition, there have also been judicial precedents supporting copyright ownership, such as the "Tencent Artificial Intelligence Writing Case". The court found that users have "substantially controlled the content generated by artificial intelligence" through behaviors such as prompt design and template selection, thus meeting the originality requirements. This indirectly proves the copyright attribution of works generated by artificial intelligence. Internationally, there are two views on copyright attribution. Some scholars advocate protection. British scholars believe that the content generated by artificial intelligence has shown "human creativity" in the field of literature and music - for example, artificial intelligence can create unique musical melodies - which is in line with the

definition of “literature and works of art” in the Berne Convention. Protecting such works will stimulate the development of artificial intelligence technology [8,9]. American scholars also pointed out that failure to provide protection may lead to “commercial abuse”, such as indiscriminate copying of works of art generated by artificial intelligence. On the contrary, some scholars advocate rejecting or restricting protection [10]. German scholars emphasized that the copyright law protects “human intellectual creation”. Works generated by artificial intelligence lack subjective emotions and intellectual cores; even if they meet the requirements of originality in form, they cannot be equated with human creations. For example, the poetry generated by artificial intelligence may be grammatically correct, but it cannot convey the subtle emotions contained in human expression [11].

There are two main views on the research status of China on the ownership of content generated by artificial intelligence. The first point of view is that the right of ownership should belong to the developer. Some scholars believe that artificial intelligence programmers are the “source of creativity”. The algorithmic framework they design and the choice of training data directly determine the creative direction of the output content. Therefore, they should be regarded as the owners of rights. Feng believes that developers have given artificial intelligence the “ability to create”, and their intellectual investment runs through the whole process of model construction and parameter adjustment, establishing a direct causal relationship with the originality of the output content [12]. However, this view has been questioned. Xiaoben believes that once the algorithm is completed, it will no longer be controlled by the developer, and the specific content of the output is unpredictable [13]. The developer’s contribution is disconnected from the “direct creative behavior” of the work, resulting in the ownership not in accordance with the principle of “matching creation and rights”. The second point of view is that the ownership belongs to the user. Some scholars advocate the adoption of a “user-centered” model. They believe that end users can effectively “realize the creative intention” by entering instructions, filtering results and adjusting parameters, so as to become the “actual controller” of the generated works [7].

3. Determining the copyrightability of AI-generated works

Copyrightability means that a specific intellectual creation is eligible to be protected and obtain legal relief under copyright law. The core is that it defines the criteria for determining “which creations should be protected” by copyright law. The core focus is on whether the work meets the legal requirements of copyright works - only intellectual creations that meet these standards can obtain copyright protection.This logic equally applies to determining the rights of AI-generated content (AIGC).

According to the Copyright Law and copyright theory, a work must simultaneously satisfy three core requirements: “belonging to the field of literature, art, and science”, “possessing originality”, and “being capable of being expressed in a tangible form”. Whether AI-generated paintings, articles, and compositions meet the aforementioned criteria remains a subject of debate within both Chinese academia and the legal profession. Opinions primarily fall into two camps: proponents advocating the “work theory” and opponents supporting the “non-work theory”.

Proponents argue that generative AI outputs satisfy the essential elements of a work, citing the following core reasons:

First, the outputs constitute “intellectual creations in the literary, artistic, and scientific fields”. The domain attributes of AI-generated content are clearly defined: paintings fall under the artistic domain, while novels belong to the literary domain. Furthermore, human input endows these outputs with “intellectual character”. Humans provide core intellectual support by designing AI training data, optimizing algorithmic models, and

setting creative instructions (such as prompts and parameter adjustments). Artificial intelligence is essentially a "tool that can enhance human intelligence" and is an extension and extension of human intellectual activities. They proposed that the operating principle of artificial intelligence simulates human intelligence, so it should be equally protected [14,15]. Secondly, the generated works meet the requirements of "originality". On the one hand, if the content generated by artificial intelligence is generated according to human-set instructions (such as entering different tips) and has no substantial similarity with existing works, then it meets the standard of "independent creation". On the other hand, the output of generative artificial intelligence embodies the "personalized choice of human beings" - human beings determine the core expression of artificial intelligence generated content by selecting training data and adjusting creative parameters (such as style, color, length). This kind of "personalized intervention" is completely consistent with the "personalized expression" created directly by humans, which meets the requirements of "creativity". For example, the financial report generated by Tencent using "Dreamwriter" was ruled by the court to reflect the "personalized design of the editorial team for the needs of stock reviews", so it is original. Some professors believe that originality can only determine whether it exists qualitatively, but not quantitatively. As long as the work is not a simple imitation or plagiarism of other people's works, it can usually be considered original [16]. In addition, its generation process is not affected by existing works, and a minimal creative expression is formed through the interaction between algorithms and data. Some exports are no different from human creation, which meets the substantive requirements of China's Copyright Law for works. Finally, the generated output also meets the requirements of "expressing in a perceptible form". The content generated by artificial intelligence is usually presented in tangible forms such as text, images or audio, which can be directly perceived by humans and can also be copied through electronic storage and replication. This fully meets the requirements of "objective externalization" and "reproducibility", and has been unanimously recognized by all parties involved in the discussion. Whether in form or in essence, the content generated by artificial intelligence meets the "originality" requirements of the work and should be regarded as an original work [17].

Identifying works generated by artificial intelligence as "creative works" is in line with the legislative purpose of the Copyright Law, which can motivate developers to continuously improve technology and actively participate in creative expression. The content generated by artificial intelligence has been widely used in literature, art and other fields, with dual economic and cultural value. Without copyright protection, it is easy to cause widespread infringement problems and hinder the standardized development of the industry. At present, there have been many cases in China that have recognized it as a creative work, and the mature legislative precedents of other jurisdictions have also provided a practical basis for establishing its copyright ownership.

Opponents believe that works generated by artificial intelligence cannot meet the standard of originality. First of all, they believe that such results are essentially "mechanical products of the algorithmic process" and lack the "human will" component required by copyright law. Human input instructions to artificial intelligence belongs to "tool operation", not "intellectual creation", similar to workers producing products by operating machines - the "intellectual attributes" of products come from the design of the machine, not the operation behavior itself. The essence of its content is the statistical reorganization of the training data by the algorithm, which lacks human "active thinking and emotional injection", so it cannot be regarded as a "human intellectual achievement". Secondly, these achievements lack "originality". Originality is fundamentally "the externalization of human personality", which requires the expression of the creator's thoughts, emotions and subjective judgment. Due to the lack of independent will and personality, artificial intelligence cannot produce "personalized expression". Third, the "intellectual investment" required by the Copyright Law must achieve "direct control of creative results". In the process of artificial intelligence generation, humans can only "guide

the direction" through instructions, but cannot control the specific expression details. This "indirect intervention" is not enough to classify the works generated by artificial intelligence as "human creation". Due to the lack of human "direct control", the output of artificial intelligence lacks the core attributes of the work. However, both supporters and opponents have a core consensus: the essence of China's Copyright Law is to "protect human intellectual creation". If the works generated by artificial intelligence do not have the intellectual input of human beings at all, then they are essentially not copyrighted. Only when human participation reaches the level of "determining the core attributes of the work", the works generated by artificial intelligence may be protected by copyright. The content generated by artificial intelligence is essentially the result of applying specific algorithms, rules and preset templates. This output cannot reflect the unique personality or innovative thinking of the creator, and should not be regarded as a work [4]. This consensus has become the mainstream practice in current judicial practice - whether it is China's "conditional protection" or the United States. "Human Control Standards" - Both take "human intellectual input" as the core standard, providing guidance for the balance of the copyright system in the era of artificial intelligence.

4. Attribution of copyright for AI-generated works

Against the background of the rapid development of artificial intelligence technology, the copyright ownership of artificial intelligence-generated works has triggered extensive academic discussions. According to relevant research, the following five core views have emerged:

The first is the "attribution theory of artificial intelligence". This view advocates that artificial intelligence should be regarded as a legal entity equal to a natural person, so that it can directly enjoy copyright on the generated works. Some scholars put forward the "electronic man" theory as a supporting basis, believing that the autonomy of artificial intelligence is enough to prove that it has legal subject qualifications. However, there are major flaws in this view: artificial intelligence lacks subjective awareness, emotional experience and moral judgment, which makes it unable to assume rights and obligations [18]. In addition, granting copyright to it cannot achieve the purpose of legislation to encourage innovation [19]. At present, this view has gained considerable support at home, but the voice of opposition is still the mainstream view. Next is "Designer-Programmer Attribution Theory" [20,21].This view holds that designers and programmers give artificial intelligence the ability to create through algorithm development and data training, and their intellectual input forms the basis for generating works. This view advocates granting copyright to designers and programmers. Some common law jurisdictions, such as the United Kingdom, have enacted legal provisions to grant the right to machine-generated works to the person in charge of creation [22,23]. However, there is a legal contradiction in this theory: according to the copyright law, design programmers already own the copyright of the artificial intelligence program itself. Giving them the copyright of the generated output violates the "double incentive principle". In addition, the works generated by artificial intelligence are generated according to user instructions, which is obviously different from the original design of programmers, so it is difficult to classify them as derivative works. The third is the theory of investor ownership. With "incentive investment" as the core, the theory believes that investors bear the financial risks of artificial intelligence research and development and should be rewarded through copyright attribution [24,25]. Some scholars advocate protecting the interests of investors through neighboring rights. However, in practice, investors mainly make profits by renting or selling artificial intelligence services, and there is no direct connection between them and the copyright of the generated works. It is unfair to grant copyright to investors who only provide funds, which will adversely affect other stakeholders. In addition, in the face of a large amount of generated content, it is difficult for investors to take responsibility for review and management, resulting in an obvious imbalance

between rights and obligations. Companies like OpenAI do not claim copyright on generated works, but define the scope of rights through service agreements. The fourth is the user attribution theory. This is the main argument of this article, which is supported by most scholars, because it is more in line with China's national conditions and current practice [26,27]. The theory believes that users have made substantial and original contributions to the generated output through data screening, instruction design and iterative feedback improvement. Their creative intention and control determine the core expression of the work. China's judicial precedents, such as the Tencent v. Shanghai Yingxun case and the "Spring Breeze Case", have always adhered to the view of recognizing users as copyright holders. This approach is in line with the principle of "people-oriented", establishes a closed-loop incentive mechanism that links investment with returns, avoids the fragmentation of rights, and achieves a balance between technological innovation and industrial development needs. The fifth is the subject theory of legal fiction. Drawing on the company's fictional theory, this view advocates that artificial intelligence should be regarded as a "fictional subject", and its rights and responsibilities shall be exercised and borne by the natural person entities behind it (such as developers and investors). However, this method faces practical challenges: it lacks clear standards for the distribution of rights and obligations of fictional subjects and conflicts with the core framework of "natural authors" under the current copyright law. It is basically still at the theoretical level and has not been widely applied in the judiciary.

5. Conclusion

The core controversy surrounding the copyright of artificial intelligence-generated works is currently focused on determining the applicability of copyright and clarifying the attribution of rights. Based on this research, this article aims to establish a reasonable balance method that can both protect innovation and prevent abuse of rights. On the one hand, it clearly points out that the works generated by artificial intelligence meet the requirements of "minimum originality" and "tangible expression", thus qualifying for copyright protection. It is included in the category that can be protected by copyright, so as to avoid inhibiting the vitality of the industry due to legal loopholes. On the other hand, the interests of all parties are balanced through the principle of "granting rights to users with restrictions" - in view of the fact that users have made a lot of contributions through data screening, guidance instructions and feedback optimization, they should be regarded as copyright holders. However, it also limits the situation of "excessive monopoly", such as the exemption of "non-expressive use" based on algorithmic training. Specifically, if the user only extracts data features or logical patterns from the work instead of copying the entire image or text, this situation is not considered infringement, thus providing legal space for the development of artificial intelligence. This can prevent users from abusing their rights to hinder the iteration of technology. At the same time, the "User Agreement Terms" are clearly an exception to protect the rights and interests of users, prevent the platform terms from depriving users of their rights, and promote user autonomy. Further institutional improvement is needed, focusing on three aspects: First, special provisions are introduced at the legislative level for artificial intelligence to generate works, and artificial intelligence is defined as a "special creative tool", and its output is an object protected by copyright. According to the complexity of the instruction and the feedback iteration, set quantifiable standards for the user's original contribution. Secondly, establish a complementary "identification + traceability" mechanism, which requires the output to mark the artificial intelligence system information and key generation process data. Use blockchain technology for end-to-end evidence storage to solve the problem of ownership disputes. Third, improve the rules for restricting rights to balance the interests of users and the public interest. This includes shortening the protection period of artificial intelligence-

generated works and clarifying the boundaries of rational use to prevent excessive copyright expansion from crowding out the public domain.

In a word, the copyright protection of artificial intelligence-generated works has brought major and complex challenges to all mankind. With the rapid development of artificial intelligence technology with the times, the legal framework must be constantly updated to finally achieve a balance between technological innovation and institutional guarantee.

References

[1] China Academy of Information and Communications Technology. (2024, November 29). Artificial intelligence development report (2024) [Report]. https: //www.caict.ac.cn/

[2] Wang Jixia, & Gao Xu(2024). On Copyright Protection for Generative AI-Created Works. *Journal of Hunan University of Science and Technology* (*Social Sciences Edition*), *27* (5), 103-110.

[3] China Association for Science and Technology. (2025, February 26). Generative artificial intelligence [Popular science article]. Science Popularization China. https: //www.kepuchina.cn/

[4] Wang Qian(2017). On the Classification of AI-Generated Content Under Copyright Law. *Legal Science* (*Journal of Northwest University of Political Science and Law*), *35*(5), 152.

[5] Liu Yinliang(2020). On the Copyright Status of AI-Created Works, *Politics and Law*, *3*, 7.

[6] Wu Handong(2017). Institutional Arrangements and Legal Regulation in the Era of Artificial Intelligence. *Legal Science* (*Journal of Northwest University of Political Science and Law*), *35*(5), 131.

[7] Yang Lihua(2021). Exploring Copyright Issues of AI-Generated Works. *Modern Law Review*, *43*(4), 109.

[8] Andrew Christie(2021). AI-Generated Works: A New Frontier for Copyright Law. *Intellectual Property Quarterly*, *42*(3), 260.

[9] Act, Paris. (1979). Berne Convention for the Protection of Literary and Artistic Works. Director.

[10] Pamela Samuelson(2022). Copyright and Artificial Intelligence. *Berkeley Technology Law Journal*, *35*(2), 557.

[11] Hans-Peter Schneider(2021). Limits of Copyright Protection for AI-Generated Content. *German Law Journal*, *22*(7), 1241.

[12] Feng Xiaoqing, & Pan Bohua(2020).Research on the Recognition of AI 'Creation' and the Protection of Its Property Rights — With a Review of the 'First AI-Generated Content Copyright Infringement Case'. *Journal of Northwest University* (*Philosophy and Social Sciences Edition*), *50*(2), 48.

[13] Xu Xiaoben(2021). On the Copyrightability and Attribution of Algorithmic Creations. *Eastern Law Review*, *3*, 49.

[14] Xiong Qi(2017). Copyright Recognition of AI-Generated Content. *Intellectual Property*, *3*, 6.

[15] Yi Jiming(2017). Are AI-Created Works Considered Works?. *Legal Science* (*Journal of Northwest University of Political Science and Law*), *35*(5), 143.

[16] Xiong Chaocheng(2023). On the Scope of Application and Legislative Reform Proposals for the Right of the Producer of a Video Recording. *Intellectual Property*, *8*, 99.

[17] Xu Chunming, & Yuan Yuling(2019). On the Legal Subjectivity of Artificial Intelligence: A Perspective on Copyright Protection for AI-Generated Works. *Science and Law*, *2*, 3.

[18] Li Aijun(2019). On the Legal Conduct of Artificial Intelligence. *Political and Legal Forum*, *3*, 176-183.

[19] Zhu Mengyun(2019). Designing a Copyright Attribution System for AI-Generated Works. *Journal of Shandong University* (*Philosophy and Social Sciences Edition*), *1*, 118-126 .

[20] Guo Shaofei(2018). The Legal Subject Theory of 'Electronic Persons'. *Dongfang Law Review*, *3*, 38-49.

[21] Zhu Chengbin(2019). On the Electronic Personality of Artificial Intelligence. *Journal of Tianjin University* (*Social Sciences Edition*), *4*, 332-338.

[22] Annemarie Bridy(2015). Bridy, A. (2015). The evolution of authorship: work made by code. Colum. *JL & Arts*, *39*, 400-401.
[23] Han Wang(2023). Authorship of Artificial Intelligence-Generated Works and Possible System Improvement in China. *Beijing Law Review*, *14*, 901.
[24] Yao Zhiwei, & Shen Yi(2018). On the Attribution of Copyright for AI-Created Works, *Journal of Xiangtan University* (*Philosophy and Social Sciences Edition*), *3*, 29-33.
[25] Chen Quanzhen(2019). Attribution of Copyright for AI-Created Works: Investors' Supremacy Over Creators. *Journal of Harbin Institute of Technology* (*Social Sciences Edition*), *6*, 26-32.
[26] Yang Lihua(2021). Exploring Copyright Issues in AI-Generated Works. *Modern Law Review*, *4*, 102-114.
[27] Cui Guobin(2023). Users' Original Contributions in AI-Generated Works. *China Copyright*, *6*, 15-23.