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An Exploration of Generative Artificial Intelligence Authorship Eligibility

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Abstract: In the era of generative artificial intelligence, whether machine creations have copyright is a controversial issue. This paper takes the first domestic copyright infringement case of artificial intelligence-generated works heard by the Beijing Internet Court as the background, and takes the "creative tool theory" adopted in the judgment as the basis for the copyright infringement case. " is used as the main analytical tool to explore the copyright subject qualification of artificial intelligence. At the same time, the "presumed author theory" is used as a supplementary theory for research. It is proposed that a dual subject structure of "creator-right holder" can be established under the Chinese legal framework to solve the problem. The dilemma of subject qualification of works generated by generative artificial intelligence.

Keywords: generative artificial intelligence; copyright law; subject qualification; creation tool theory; "author-copyright holder" dichotomy

1. Introduction

The advent of the artificial intelligence (AI) era has profoundly changed human life and production methods, and has posed huge challenges to existing legal rules. As a new technological development, generative AI can generate new original content by learning existing knowledge. This shows that AI is no longer limited to a creative tool, but has entered the stage of human-machine co-creation, and even machine creations themselves have the appearance of literary and artistic works [1]. At this time, AI works can become the subject of copyright law regulation and become a topic of common concern.

On November 27, 2023, the Beijing Internet Court made a judgment on the "First Case of Copyright Infringement of AI Text-to-Image". This judgment is the first time that a Chinese court has officially recognized that AI-generated content has copyright, breaking through the extensive debate in academia and practice. This judgment not only marks that the emergence of generative AI has pushed AI technology to a new stage of development, but also shows that with the development of AI, the law will inevitably make reasonable adjustments to adapt to and respond to the problems that may be encountered in the era of AI. However, the judgment eventually caused great controversy in China. Because the copyrightability of AI-generated content is too large, this article will focus on the subjectivity issue-whether generative AI has authorship. Although the court recognized the copyrightability of generative AI works in its judgment, it still adhered to the basic concept that "the author must be a natural person who created the work."

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This article will analyze the judicial thinking, legal theory and policy orientation of the Beijing Internet Court in the "Artificial Intelligence Text to Image Copyright Infringement Case", and by comparing it with previous relevant AI cases in China, explore China's perspective on the issue of copyright for generative AI, and explore the possibility of future laws in the context of its judicial attitude of insisting on conditional protection of AI-generated content. Specifically, this article will use the case as the research background, the "creation tool theory" adopted by the judge as an analysis tool, and the "presumed author theory" as a supplementary argument to discuss the solution to the copyright law subject qualification of AI. At the same time, this article will discuss the possibility of realizing the above solution under the Chinese legal framework. This article aims to provide some superficial insights for improving the copyright governance of AI when the legal framework for generative AI creation is not yet complete, and to contribute to the prosperity and development of the AI industry.

2. Methodology

2.1. Generative AI and its Creation Principles

The development of generative AI has gone through four stages: the first stage is a rule-based AI system with relatively simple functions that can only perform specific tasks within a very limited scope. The second stage is represented by auxiliary tool AI, represented by the smartphone assistant Siri, which introduces contextual perception and memory systems. It can not only handle current tasks, but also remember and use contextual information to optimize responses. The third stage marks the entry of AI into the narrow-domain AI stage, which can not only understand and store a large amount of information, but also show high specificity in a specific field. "IBM's supercomputer (Watson) is a good example. The fourth stage is the generative AI stage based on large-scale language models. Taking the language model ChatGPT as an example, its essence is a word guessing model based on statistical learning methods, which mainly relies on the neural network architecture of the self-attention mechanism and the pre-feedback mechanism to operate [2]. At this stage, generative AI has begun to show "human-like" characteristics and has begun to simulate human thinking and reasoning processes. It can not only solve unfamiliar problems based on existing knowledge, but also show certain thinking and reasoning abilities [3].

2.2". Creative Tool Theory " and "Presumed Author Theory "

The "creation tool theory" and the "presumed author theory" are two main theoretical tools for solving the subject qualification of artificial intelligence. Both have their own theoretical basis and practical application possibilities, but they also face their own limitations. The "creation tool theory" emphasizes the dominant role of people in the creative process, and believes that artificial intelligence only assists in generating works in the process of executing human instructions. Therefore, the copyright of the work should belong to the natural person who uses artificial intelligence to create the work. The theoretical basis of this claim is the concept of natural person author in legal tradition. The "presumed author theory" advocates that generative artificial intelligence should be regarded as the presumed author and be given the identity of the author. With the continuous advancement of artificial intelligence technology, generative artificial intelligence is becoming increasingly autonomous and independent in the creative process. Its works can be regarded as independent creations independent of specific human creators to a certain extent. Therefore, it is necessary to give legal recognition and regulation to this type of new creative subject. However, this view also faces conflicts with the existing legal framework and concept of authorship, as well as challenges in practical operation and application.

2.3. China’s Legal Framework

Article 3 of the Chinese Copyright Law defines "work" as "intellectual achievements in the fields of literature, art and science that are original and can be expressed in a certain form"; Article 3 of the Regulations for the Implementation of the Chinese Copyright Law stipulates that "creation" is "intellectual activities that directly create literary, artistic and scientific works"; Article 11, paragraphs (1), (2) and (3) of the Copyright Law respectively stipulate that "copyright belongs to the author"; "the natural person who creates the work is the author"; and "the legal person or unincorporated organization is deemed to be the author of the work created for it and for which the legal person or unincorporated organization bears responsibility". This article is a subject norm, including the basic contents such as the author's right subject qualification, natural person author, and legal person author. The current copyright law was developed in the context of human creative activities. It takes human authors as the core and human-centrism as the underlying logic, and gradually forms a subject-object dichotomy structure, that is, people are regarded as the only subject of value judgment and moral evaluation, and everything other than people can only be regarded as objects.

2.4. Case Details

In the AI text-to-image copyright infringement case, the plaintiff used the AI software Stable Diffusion to generate images and published them on a certain online platform. The defendant used the images as article illustrations without permission and removed the watermarks. The Beijing Internet Court ruled that the images involved had the elements of "intellectual achievements" and "originality", and therefore constituted works, were works of art, and were protected by copyright law. The plaintiff, as the person who directly set up the AI model involved according to needs and ultimately selected the images involved, was the author of the images involved and enjoyed the copyright. The court ordered the defendant to issue a statement on the account involved to apologize to the plaintiff and compensate the plaintiff for economic losses of 500 yuan.

3. Results and Discussion

3.1. The Adjudicative Thinking of the Beijing Internet Court

Based on the definition of works in Article 3 of the Copyright Law, the court determined that the creation process of the images in question reflected the intellectual achievements of the plaintiff. In the absence of contrary evidence, it can be determined that the images in question were independently created by the plaintiff, reflecting his personalized expression and originality. Artificial intelligence generated by humans with original expressions can be protected as works by copyright law, and artificial intelligence models are the author's creative tools. Although the court recognized that artificial intelligence-text-images are all works that can be protected by copyright, it flatly rejected the issue of the authorship of the generated artificial intelligence. The court adhered to the human-centric position and regarded the generated artificial intelligence model as a tool. The entire creative process is that humans use the tool to create. It is humans, not the generated artificial intelligence model, who make intellectual input. As early as 2019, the Beijing Internet Court, in its trial of the "Filin v. Baidu Artificial Intelligence" copyright case, ruled that the Copyright Law regulates human creative behavior, and based on the law's requirement that natural person creation is a necessary condition for copyrighted works, the court directly determined that content generated by computer software does not constitute a work. Although technological developments have prompted the courts to change their views on the nature of the works involved, out of a humanistic stance, the courts have consistently held that copyright law only protects the creative achievements of natural persons, and that current generative AI models do not have free will and cannot be “authors” under Chinese copyright law [4].

3.2. Challenges to the Court ' s Decision

First, creative tools do not participate in determining the final creative content. When taking a photo with a camera, what the photographer wants to take directly determines the content of the photo. No matter how powerful the camera is and how smart the camera function is, the photographer already knows the basics of pressing the shutter button. The creator needs to know the content of the photo to be taken. However, before the image generated by generative AI is finally presented, the creator cannot predict it. Secondly, the algorithm of AI itself and the materials it is trained on determine the generated content. Generative AI generates content based on large-scale trained data. The prompts input by the user can only guide the final generated content. No matter how detailed the prompts are, the performance elements of the generated content are not determined by the user himself, but by the AI based on the algorithm and the trained materials. To a large extent, the user cannot even predict the basic composition of the generated image [4]. When we choose to recognize the copyrightability of AI-generated content but deny the legal subject status of generative AI, this means that although these intelligently generated contents may be protected by copyright law, the corresponding copyright subject cannot be clearly identified, which will lead to many problems: First, the connection between the work and the author is automatically cut off. Since generative AI does not have legal subject status, even if the original content it generates is recognized as a work, the copyright cannot be directly attributed to AI. So how should the rights and obligations be distributed? Second, the rupture of the relationship between works and authors may lead to chaos in the copyright market and frequent infringement problems. Works created by generative AI may be widely used by natural persons, and even be impersonated as human works with false signatures.

3.2. Establishing the 'Author-Copyright Owner' Dichotomy Model

First of all, from the perspective of the algorithmic creation process, algorithmic creation is to generate content by imitating human intellectual creation activities through data mining, analysis and calculation. Through the learning of big data, algorithms can reproduce human thinking expression and creative ability. With the continuous development of technology, generative artificial intelligence may even gradually replace some of human intellectual creation activities. According to the contribution of intelligent machines to the final intellectual creation results (such as inventions and works), the role of artificial intelligence can be divided into auxiliary generation, cooperative generation and independent generation. Therefore, "human-computer interaction, human-computer collaboration, and human-computer symbiosis" may become the trend of future creation. With the increasing participation of artificial intelligence in the creative process, limited and conditional recognition of the identity of "machine authors" may be a necessary and feasible direction for future development.

Secondly, from the perspective of the human-like creative process, in the algorithmic creation process, generative AI already has similar characteristics to human authors, which can not only effectively handle complex tasks, but also show a certain degree of autonomy. This autonomy is not only reflected in the ability to analyze and process data, but also in the "human-like" ability to generate creative content. In many cases, the content of generative AI is even difficult to distinguish from human-created works. This human-like creative behavior is a factual behavior, so the machine author is similar to the natural human author who becomes the subject by creating facts. At the same time, with the rapid development of artificial intelligence in terms of evolvability, efficiency and accuracy, it is no longer an unattainable fantasy for generative AI to have the ability to independently carry out intellectual creation and realize innovative inventions.

Finally, the binary subject structure of "author-copyright holder" can be established through legal fiction technology. In the field of copyright, this fiction can be defined as "presumed authorship", while the current theory of fictional authorship is only directly

reflected in "legal person works". However, when generative AI is set as the author, we should be aware that it is very different from "legal person". According to the object theory of civil law, the subject of rights must be the subject of meaning [5]. The fundamental reason why machine authors cannot become copyright holders is that they lack civil capacity and cannot reasonably enjoy rights, perform obligations and bear legal responsibilities in their own name. Generative AI does not have meaning autonomy, so even if it is set as the author, it can only be given a certain status by law because of its complete lack of civil capacity [6]. Therefore, even if generative AI is indeed proposed as the author in the future copyright legal framework, it is still necessary to clearly distinguish the relationship between the creative subject and the right subject and establish a "dual subject structure" that separates "creator-right holder". Such a distinction not only conforms to the basic principles of the current legal framework, but also helps to ensure that the incentive mechanism of copyright law can be continued.

4. Conclusion

No matter what stage AI develops to, no matter how "humanized" generative AI is, any legal framework related to AI must uphold the "people-oriented" concept that is in line with China's national conditions, both now and in the future. We can fully understand that the court denies the authorship of generative AI based on the "creative tool theory", but because the algorithmic creation process of generative AI is very different from the creation process of creative tools such as cameras, we must face up to and adapt to the reality that humans and AI participate in the creation of works together, and rethink and define the roles and relationships of fictitious authors, quasi-authors, and copyright owners. In this process, identifying generative AI as an author is actually a legal recognition of the role it plays in the creative process. This recognition is a recognition of the contribution of AI to creative activities, rather than granting it full legal personality. Generative AI can have authorship, but it does not have the full qualifications of a copyright owner and cannot enjoy the same copyright as human authors. This means that although AI can participate in creation, the copyright of its creative achievements should still be exercised and enjoyed by natural persons or legal persons with full civil capacity. Future legal reforms must find a balance between traditional principles and modern technology, ensuring that the law is neither outdated nor infringes on the legitimate rights and interests of human creators when responding to technological progress. This will be a complex and long-term task that requires the joint efforts of the legal community, the scientific community, and all sectors of society.

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