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Study on the Copyrightability of Objects Created by Artificial Intelligence

Ruihan Dong[1,a,*]

[1]*Heilongjiang University, Nangang, Harbin, China*
a. 20213455@s.hlju.edu.cn
**corresponding author*

Abstract: With the continuous development of AI technology, the emergence of a large number of AI-generated products has brought about many urgent problems for copyright law. At the forefront of this issue is the question of whether AI-generated objects can be copyrighted. In this paper, we first summarize the consistent jurisprudential ideas through case studies: analyzing the controversial aspects of "originality" and "intellectual achievement" in the definition of works to determine whether AI-generated products are works. In terms of originality, applying the criteria of "unique" and "original", this paper analyzes and concludes that AI generators meet the requirements of "unique", but do not meet the requirements of "original", and therefore do not have originality. The analysis in this paper concludes that AI generation satisfies the requirement of "unique" but not "original", and therefore does not have originality. In terms of intellectual achievements, this paper divided the subjects who enjoy the ownership of intellectual achievements into the AI itself and the natural person who uses the AI, and analyzed and came to the conclusion that the AI is not the intellectual achievements of the above two subjects. Therefore, the generation of AI does not meet the terms of the definition of a work, is not a work within the meaning of the Copyright Act, and cannot be copyrighted.

Keywords: artificial intelligence (AI) generator, copyrightability, originality, Intellectual achievements

1. Introduction

In the past few years, generative artificial intelligence has been developing at a fast pace and has made great breakthroughs in the field of art and literature. Generative AI is an AI language model with strong comprehension, rigorous reasoning, and precise expression, which is sufficient for verbal communication, text writing, and code editing, represented by ChatGPT, MOSS, and Wenxin Yiyin, among others. But with the boom in generative AI, new copyright questions have arisen: Are AI-generated objects copyrightable? Can they be recognized as works? At present, Chinese law does not explicitly regulate this issue, and the results of judgments in judicial practice have been inconsistent.

In the Tencent Dreamwriter case, the court for the first time proposed the "two-step judgment method" to determine the originality of AI-generated products: Firstly, the articles in question are analyzed and judged in terms of whether or not they are independently created, whether or not there is a certain degree of difference between their outward manifestation and existing works, and whether or not they possess a minimum degree of creativity; Second, whether the personal choices, judgments,

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and skills of the creator are reflected in the production process of the article in question. In determining specifically whether the conduct of the person concerned is a creative act within the meaning of copyright law, consideration should be given to whether the conduct has the attribute of intellectual activity and whether the conduct is directly related to a particular form of expression of the work[1].In the first case of AI Wenshengtu, the court decision deconstructed the copyright object element according to Article 3 of the Copyright Law into the following elements: whether it belongs to the field of literature, art and science; whether it is original; and whether it is an intellectual achievement[2].

Through the above analysis of judicial cases, it can be seen that China's judicial practice has basically formed a judicial position and judicial ideas: Based on the provisions of the existing copyright law, that is, the interpretation of the basic connotation of works around the definition of works, and focus on the two elements of "originality" and "intellectual achievements" in the absence of disputes over "a certain form of expression", the interpretation of the law. In the absence of disputes over "certain forms of expression", the interpretation of the law focuses on the two elements of "originality" and "intellectual achievement"[3].Exactly how AI-generated content is defined in copyright law is relevant to the future development of copyright law and is an issue that needs to be addressed. Therefore, in this paper, we will take "originality" and "intellectual achievements" as the starting point to discuss the issue of copyrightability of AI-generated works.

2. The generators of artificial intelligence are not original

2.1. The Originality Standard in China's Copyright Law

There are different opinions in the academic community because China's copyright law does not specify the standard of originality. In examining the issue of copyrightability of AI-generated works, this paper argues that the criterion of originality should be elaborated in terms of both "independence" and "creativity". First of all, the term “originality” has two meanings: "independence" and "creativity"[4]. The Chinese character for "originality" can also be divided into "independence" and "creativity", corresponding to two meanings of originality[5].Second, the approach is consistent with current jurisprudence. The "Guidelines for the Trial of Copyright Infringement Cases in Beijing Higher People's Court" issued by the Beijing Higher People's Court stipulates that the determination of "originality" should be based on the two aspects of "independent completion" and "reflection of the author's choices and judgments"[6].In the leading cases issued by the Supreme Court on the standard of originality in the Copyright Law, the judges also interpreted "originality" in terms of both "independence" and "creativity"[7].Thus, it makes more sense to take 'originality' to mean both 'independence' and 'creativity'.

2.2. Artificial Intelligence Generators Meet the "Independence" Requirement

"Independence", i.e. independently created, requires that the work be independently created by the author and not directly copied or plagiarized from the work of others.It should be noted here that according to the dichotomy between thought and expression, "independence" is a requirement for expression rather than thought. Even if a work contains the same ideas as other works, the requirement of "independence" is met as long as the external expression of the ideas remains unique.

However, depending on its mode of operation, AI must ingest a large library of material for training and then orchestrate the material according to established algorithms and models, which ultimately produces the AI generation.However, it is argued that the resulting AI still satisfies the "independence" requirement.

As noted above, the "independence" of originality is a requirement for expression rather than for thought. Human beings must also learn from existing knowledge before they create, and integrate that

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knowledge through learning, digesting, and assimilating before they create.There are also cases in which the works created by human beings do not advance the idea, but only change the way of expressing the content of the idea, which also fulfills the condition of "independence".Similarly, the AI-generated product does not present a new idea, but merely refines and integrates existing material and expresses it in a different form of expression. However, as long as the expression is unique, it satisfies the condition of "independent creation" and the requirement of "independence" of originality.

2.3. Artificial Intelligence Generators Are Not Meet the "Creativity" Requirement

"The independent performance and exercise of labor is not, in and of itself, a sufficient condition for an object to be protected under the copyright laws"[8].The requirement of copyrightability cannot be satisfied by "independent completion" alone; the work should not only be "independently completed", but should also satisfy the requirement of "creativity", i.e. it should reflect to some extent the author's personality, choices and designs in the creative process.

But what level of creativity is required for a result to constitute a work? If the nature of the work differs from the legal tradition of the country in which it is produced, the degree of "creativity" of that work must be different. The Supreme Court has stated that "originality ..... There is no single standard that applies to all works. In fact, different types of works have different requirements for originality"[9].In common law countries, the degree of "creativity" required by copyright is much less than that required in civil law countries. The standard for creativity is extremely low, and even a little is enough," the United States Supreme Court said in Feist[10].In contrast, the requirements for "creativity" are generally higher in civil law countries. "Creativity must belong more to the realm of independent work than one would expect from ordinary intellectual labor," notes German copyright law expert Binder Lei[11]."Things that can be done by applying ordinary human skills, things that can be done by almost anyone, even if they are new, cannot be protected as works"[12].It is difficult to judge the originality of AI-generated works because China's copyright law does not specify the level of "creativity". This paper argues that China's copyright law is closer to the copyright law of civil law countries in terms of concept, system and structure, and the requirement of "creativity" in the originality of civil law countries is higher than that of common law countries, and China's requirement of "creativity" should not be lower than that of common law countries[13].When discussing the issue of copyright of AI-generated materials, because the provisions of China's Copyright Law on the moral rights of authors are very similar to the Berne Convention, in the end, it is borrowed from the French and German countries and other civil law countries "copyright personality rights" rules[14].And the issue of copyrightability of AI-generated works is an emerging issue at the legal level, and its impact on copyright law cannot be underestimated. If AI-generated works are regulated with lower requirements, and the standard of requirements for AI-generated works is equal to or even lower than that of ordinary works, unforeseeable consequences will arise. Therefore, the higher standard of originality of civil law countries should also be applied to the question of the level of "creativity".

This means that in order to be recognized as a work, an AI-generated work must also achieve a high level of intellectual creativity on the basis of independent completion, in other words, it must be able to reflect the author's unique intellectual judgments and decisions, display the author's personality and achieve a certain level of creativity. Artificial intelligence generators do not meet the requirements of "creativity" because they cannot reach the high level of intellectual creativity. When human beings make creations, since they have their own will and make their own trade-offs and judgments in the process of creation, only then can the natural person be recognized as the author, and his or her creations belong to the works. However, the process of generating objects created by artificial intelligence is essentially computation rather than creation[15].Some AI researchers describe the process of generating AI as a machine learning algorithm that designs the workings of

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the central neural brain as an iterative, abstract process to obtain an optimal representation of data features[16].In other words, when we type in a keyword and press the generate button, the AI's "strategy network" analyzes the relevant human big data, looks for the information that best fits the keyword, and generates a generation that best meets human expectations. Therefore, artificial intelligence lacks the emotional input and value judgment of human creative activity in the process of generation, which is essentially the calculation and layer-by-layer processing of information and the application of specific algorithms to achieve the best results. The process of generating content does not involve the "intelligence" required for creation, and therefore does not meet the requirements of "creativity" ,is not original, and cannot be a copyrighted work. Therefore, artificial intelligence lacks the emotional input and value judgment of human creative activity in the process of generation, which is essentially the calculation and layer-by-layer processing of information and the application of specific algorithms to achieve the best results. The process of generating content does not involve the "intelligence" required for creation, and therefore does not meet the requirements of "creativity", is not original, and cannot be a copyrighted work[17] .

3. Artificial intelligence generators are not intellectual achievements

3.1. Artificial intelligence generators cannot be recognized as the intellectual achievements of artificial intelligence

According to Locke's theory of labor, labor is the work of the human being as a subject, and it is the process by which an individual creates value by interacting with the objective world using his or her own physical and intellectual capacities. Man here refers to the natural person in the physical and social sense, a subject of flesh and blood, conscious and autonomous. Through labor, natural persons invest their time, energy, and skills in the creative process, thereby putting their own stamp on intellectual achievements and acquiring ownership of them.

However, artificial intelligence does not have the physiological and social sense of subject qualification, can not independently enjoy the rights, duties and responsibilities, it is only as a tool and the existence of the object, lack of consciousness and autonomy of the subject. Artificial intelligence does not qualify as a subject in the legal sense of the term either. We cannot interpret the current law to mean that "the subject of the law is not limited to natural persons", and if we consider intellectual property law to be an integral part of civil law[18].The provisions of intellectual property rights and duties of the subject are constructed on the basis of the rules of civil subjects, then having civil capacity is the prerequisite for enjoying the rights under the Copyright Law, and having civil subject qualification is the prerequisite for obtaining the qualification of authorship. However, artificial intelligence has neither the qualification of a civil subject nor the capacity of a civil right subject. Even if its "copyright" is infringed, the AI will not be able to exercise its right of prohibition in a timely manner to protect its legitimate interests. Therefore, it is impossible to recognize artificial intelligence as a legal subject. The law has established non-human subjects as legal subjects in order to solve the problems of the subject of rights, capacity to act and legal responsibility, etc. If artificial intelligence is established as an author, but it does not have the ability to exercise rights, fulfill obligations and assume responsibilities, such an establishment is meaningless[19].

Therefore, AI does not have the subjective qualification to enjoy the ownership of intellectual achievements, and AI generation is not the intellectual achievement of AI.

3.2. Artificial intelligence generators cannot be identified as human intellectual achievements

If an AI product is not the intellectual work of the AI itself, can it be recognized as the intellectual work of a human being? In other words, can an AI-generated product be recognized as having been

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created by a "natural person" using the AI? To solve this problem, it is necessary to clarify the positioning of the "user input" behavior of keyword entry.

In the first case of "AI text-generated images", the court found that the plaintiff's behavior of inputting prompt words to generate images reflected the plaintiff's individual selection and arrangement and made a certain intellectual contribution, so that the images in question were original, belonged to the plaintiff's intellectual achievements and constituted a work of authorship. That is, in this case, the court found that the act of "user input" was part of the "personalized choice" of the natural person and met the conditions of "creation". This article disagrees with the court's decision. As mentioned above, the content generated by the AI is not determined by the behavior of the "user input" but is based on the AI's own algorithms and material training, the final product is not under the control of any natural person, and the "user input" is not part of the "creation" in the sense of copyright law. User Input" is not a "creation" as defined by copyright law[20].This is because AI-generated content can only be influenced by "user input" (thoughts), and it is the AI's algorithms and the material on which it is trained that actually determine that content (expression). Therefore, the "user input" belongs to the idea as opposed to the expression of the AI-generated object[21].

In other words, an AI user's instructions can describe the general scope and direction of AI-generated content, but cannot determine its specific content. In the "AI text born image of the first case", although the plaintiff, input the key words it can not know how the final product before the final generation of the image, and the plantiff also can not decide on the final product, the final product can only be generated by the artificial intelligence after receiving the keywords, analyzing the database according to its own algorithm, and generating content according to the material training..

Article 3 of the Regulations on the Implementation of Copyright provides: "The creation referred to in the Copyright Law refers to the intellectual activity that directly produces literary, artistic and scientific works". If the "author" does not even know the specific content of his "work", he can hardly be said to be engaged in "creation".

This paper argues that the act of "user input" belongs to "thinking," which, according to the thought/expression dichotomy, does not belong to creation. That is, the AI user does not create, let alone whether the AI product is his intellectual work.

In summary, an AI-generated object is neither its own intellectual achievements nor the intellectual achievements of its user, i.e., an AI-generated object is not an intellectual achievements.

4. Conclusion

On a legal level, the first question to be addressed in the discussion of AI-generated products is whether they can be recognized as works. If it is recognized as a work, the next step should be to discuss how it should be protected under copyright law. This does not mean, however, that if it is recognized that it is not a work, it will not receive legal protection.They can be protected by creating neighboring rights or by protecting legitimate competitive interests in the case of AI-generated objects.To seek protection for AI-generated objects under the copyright law system would be to defeat the purpose and mission for which the copyright law was created.The purpose of copyright law is to better protect authors and works and to encourage creativity. Technology can never replace or equal the human mind, and only humans can understand and be motivated by the mechanisms of copyright law.At all times, the meaning behind the law cannot and should not be forgotten. Human beings need to create, to cross minds and souls for a short or long time, and copyright law exists to protect them.If AI-generated material is recognized as a work, it will have a major impact on creation, and the order of copyright will be challenged. Authors and works will have no way out.

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