Proceedings of ICGPSH 2024 Workshop: Industry 5 and Society 5 – A Study from The Global Politics and Socio-Humanity Perspective
DOI: 10.54254/2753-7048/2025.LC20507

The Copyright Protection of Artificial Intelligence Generated Content under the Background of Big Data

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Abstract: With the rapid development of artificial intelligence, it has been widely used in all aspects of life. However, the relevant legal issues caused by artificial intelligence are also increasingly prominent. Among these legal issues, the protection of copyright of Artificial intelligence generated content (AIGC) has become a hot topic from all walks of life. People mainly focus on whether AI should be protected by copyright. This paper argues this problem on two sides. On one hand, this paper will introduce the legitimacy of the copyright protection of the AIGC including institutional suitability (taking China's first AI infringement case as an example) and theoretical legitimacy. On the other hand, this paper takes the feasibility of copyright protection of AIGC in consideration, which is divided into three parts: The suitability of the object, the suitability of the subject, and the attribution of rights. This paper also introduces three different methods to the attribution of AIGC copyright, including virtual legal personality theory, artificial intelligence programming designer for the author theory, and AI programming designer and users for the co-author theory. In conclusion, this paper firmly suggests that the AIGC should be protected by copyright.

Keywords: AIGC, China's first AI infringement case, the Copyright Law of the Peoples Republic of China.

1. Introduction

With the rapid development of artificial intelligence, it has been widely used in all aspects of life. However, the relevant legal issues caused by artificial intelligence are also increasingly prominent, among which, the protection of copyright of AIGC has become a hot topic from all walks of life. Although China has only formulated the "Interim Measures for the Management of generative artificial Intelligence Services", the relevant cases caused by artificial intelligence have attracted the attention of all sectors of society. For example, China's first "AI infringement case" has made a judgment on whether the AIGC is protected by copyright. According to the result of the verdict, which caused academic debate, some scholars also think against copyright law originality, and scholars for artificial intelligence generation copyright works provide judicial standards based on this. This paper mainly researches AIGC as the research object and analyzes the foreign countries about artificial intelligence generation theory experience, for China for artificial intelligence generation copyright protection [1].

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DOI: 10.54254/2753-7048/2025.LC20507

2. The Definition of Artificial Intelligence Products

Before defining AIGC, it is needed to determine what artificial intelligence is. AI was first introduced by John McCarthy in the Dartmouth Summer Research Project in 1956 [2]. From a technical point of view, artificial intelligence refers to a technical system implemented through computer programs that mimics human intelligent behavior. In simple terms, AI systems can perform tasks that often require human intelligence, such as visual recognition, speech recognition, decision-making, and natural language processing. From a philosophical perspective, artificial intelligence discusses whether machines can have the thinking ability and consciousness similar to human beings. At the present stage, the artificial intelligence such as Chat GPT, Mid Journey, and so on are all artificial intelligence that allows the AI to learn a lot on the Internet and finally produce the works according to human beings' demands.

AIGC is the works under people's demand, making artificial intelligence coded by a large number of algorithms integrate others' works. Common AIGC includes paintings, film and television works, literary works and so on.

3. The Legitimacy of the Copyright Protection of the AIGC

At present, with the huge use of artificial intelligence, the legal problem that whether the AIGC is protected by copyright is still in the early stage. This paper thinks that we should solve the problem of artificial intelligence generation copyright protection as soon as possible, and the artificial intelligence generation copyright protection has its legitimacy.

3.1. The Institutional Suitability of the Copyright Protection of Artificial Intelligence Product

The works mentioned in Article 3 of the Copyright Law of the Peoples Republic of China refer to intellectual achievements in the fields of literature, art, and science that are original and capable in a certain form, including: (1) Written works; (2) oral works; (3) music, drama, folk art, dance, and acrobatics works; (4) art and architectural works; (5) photographic works; (6) audio-visual works; (7) engineering design drawings, product design drawings, maps, and model drawings; (8) computer software; (9) other intellectual achievements conforming to the characteristics of the works. The Copyright Law of the People's Republic of China leaves a legal place for AIGC: AIGC is suitable for 'other intellectual achievements', which meets the characteristics of the work. This makes AIGC protected by the law.

In China's first "AI infringement case", the judgement shows the direction for the copyright protection of AIGC in judicial practice. In 2023, the plaintiff Li posted the picture (drawn by AI) on his Xiaohongshu account, named "Spring breeze sent gentle",. She posted the pictures on social platforms with "AI painting" and other labels.

Subsequently, the defendant Liu posted an article titled "Love in March, in the Peach Blossom" through the account. The text content of the article was a poem written by himself. A total of 5 pictures were used as the first picture of the picture involved in the case, and the picture involved did not show the watermark. At the bottom of the article reads: " The original poem / I am the cloud sunrise, the picture cut / I am the cloud sunrise, material from the network invasion delete apology.

The plaintiff, surnamed Li, filed a lawsuit to the Beijing Internet Court: (1) Request the defendant to issue a public statement to the plaintiff on the platform, to eliminate the impact of its infringement on the plaintiff. (2) Request the defendant to compensate the plaintiff for the economic loss of 5,000 yuan.

In the judgment, the Beijing Internet Court ruled that the "spring breeze brings gentleness" picture (AI manufacturing picture) was a work of art, protected by the copyright law.

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According to Article 3 of the Copyright Law of the People's Republic of China (here in after referred to as the Copyright Law), "Works" as used in this Law refer to original intellectual achievements in the fields of literature, art and science." The court held that the appearance of the pictures involved was no different from the photos and paintings usually seen by people, which obviously belong to the field of art and have a certain form of expression.

The court determined that the pictures involved had the requirement of "intellectual results".

As for whether the intellectual results are expressed in a certain form, the court believes that the plaintiff has made a certain amount of intellectual investment, such as the way of presenting the design characters, selecting the prompt words, arranging the order of the prompt words, setting the relevant parameters, which picture is selected to meet the expectations, and so on. The pictures involved in the case reflect the intellectual input of the plaintiff, so the pictures involved have the requirement of "intellectual achievement".

The court determined that the pictures involved had the "original" elements.

The plaintiff designed the characters and the presentation methods through the prompt words and set the picture layout and composition through the parameters, which reflected the choice and arrangement of the plaintiff. On the other hand, after the plaintiff obtained the first picture by entering the prompt words and setting relevant parameters, he continued to add the prompt words, modify the parameters, constantly adjust and revise, and finally obtained the pictures involved. This adjustment and correction process also reflected the plaintiff's aesthetic choice and personality judgment. In the trial, the plaintiff generated different pictures by changing individual prompt words or changing individual parameters. It can be seen that when the model is used for creation, different people can input new prompt words and set new parameters by themselves to generate different content.

The court held that at this stage, the generative artificial intelligence model does not have free will or the legal body. Therefore, when people use artificial intelligence models to generate images, there is no problem of who is the creator between the principal and the trustee (painter). In essence, AI is still people use tools for creation, which means that the creative process of intelligence is people rather than artificial intelligence model.

From this point of view, at the present stage, the judicial practice and China's laws have given the legal right of copyright protection of artificial intelligence generation. It also confirmed that the copyright protection of artificial intelligence generation is enjoyed by the author.

If learning from Huang Yuye, Sima Hang, they discuss the problem of AIGC from the "perspective of civil law in the Rights Ownership of AIGC" [3]. From the perspective of Breeding, he believes that in civil law, the people are the subject and the things are the object. Obviously, artificial intelligence is things, according to the theory of property law, the activities of the works generated by artificial intelligence are determined by its natural properties to meet the natural fruits: the works generated by artificial intelligence is a knowledge property income based on the nature of artificial intelligence; the production of such works has continuity; the production of such works is not harmful to the nature of artificial intelligence. The AIGC is the fruit of artificial intelligence, and the relationship between things leaves the relationship between authors and works in the traditional copyright. However, as for the issue of right ownership, Huang Yuye and Sima Hang did not accurately determine whether the copyright belongs to the AI developer or the user.

3.2. The Theoretical Legitimacy of the Copyright Protection of AIGC

3.2.1. The Principle of Equality of the Copyright Protection of AIGC

Drawing on the principle of equality in the five principles in the Civil Code of the People's Republic of China, the principle of equality means that the legal status of civil subjects in civil activities is equal, which means that when different civil subjects participate in civil relations, they should apply

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the same law and have equal status. Civil subjects must consult equally when generating, changing, and eliminating civil legal relations, and their legal rights shall be equally protected by law. This paper believes that although the copyright protection of artificial intelligence does not belong to the scope of the use of the civil law, it should also conform to the principle of equality. We should give the equal status of AIGC in the law, that is, the right to enjoy the copyright protection of the products, and the copyright law should be applied. Artificial intelligence, as its developer, user, and its own multiple subjects, is a creative result created through the joint efforts of the people. If the output of AIGC is not protected by copyright, will it become a legitimate way for criminals to infringe the law on other creations? Moreover, if the right of copyright protection of artificial intelligence generation is deprived, will it affect more works that were originally applied to the copyright law and their author rights? From the perspective of result fairness, we should give the copyright protection of artificial intelligence generation, only in this way can it have better development and make the masses. People tend to use artificial intelligence more often, without worrying about its legal liability and legal questions.

3.2.2. The Natural Rights in the Copyright Protection of AIGC

At the beginning of the copyright law, investors turned to the romantic theory of natural rights in order to cover up their real demands for monopoly interests, which eventually prompted the Congress to pass the declaration of protecting the rights of authors, and thus the copyright law was born. Therefore, when the natural rights theory was thought as the basis of intellectual property legitimacy at the same time, it also caused the controversy and got criticism from other theories. After all, at the beginning of it is mixed with complex legal factors, and in the later rights restrictions, originality that system content on lack interpretation. However, according to the western idea of "natural human rights" and the idea that the law can not prohibit it, the protection of human copyright is also natural. On the other hand, the copyright of artificial intelligence should be also thought that the rights of copyright protection are naturally owned.

4. The Feasibility of Copyright Protection of AIGC

4.1. The Suitability of the Object

As the object of copyright, a work is the foundation and core of copyright protection. Therefore, it is very important to make clear the definition and content of the work. Professor Li Yang believes that works refer to the original expression of thoughts or feelings in the fields of literature, art, and science [4].

In the definition of works in the Copyright Law of the People's Republic of China, the works mentioned in this Law and enumerated in Article 3 refer to the intellectual achievements that are original and can be expressed in a certain form in the field of literature, art and science, including: (1) Written works; (2) oral works; (3) works of music, drama, opera, dance, and acrobatics; (4) art and architectural works; (5) photographic works; (6) audio-visual works; (7) graphic works and model works, including engineering design drawings, product design drawings, maps,and schematic drawings; (8) computer software; (9) other intellectual achievements conforming to the characteristics of the works.

Obviously, China's copyright law retains the AIGC in 'other intellectual achievements' that meets the characteristics of the works. It can be seen that the copyright protection of artificial intelligence generation has been affirmed in the suitability of the object. But how to determine the originality of AIGC is worth studying. The author will divide it into two aspects: form and composition and substantive elements.

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4.1.1. The Form and Composition Elements of the Object of Copyright Law

In the form of the object of copyright law, these factors should be considered: first, the content of the work belongs to the field of literature, art, and science; second, the work can be copied in some tangible form.

This paper believes that the current AIGC is mainly literary words, pictures, videos, music, etc., and these products belong to the fields of literature, art and science.

Philosopher Kant in 1785 demonstrated the illegality of books, distinguished books from the content to mechanical copies and works two in forms, and clear mechanical copies for property rights [5]. Work is the object of the spiritual rights, so others without the consent of the author to copy their works and sales to the public, which constitutes the violation of the authors' spiritual rights. Thus, as long as the work is completed, it can be identified as a tangible carrier and can be copied in some tangible form.

4.1.2. The Essential Elements of the Object of Copyright Law

In the essence of the object of copyright law, that is, when determining the object of copyright law,we must ensure the essence of copyright law. On one hand, the work itself must be the expression of thought or emotion. On the other hand, the content of the work must have a certain degree of originality.

When considering whether artificial intelligence is the expression of thoughts or emotions, we might firstly understand the progress of artificial intelligence generation. First, the user will input instructions to artificial intelligence. Then artificial intelligence extracts the relevant known materials required by the user in a short period of time, and integrates the generation to the user. After that, when the artificial intelligence is instructed by the user, which means that it receives the users' thoughts and emotions, and then artificial intelligence produces the work according to the users' thoughts and emotions. It can be considered that the artificial intelligence generation is the expression of thoughts and emotions. When the user gives the instruction to change the AI generator again, it should also be regarded as a form of strengthening their thoughts or emotions.

Back to the way of AI generation, AI generation is a process of AI searching and integrating relevant content before processing. This process reflects the originality of AIGC. If taking user included, we can think that it is the users instructions that allow artificial intelligence to generate products. In my opinion, this is not different from the creation process of Mona Lisa's painting at that time: businessman asked Da Vinci to paint a portrait of his wife.

It can be seen that, when considering the output process of AI products and the participation of users, the AI products meet the object conditions of copyright protection.

4.2. The Suitability of the Subject

According to Article 2 of the Copyright Law of the People's Republic of China, works of Chinese citizens, legal persons or organizations without legal persons, whether published or not published, shall enjoy copyright in accordance with this Law.

The copyright in the work of a foreigner or stateless person in accordance with the agreements of the country where the author belongs or his habitual residence with China or the joint international treaties shall be protected by this Law.

Works of foreigners or stateless persons first published within the territory of China shall enjoy copyright by this Law.

Authors of countries that have not signed agreements with China or jointly participate in international treaties and works of stateless persons published for the first time in a member state of

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international treaties to which China participates, or in both member states and non-member states, shall be protected by this law.

Therefore, it can be seen that when determining whether the subject of AI is subject to copyright protection, it should be considered whether AI can be identified as a Chinese citizen, legal person or non-legal organization. Since China currently does not give AI Sara citizenship in China as Saudi Arabia does, it is clear that AI cannot be identified as a Chinese citizen. So can we consider the subject eligibility of artificial intelligence from the direction of a legal person or an unincorporated organization? When China's copyright law stipulates that the legal person and unincorporated organizations are the subject of copyright, it does not stipulate that the subject must be the human subject, but the legal person and other organizations as the subject of legal.

Although artificial intelligence in China copyright law is not clear whether artificial intelligence is the copyright subject, considering the artificial intelligence is to imitate the human subject way of thinking and behavior of machine or program, this paper thinks AI has people's capacity for civil rights and civil conduct (such as creation), with the qualification and possibility to become the subject of copyright. According to the code and its targeted learning some specific things after human rules, the artificial intelligence has their own behavior intelligence, which can also overcome human being on those specific things, which is like the legal persons or other organizations. Especially in the view of the principle of the application of law in the scope of private law, the law can be prohibited. Therefore, since China's Copyright Law does not prohibit artificial intelligence from becoming the subject of copyright clearly, we can conclude that artificial intelligence can enjoy the qualification of the legal subject within the scope of the copyright law, that is, to become the possible application of the copyright law [6].

Moreover, according to Article 1 of the China's Copyright Law, in order to protect the copyright of literature, art and scientific works, as well as the rights and interests related to copyright, the Chinese Government encourages creation and dissemination which benefit to the socialist spiritual civilization, material civilization construction of work. The Chinese Government also promotes the development and prosperity of socialist culture and science. This law is enacted according to the constitution law. The legislation to the copyright law of AIGC will greatly encourage the artificial intelligence industry to develop artificial intelligence into better creative function, which lays a solid foundation for independent intellectual achievements. There is no doubt that legislation to the copyright law of AIGC will contribute to the socialist spiritual civilization and material civilization, as well as the development of socialist culture and scientific progress in our country.

4.3. Attribution of Right

After establishing the subject and object elements of artificial intelligence generation, it is important to consider the ownership of the copyright rights of artificial intelligence generation. At present, there are social views on the copyright ownership of artificial intelligence products, such as virtual legal personality theory, artificial intelligence programming designer for the author theory, AI programming designer and users for the co-author theory, social public field theory and so on. The author will list several theories for analysis.

4.3.1. Virtual Legal Personality Theory

Although artificial intelligence creates works according to the user's instruction, it is the artificial intelligence that creates the work from nothing. Based on the fact that AIGC has its own originality and its content has unpredictability, the creation of AIGC has legitimacy and rationality. The American scholar Timothy L. Butler proposed the famous "FHA" theory. It believes that the AI obtains the copyright. Then, specifically, we can formulate a virtual legal personality for the artificial

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intelligence to obtain the legal subject qualification and enjoy the copyright [7]. As for the subsequent distribution of intellectual property rights of works, it is decided by the judge based on their discretion. However, what should be considered is that if the AI has the property right of the work, how will we dispose of its property? Whether the distribution of intellectual property rights of works is a waste for the society?

4.3.2. Artificial Intelligence Programming Designer for the Author Theory

This theory says that artificial intelligence programming designer is the creator of artificial intelligence. They have the corresponding labor and it is the artificial intelligence programming designer who creates the artificial intelligence, which conforms to the perspective of labor value based on labor pay and the theory of enjoying property rights. It also conforms to the utilitarian theory to improve intellectual achievements and social and cultural innovation progress. Scholar Farr, as an advocate of this theory, said in Evan H. Farr. Copyrightability of Computer-Generated Works, that the only people who have been fully engaged and creative enough are the programming designers [8]. Thus, artificial intelligence is a realistic expression of their thoughts and emotions. Therefore, based on the rational nature and labor efforts of programming designers, it should give them the rights of AIGC. to make them intuitively feel the positive role of the copyright legal system. Meanwhile, this theory can encourage them to better conduct computer programming and other intellectual creation activities.

4.3.3. AI Programming Designer and Users for the Co-author Theory

Artificial intelligence programming designers and users for the co-authors of the copyright ownership model, will be artificial intelligence.

The programming designer and the AI user are identified as co-authors, and claim that the work rights of the AI product are shared by the aforementioned both. The author supports this theory. The author believes that we can regard artificial intelligence as a tool of creation, so the instruction to create a work is issued by the user. The creation intention is mainly dominated by the user, who can make changes according to the generation produced by the artificial intelligence, and inform the artificial intelligence of further instructions to change it. However, artificial intelligence, as a creative tool, is the result of the intellectual labor of artificial intelligence programming designers, and should be rewarded by it. As for how the AI programming designer and the user distribute the property, the author believes that the AI programming designer can reach an agreement with the user in the form of contract debt before the user uses it.

5. Conclusion

At the present stage, artificial intelligence has the expression of "independent" thought. The mechanism of its creation and output is to identify problems, and then automatically collect works from the Internet, absorb and integrate, and finally produce content. This process reflects the "originality" of AI, and the identification of problems reflects the ideological nature of AI. Article 3 of China’s Copyright Law stipulates the provisions of "other intellectual achievements that meet the characteristics of the work", which makes the artificial intelligence generation have its rationality and applicability at the legal level. This paper hopes that through the copyright protection of artificial intelligence generation research, copyright protection of artificial intelligence generation will greatly improve the legal protection of artificial intelligence in our country, for the future development of artificial intelligence generation to provide some reference direction and path, make its positive and beneficial side can be fully development and utilization.

DOI: 10.54254/2753-7048/2025.LC20507

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