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Research and Analysis of Copyrightability of Artificial Intelligence Generated Images

Meiling Guo*
Law School, Beijing Normal University, Beijing, China
***Corresponding author,E-mail:gardenia0913@126.com**

Abstract

Artificial Intelligence (AI), as an innovative technology, has been widely used in China in recent years, and it has achieved remarkable results in the field of content creation. However, there is no uniform opinion in China as to whether the content generated by AI has originality in the sense of copyright law, and whether it should be protected by law. This article will explore this issue in depth, analyzing the originality, authorship, means of creation and results of creation of AI-generated content, with a view to providing certain reference for solving this problem.

Keywords

artificial intelligence, generated content, copyrightability, author, originality

1.Introduction

In November 2023, the Beijing Internet Court concluded a high-profile copyright infringement case involving the copyright of images generated by artificial intelligence (AI). The case, dubbed "the world's first AI image copyright case" by the media, triggered a heated discussion on AI and copyright law. The court held that the AI-generated images in question should be protected by copyright law. The copyright owner of these images was not the AI itself, nor the designer of the AI model, but the user who entered prompt words into the AI model and set the relevant parameters. The result of this judgment breaks with traditional concepts and provides a new angle of thinking on the issue of copyright attribution of works created by AI.

With the development of science and technology, artificial intelligence has gradually become an important tool for creation, and how to define the copyright of works created by artificial intelligence has become an urgent legal challenge. The ruling in this case has undoubtedly provided a new solution to this problem. However, the discussion of this issue is not over, how to balance whether the creation through artificial intelligence belongs to the works in the sense of the copyright law, if it belongs to the works, how to solve the copyright attribution, and how to formulate a more reasonable copyright regulation to adapt to the needs of the development of artificial intelligence, etc., this article will start the discussion with this case.

2.Formulation of the problem

2.1. Inadequacy of "author must be a natural person"

First of all, the idea that "the author must be a natural person and the copyright must be initially acquired

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by that natural person" is not an unshakeable principle in the copyright system. 300 years ago, the British Crown only recognized publishers who joined the "Publishers' Guild" to enjoy the privilege of printing and publishing books, while the actual creators of literary works did not obtain the corresponding rights. More than 300 years ago, the British Crown only recognized that publishers who joined the "Publishers' Guild" had the privilege of printing and publishing books, while the actual creators of literary works were not granted the corresponding rights, and the implementation of the Queen Anne's Law of 1709 was merely the product of a game of interests and compromises that gave the initial copyright to the natural persons who created the works. However, investors did not withdraw from the stage of history, and with their capital, voice and rich lobbying experience, they sought to incorporate into the copyright law concepts and rules favorable to themselves, such as the works of legal persons, works for hire, and film creators in addition to enjoying the right of authorship and the right to remuneration for their labor, the other copyrights initially attributed to the producer. The establishment of China's Copyright Law was deeply influenced by the Western system, and the above rules were introduced in full, even stipulating that the performance unit could initially enjoy the performer's rights as a performer. Although this provision has been repealed in the newly amended Copyright Law, the new law separately stipulates that the initial copyright of "official works created by staff members of newspapers, periodicals, news agencies, radio stations and television stations" belongs to the legal person.

There are contradictions in the judgment of the first trial of the "first AI picture copyright case". On the one hand, the judgment claimed that "mechanical intellectual achievements" are not works and are not protected by copyright; on the other hand, it held that "the lines and colors of the pictures in question were basically 'created' by Stable Diffusion, an AI model, which is significantly different from the drawings that people have previously made using brushes and drawing software. On the other hand, it is argued that "the lines and colors of the pictures in question are basically 'created' by the AI model of Stable Diffusion, which is significantly different from the paintbrushes and drawing software that people used before." Since there is a significant difference between AI creation and traditional painting methods, what is the essential reason for this difference, is it not precisely that compared with brushes and drawing software, AI has the ability to "choose on its own".

2.2. Confusion between the means and the result of creation

As technology continues to change, the means of creating works continue to evolve. Taking literary works as an example, from the beginning of the need for authors to handwrite to typewriters and computers, the emergence of speech-to-text technology and the introduction of ChatGPT have enriched the means of creation. Nowadays, more and more creations are completed through a program or algorithm. As to whether works generated by artificial intelligence can be categorized as works in the sense of the copyright law, some scholars believe that the contents generated by artificial intelligence should not receive the protection of the copyright law on the grounds that the contents generated by virtue of artificial intelligence are not original or do not belong to the results of intellect, and so on.

However, this statement essentially confuses the means of creation with the result of creation. Artificial intelligence is only a means of creation; it does not replace the thinking and creativity of the creator. Content generated through AI is not identical, and each work still reflects the originality of the creator. Archi-

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tects, for example, use electronic drawing tools for modeling, but this does not negate the originality of the architectural models they create. Of course, it is true that AI is quite different from traditional computers or robots in the sense that people will get different results by inputting commands to the AI. Traditional computers or robots, on the other hand, are pre-programmed by their designers, and will only produce repetitive results in accordance with established requirements when given instructions. From this, we can see that artificial intelligence has already possessed a certain "intelligence quotient" and the ability to make autonomous choices by simulating human perception, thinking, judgment and action.

2.3. Generalization of the criterion of "originality"

In the case of copyright protection for intellectual property, the fact that the creator is not a natural person does not disqualify him or her from enjoying the initial copyright. Similarly, the intellectual work in question cannot be regarded as a work that should be protected by the copyright law simply because it embodies the free will or personalized expression of the plaintiff. As a matter of fact, intellectual work can only constitute a work if it possesses originality and thus obtains copyright protection. In this regard, both legislation and doctrine have formed a basic consensus. However, the meaning of "originality" and its judgment standard have been disputed for a long time.A widely accepted view is that the standard for judging originality is not simply whether there is originality or not, but should focus on the level of originality. The key to determining whether an intellectual achievement is original lies in whether there is a recognizable difference between it and an already existing symbolic expression. If there is a significant difference, then it can be considered that the intellectual achievement embodies the author's unique personality expression, thus possessing originality; on the contrary, it does not possess originality. This point of view has been widely used in judicial practice, such as in the first instance decision of the "first AI picture copyright case", when judging whether the picture in question has originality, the decision clearly states that: "from the point of view of the picture in question itself, it embodies recognizable differences with the prior work, and it can be concluded that The picture in question was made independently by the plaintiff and reflects the plaintiff's personalized expression."

The defendant in the "first AI image copyright case" provided a large amount of evidence to prove that AI images similar to those claimed by the plaintiff are available for sale on many platforms, and the price is usually only a few dollars or even less. The price is so low because, on the one hand, the AI generated pictures and the painting created by an artist is still a world of difference in quality, and human beings will only have emotional resonance and aesthetic pleasure to the works of art created by human beings; on the other hand, the output cost of the AIGC is too low, and any ordinary person just enter a few words or set a few parameters, and these words or parameters have a lot of routines or On the other hand, it also lies in the fact that the output cost of AIGC is too low, any ordinary person only needs to input a few prompt words or set a few parameters, and these prompt words or parameters can be copied from a lot of sets or templates, which do not require the operator to think hard by himself, even the plaintiff of the "the first case of AI image copyright" admitted that many of the inverse prompt words inputted by the plaintiff were copied from the user's sharing in a certain forum directly. The author believes that the judgment of originality should take into account the scarcity of the work in the market. In the judgment of originality, the scarcity of the

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work in the market should be taken into account. Only when the benefits of protecting the intellectual work in question significantly exceed the costs of protecting the intellectual work in question, is it necessary to protect the intellectual work in question.

3.Extraterritorial legal experience with AI-generated content

The United States has been the first country in the world to explore issues related to intellectual property rights of "machine creation", and since the 1950s, the United States has been more conservative in its attitude towards the results of machine creation. With the continuous development of science and technology, artificial intelligence has gradually become an important driving force for social productivity and innovation. In this context, the U.S. copyright legislation has not yet made clear provisions for the copyright of artificial intelligence works. In fact, at the legislative level, the U.S. for such works generated by artificial intelligence presents a refusal attitude.This refusal mainly stems from several aspects: firstly, the traditional copyright law is based on the human creative subject, while the creation process of artificial intelligence works is very different from that of human creators, which makes it controversial for the attribution of the copyright of artificial intelligence works at the legal level. Secondly, the creation speed and quantity of AI works far exceeds that of human creators, which may lead to unfair distribution of resources and unbalanced protection of rights and interests in the field of copyright. Finally, the continuous development of AI technology has made the process and results of the creation of works more unpredictable, which also poses a challenge to the enforcement of copyright law.

Although the U.S. has not yet made clear provisions for AI works in its copyright legislation, it is worth noting that the U.S. policy stance in the field of AI has gradually changed in recent years. The U.S. government and enterprises have begun to pay attention to the application of AI technology in various industries, including the creative industry. This indicates that the U.S. policy in the field of artificial intelligence creation is expected to be gradually adjusted to meet the needs of the times.

Legislative trends in other countries regarding works created by artificial intelligence can be broadly categorized into two types. Firstly, one is to draw on existing copyright provisions and extend the scope of application of the law to cover the copyright protection of "machine-created" works. Taking the United Kingdom as an example, the 1998 amendment to the Copyright Act clearly stipulates that the copyright of "computer-generated works" shall be vested in the person who has made the "necessary arrangements" for the creation of such works. This provision essentially extends the scope of copyright protection to works created by machines, providing a legal basis for AI creation.

Secondly, the second is to draft a special copyright bill to set the "independent intellectual creation standard" for AI, so as to clarify the copyright attribution of "machine works". In this regard, the EU has played a leading role. As the earliest supranational organization to carry out discussions on AI legislation, the EU put forward a legislative proposal in 2017, especially emphasizing the need to formulate relevant "independent intellectual creation standards" for "works created by computers or robots that can be recognized as copyright works. ". This criterion aims to clarify the conditions for determining whether a work is an inde-

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pendent intellectual creation, so as to better recognize the attribution of copyright in the work.

4.Institutional Arrangements for Copyrightability of Content Generated by Artificial Intelligence

With the rapid development of science and technology, especially the increasing maturity of artificial intelligence technology, the evolution of copyright law in the future era will pay more attention to realizing the integration of instrumental rationality and value rationality. In China, the reform of copyright law has entered a deep water zone, facing many unprecedented challenges, the most prominent of which is the resolution of the copyright problem of works created by artificial intelligence. The emergence of artificial intelligence technology makes the traditional copyright law concept and system face a serious impact. In order to cope with this challenge, it is necessary to break through the "cage of technical knowledge" and pursue technical rationality with broad social value. This means that we should not only focus on the technological innovation itself, but also look at the issue from the perspective of broader social value.Only in this way can we ensure that the development of AI technology can truly benefit human society and realize the harmonious coexistence of science and technology and humanities.

4.1. Judgment of Originality of Content Generated by Artificial Intelligence

Originality is an important constructive concept of copyright law, and our law does not explain originality. The general view is that originality can be broken down into two aspects: "unique" and "creative": "unique" refers to independent creation, originating from oneself; "creative" means that the work has a certain degree of intellectual creativity. " means that the work has a certain degree of intellectual creativity. Existing views on the originality of AI-generated content is understood differently: some people think that its generation process does not leave space for AI to play "ingenuity", does not have individual characteristics, and therefore does not meet the requirement of originality; others claim that the object of judgment of originality is the expression itself that has already been formed, and that the legal protection is only aimed at the creative result, and can not be extended to the creative process. The legal protection is only for the result of creation, and cannot be extended to the process of creation. Obviously, the focus of the debate does not lie in the level of originality of AI-generated content, but rather in the method of judging the originality of AI-generated content, whether or not an objective standard should be adopted, i.e., there is no need to consider whether the creator of the content is a human being or an artificial intelligence. In fact, if the premise of the "AI creation tool theory" is taken as a premise, a natural conclusion can be reached.

Artificial intelligence as a tool is an extension of human will, and the originality of the content it generates can only originate from human beings, so the judgment of originality should be no different from the judgment of originality of human works. In other words, the judgment of the originality of the content generated by artificial intelligence should adhere to the "content determinism", i.e., without examining the generating subject and generating process of the content, only from the content itself to determine whether the content generated by artificial intelligence constitutes a work in the sense of copyright law.

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4.2. Artificial Intelligence generated content of intellectual achievement attribute

Artificial intelligence is the ability of machines to imitate human intelligent behavior. Semantically, "intelligence" and "intellect" are synonymous, and both refer to the ability of human beings to recognize and understand objective things and to solve problems by applying knowledge and experience. Moreover, AI itself is an intellectual achievement of human invention, and its generated content is the result of imitating human intellectual behavior, so it should have the attribute of intellectual achievement. Further analysis reveals that the content generated by AI has commonality with human intellectual achievements in terms of expression logic and form.

Therefore, AI shares internal logic with intellectual achievements in the process of content generation, and the generated content has the same external logic with intellectual achievements in the form of expression, not to mention that AI itself is a tool created by human intellectual activities, and its generated content of course has the attributes of human intellectual achievements.

4.3. The significance of the copyrightability of the content generated by artificial intelligence

From the viewpoint of interpretation theory, the content generated by artificial intelligence has the attribute of intellectual achievement, according to the "content determinism" to determine whether its originality reaches the standard stipulated in the law, can be characterized whether it constitutes a work. From the viewpoint of legislative theory, the success of a law is measured by whether it can realize its original objectives and good social effects. The inclusion of AI-generated content in the protection of the Copyright Law is in line with the legislative objectives of the Copyright Law and is of great significance to the development of social economy, science and culture.

When facing the issue of copyright for works created by artificial intelligence, the legislative goal should be adhered to on the basis of reshaping the legal system. This means that the reform of the copyright law should be centered on incentivizing innovation and risk regulation to ensure that the rights and interests of creators are safeguarded, while fully stimulating the vitality of social innovation and promoting the prosperous development of cultural and creative industries. On this basis, it is necessary to construct a set of fair, reasonable and effective institutional framework to realize the dual goals of science and technology and law. The close combination of human technical rationality and institutional rationality is the best response to the issue of copyright law for works created by artificial intelligence. On the one hand, it is necessary to fully recognize the infinite possibilities of technological innovation and actively promote the wide application of AI technology in the field of creation; on the other hand, it is necessary to adhere to the original intention of the legislation of the copyright law, to ensure that it can play a due guiding and regulating role in the face of new technology. Only in this way can we move towards a better future under the joint promotion of technology and law.

In conclusion, in the process of solving the problem of copyright law for works created by artificial intelligence, it is necessary to realize the organic combination of scientific and technological rationality and

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institutional rationality on the basis of adhering to the legislative objectives. By constructing a set of fair, reasonable and effective institutional framework, it can not only safeguard the legitimate rights and interests of creators, but also stimulate social innovation and vigor, and promote the prosperous development of cultural and creative industries. In this sense, the evolution of copyright law in the future era will provide more perfect legal protection for works created by artificial intelligence, and help the common prosperity of China's science and technology and cultural undertakings.

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