Exploring the Copyrightability of AI-Generated Content

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Abstract: "Artificial intelligence+" was included in the 2024 government work report of China for the first time, marking the trend of scientific and technological innovation led by artificial intelligence, and demonstrating China's firm support for developing the industry chain of artificial intelligence. The works generated by artificial intelligence not only present extraordinary artistic charm, but also have huge economic value. The ideas indicated in the judgment of the first artificial intelligence case by Beijing Internet Court reveal that at the moment when generative artificial intelligence is in the ascendant and becoming increasingly popular, it is unreasonable to simply deny the originality of AI-generated works and their close connection to human intellectual investment on the grounds that the creator is not a natural person. In the meantime, the exclusion of artificial intelligence content from copyright protection may cause the copyright system exist in name only in this era of rapid development.

1 INTRODUCTION

As a frontier field of scientific and technological innovation, artificial intelligence (AI) has evolved from the initial theoretical concept in science fictions to the wide application in life since it was first proposed in the 1950s. Developing at a remarkable speed, AI has not only profoundly changed people's lifestyle, but also made a huge impact on the world's social and economic structure. Thanks to the popularization of basic technologies such as high-performance computers, high-speed networks and big data, AI has become the focus of scientific research and will continue to lead the technological revolution and industrial upgrading in the future in order to meet the urgent need of promoting the prosperity and developing the global economy.

Generative artificial intelligence (or the text-to-image models discussed in this article) represents a major research progress in the field of AI in recent years. This technology provides an easy and convenient creative solution that can efficiently convert the description in natural language by the users into vivid images, breaking the limits of time-consuming and labor-intensive traditional drawing process and the constraints of personal painting skills to bring in new possibilities for creators to realize their ideas.

However, with its rapid development and expanding application scope, generative artificial intelligence has brought significant legal challenges: should the content created by generative artificial intelligence with human creativity (referred to as "AI-generated content") be considered as an object protected by the Copyright Law? The works stipulated in the Copyright Law of the People's Republic of China must meet the following four requirements: "whether it is original; whether it is an intellectual achievement; whether it is expressed in a certain form; whether it falls under the realm of literature, art, or science (Jing 0491 Min Chu No. 11279)."AI-generated content obviously meets the latter two criteria, but there is still great controversy in the academic community as to whether it is original and whether it can be regarded as the result of human intellectual labor.

On November 27, 2023, Beijing Internet Court made a judgment on China's first infringement case of generative AI, which to a certain extent has recognized the copyrightability of AI-generated content, marking a breakthrough in resolving the disputes over the ownership of AI-generated content in China.

During the trial, the plaintiff accused the defendant of removing the watermark from the pictures he created and published on Little Red Book using Stable Diffusion (a text-to-image model) without authorization and then publishing it on Baijiahao. The plaintiff claimed that during the generation process, he obtained the satisfactory

picture by selecting models, inputting prompt words, and setting generation parameters, which reflected the choice, selection, arrangement and design of the work and demonstrated his intellectual labor. The picture involved has been recognized by many users after being released on the platform. Being recognized as works by the standards of the general public indicates that it has the originality. As a result, the picture involved is qualified as the object protected by the Copyright Law, and the defendant's behavior caused others to confuse the original author of the picture and infringed the copyright. The defendant also claimed to have no intention of infringement because the picture involved was not used for commercial profit. The defendant could not provide the specific source of the picture or explain why the watermark was erased; it was uncertain whether the plaintiff owned the rights to the picture.

The court held that the plaintiff input the prompt words in the Stable Diffusion model and requested the generation of a close-up of a beautiful woman in the light of dusk in a photographic style. Subsequently, specific descriptions were added to the initially generated pictures, and the parameters were adjusted. Finally, a satisfactory picture was selected. This process reflects the plaintiff's intellectual investment. During this process, the plaintiff obtained the picture through continuous adjustment and revision, demonstrating his aesthetic choice and personal judgment. The generated pictures also have identifiable differences from previous works, so the picture is original. The court finally determined that the defendant's behavior constituted infringement and ruled that the defendant should bear the corresponding civil liability (Jing 0491 Min Chu No. 11279).

The judgment of this case not only provides important reference and guidance for future legal practices of this kind, but also raises the awareness of all sectors to protect intellectual property rights against the rapid development of cutting-edge technology. In order to better adapt to the ever-changing era of artificial intelligence, boost the comprehensive prosperity of the market economy and culture, and prevent the impact on the copyright order of literature and art by the increasing AI-generated content, it is necessary to discuss its characterization in the Copyright Law. This article will discuss the view that denies the copyrightability of AI-generated content through arguing that AI-generated content is the result of human intellectual investment and has originality by combining the judgment of the first AI case from Beijing Internet Court, aiming to contribute to the construction of a more complete and reasonable copyright system.

2 THE DENIAL OF THE COPYRIGHTABILITY OF AI-GENERATED CONTENT AND ITS PROBLEMS

2.1 The Denial of the Copyrightability of AI-Generated Content

Whether AI-generated content can be regarded as works is challenging and impacting the framework of traditional Copyright law, triggering thoughts and discussion in the academic community. Scholars hold different views on this, which are mainly affirmative views (recognizing the copyrightability of AI-generated content) and the opposite.

The view denying the copyrightability of AI-generated content claims that it is not human intellectual achievements and lack originality, and its constituent elements do not meet the definition of works in the Copyright Law. Although similar to human works in terms of expression, AI-generated content is not essentially objects protected by the Copyright Law, and thus it is pointless to consider the identity of the author and the ownership of copyright. For example, some scholars have cited the classic case of "monkey selfie dispute" in their articles, emphasizing that the objects protected by the Copyright Law must be original human intellectual achievements.

The aforementioned view believes that although the photos taken unintentionally by macaques are difficult to distinguish from professional photographs in quality, given that macaques are not natural persons, their eye-catching selfies are not protected by the Copyright law. There can be proviso in the law, but there is no exception in logic. The nature of generative AI is no different from the example of "monkey selfie", which is not the intellectual investment of natural persons (Wang, 2023). The current generative AI content is mainly based on algorithms, rules and models. Its creation process is essentially the result of executing preset procedures and methods instead of independent and personalized creation of the author. The process of generating content does not involve the intelligence required for creation (Wang, 2017). In summary, AI-generated content is not protected by the Copyright law.

The author disagrees. The view denying the copyrightability of AI-generated content tends to exclude it from the scope of copyright protection,

which fails to guide the development of advanced productivity, and also makes the copyright system face severe challenges in the upcoming AI era. In this regard, this article will explain the necessity for relevant laws to include AI-generated content as works and to entitle them to copyrightability.

2.2 AI-Generated Content as Human Intellectual Achievements

A photographer walked into the jungle of Indonesia with a professional camera. By chance, a group of curious macaques discovered the camera on the tripod and fiddled with it. The macaques inadvertently pressed the shutter hundreds of times. It was this series of accidental operations that captured the brilliant smile of a celebes crested macaque, presenting a photo that looks like a human selfie.

The macaque may have never expected that this unconscious behavior driven by animal instinct would become an indispensable topic in the study of the Copyright law. Since 2015, People for the Ethical Treatment of Animals (PETA) has sued the photographer on behalf of macaques, claiming that the macaque should fully enjoy the copyright of the selfie. They accused the photographer of infringement by using the photo without permission and making continuous profits. After two years of litigation, the judge believed that the relevant laws protecting copyrights do not apply to animals, and finally ruled that the photographer enjoys the copyright of the photos.

What if the photographer of that picture wasn't a monkey? Imagine if the situation was even more bizarre at the time: a cricket jumped onto the shutter of the camera and accidentally "created" a masterpiece with excellent composition and color. I guess no one would step up and claim that the cricket created the photo. The ownership of the copyright of the photos taken by macaques has become a focus of controversy, but there is no need to explore whether the cricket can be a photographer. What is the essential difference between the two examples?

The author believes that there is no difference between the two. Whether it is a monkey or a cricket, they are both animals, so the photos they "took" are completely products of chance. The philosopher Karl Marx pointed out that the most essential difference between humans and animals is that humans have consciousness and can actively create and change the world, while animals have no consciousness and cannot exert subjective initiative. The macaques fiddling with the camera and the cricket jumping are just simple conditioned reflexes instead of their input

for the purpose of "intellectual achievements". This is like making a monkey sit in front of a typewriter. Even if it successfully typed out a copy of Hamlet, neither the monkey nor the individual who arranged this would be considered to have plagiarized Shakespeare's works.

However, AI is not an animal. The infinite potential and powerful strength of the code are the imitation and reproduction of human mind. In terms of the internal operating principle, AI not only reproduces the human thinking system, but also has the ability to imitate and even replace human intellectual investment. Computer hardware, as the basis for AI operation, corresponds to the lowest level of physiological processes in human intellectual investment; AI programming languages reflect the primary information processing links in human intellectual investment; AI programs involves the highest level of human intellectual investment – thinking strategies (Yang, 2021). Taking Stable Diffusion as an example, the principle of image generation by this deep learning model is to achieve the conversion from text description to detailed image through diffusion model. The text encoder accurately analyzes the text information input by the user and converts it into internal instructions; the neural network noise predictor based on the UNet architecture is the core of Stable Diffusion. In the process of image generation, it first receives a noisy picture, then gradually removes the noise to produce a clear, creative and brand-new pattern that conforms to the user's description; the variational autoencoder (VAE) realizes image compression through Encoder and Decoder (Xu, 2024). Users can make the generated pattern more in line with their own creativity by introducing techniques such as conditional control and feature embedding. Therefore, it undoubtedly contradicts the logic of humanism to compare AI creations that reproduce the complexity and creativity of human brain activities with the conditioned reflex behavior of macaques photographing under external stimuli.

In addition, some scholars argue that the photographer locate the camera on a tripod at a specific spot in the jungle, which reflects human intellectual achievement. This argument lacks theoretical basis, since there is no connection between where the camera is put by the photographer and the generation of the monkey selfie. The macaque snatching the camera and pressing the shutter is pure accident. The human intellectual investment of arranging the camera did not play an active role in the generation of the photo. In this case, neither the intellectual achievements of human investment were

shown, nor was there the possibility of considering the macaque as the photographer.

In contrast, users only need to run Stable Diffusion on their computers and input specific text information into the text encoder while adding control conditions to personalize the generated content in order to create an image that reflects their inspiration. The more detailed the input text information is, the more accurately the generated image can reflect the user's creativity. This clearly reveals that there is a fundamental difference between AI creation and macaque photography. The process of AI creation relies on the investment of human intelligence. As Beijing Internet Court pointed out in its judgment: "From the time the plaintiff had an idea about the picture to his final selection of the picture involved, the plaintiff did some intellectual investment, such as designing the presentation of the character, selecting prompt words, arranging the order of prompt words, setting parameters, and selecting the picture that he wanted (Jing 0491 Min Chu No. 11279)." In this case, the carefully designed experiments by the plaintiff fully demonstrated the close connection between human intellectual investment and the quality of creation, proving that it was the picture in this case is the result of the plaintiff's intensive intellectual labor. The judgment opposes the view that AI creation is comparable to macaque photography, which is not only an affirmation and respect for the concept of Humanism and the hard work of the creators but also consistent with the legislative purpose of the Copyright law that encourages creation (Zhu, 2024).

2.3 The Manifestation of Originality of AI-Generated Content

In terms of originality, there is a view that cannot be ignored: since generative AI technology is written based on algorithms, and the creation process follows the steps of fixed models, it lacks the unique character, emotional appeal and even spirit that human creator can put into a piece of work. Therefore, the process of generating content by AI does not belong to the category of intellectual creation and cannot meet the requirement of originality. In addition, some people even refer to the process of AI creation based on massive material training and regeneration as "corpse collage", which is quite Ludditism-like when manual workers destroyed the textile machines during the Industrial Revolution. In this regard, it is important to discuss what is the emotional appeal of the work. What are the irreplaceable qualities in human creation that

distinguish it from the works generated by artificial intelligence?

When discussing aesthetic theory, transference is a key concept, which reveals the intrinsic connection between human emotions and aesthetic experience. Transference refers to the individual projecting their own emotions, thoughts or will onto external objects, thereby producing a special experience as if the external objects also have the corresponding emotions or characteristics.

The poetry of Tang Dynasty and the lyrics of Song Dynasty are the artistic treasures of Chinese culture, in which the technique of expressing one's aspirations through objects is common. For example, on his big day of becoming the government official, Meng Jiao wrote with great joy: "Successful, faster runs my horse in vernal breeze, I've seen within one day all flowers on the trees (Xu, 2021)."as if the spring is prospering together with him. Feng Yen-ssu used a straightforward tone to depict a different spring scenery: "Beautiful, this view of hills and streams, As always along the roads of Chin-ling town; But youth turns to age all the same (Translated by Daniel Bryant)." which makes people feel sad about how time flies. When facing the sunset, Chinese people will mourn for the elapsed time; when seeing the moon, Chinese people will miss the hometown in the beam shed by this same moon. Zhou Dunyi loves lotus because of its elegant temperament. Li He wrote a poem to praise horses because the old horse is still running thousands of miles just like a hero with unfulfilled ambitions in his later years.

Are these complex emotions really related to the nature of the things and images mentioned above? If so, anyone should feel the same when looking at the same rose, and the emotional barriers between humans will no longer exist. When one gazes at the rose, it may has a yearning for love within; but others, seeing the crumbling petals, may contemplate the impermanence of life. Humans' emotion originates from one's own subjective feelings. Through the role of transference, humans attach emotion to what they see. This is the aesthetic empathy, one of the most influential schools of modern Western aesthetics, argued by the German psychologist Lipps: the aesthetic object will stir up certain experience in the individual's mind, and then project these internal experiences onto the external object, thus forming a kind of resonance.

In other words, when people appreciate a thing of beauty, whether it is the wonders of nature or fascinating literary works, the emotions experienced are not the inherent characteristics of the object being appreciated. Instead,when the memories and

experiences rooted in the subconscious are touched, through a series of specific complex psychological activities and thinking processes, the specific emotions aroused by themselves are transferred to the aesthetic object.resulting in the misunderstanding that the object contains such emotions.In other words, emotions are produced by people, not by what people see..People are appreciating themselves (Wei, 1999)! When Zhuangzi standing on the bridge, what he appreciated was not the happy fish, but the open-mindedness and freedom in his heart.

If the "emotional appeal endowed in the work" is regarded as the key to intellectual creation, it does not depend on the creator's investment, but on the audience's experience. Otherwise, all the audience around the world should have the same emotional resonance with what the creator has invested when reading the same article. This denies the diversity of human emotions. On the video platform called Bilibili, there is a video called "Mohe Dance Hall story painted entirely by AI made me cry!!!" (video number: BV1Sd4y1c78G). The creator used generative AI to carefully draw the illustration for each line of the lyrics for the song Mohe Dance Hall, vividly depicting the artistic images of the song. The audience have been touched by the harmonious integration of music and visual art. They think it is hard to believe that these vivid images are all created by AI. Although AI does not have consciousness and cannot understand the story from a human perspective, the work produced by its algorithms according to a fixed model managed to provide the audience with artistic enjoyment. When the subject's soul is touched by feeling provoked by the object, and the strong emotions is projected on the object, it can be said that these creations contain rich emotional appeals, which demonstrates that we can be moved by AI works.

In traditional literary and artistic creation, the creator's unremitting pursuit and dedication are crucial. However, is there a standard to measure the depth of emotion that the creator has poured into the artwork? Of course not. Even human artist may create a masterpiece with just a few strokes at a flashing moment of inspiration. However, sometimes the final result is worthless even with great efforts. It is obviously not objective to use "the creator's emotions" as a standard to judge intellectual creation. Whether the work has emotional appeals should be determined by the audience! We should not assume from an unquantifiable perspective that AI works do not have the possibility of containing profound and rich emotional appeals.

In fact, whether or not to recognize the originality of AI creations does not affect the application of generative AI to all the fields of literature and art in the digital age, including film, music, and literature. AI is everywhere. For example, the animation "The Dog & The Boy" produced by Netflix is a project of using artificial intelligence to create all the animation scenes, demonstrating a unique charm in both visual performance and creative conception that has been well-received by the audience. Another example is an advertisement released by Ito En Co., Ltd., which presents a female model generated by AI. In the film, an elderly lady is holding the green tea and jumps joyfully to raise the bottle to the camera, saying the line with a dynamic tone: "My future starts from now." As soon as she finishes the line, she moves the bottle away, and suddenly returns to youth. The wonderful performance of the AI model vividly presents the healthy, natural and refreshing selling points of the green tea beverage. The packaging design of this green tea product is also tailored by generative AI. In 2023, Japanese cartoonist Sandrovich Yabako frankly revealed on the social platform that generative AI was used in the creation of his work Kengan Ashura. It is unexpected that an illustration that has sparked heated discussions among netizens and was mistakenly believed to be created by AI is actually due to a mistake in manual drawing, while the content that was truly created with AI has been ignored.

The Copyright Law of People's Republic of China has relatively loose requirements for the originality of works. The requirements to reach a certain aesthetic level or have specific academic value is not strict. As long as the work is independently completed and not plagiarized from others', it can meet the standards and naturally be protected by law. Historical materialism emphasizes that the masses are the creators of history, and the law should not go beyond the common sense of the people. With the wide application of generative AI in the fields of literature and art, the public is not let down by AI-generated content because they lack emotional appeals, or recognize any similarity between AI-generated content and existing works. Furthermore, the commercial advertisements created with the generative AI has also managed to meet the standard of "independent completion" and none of them have been questioned in terms of originality or caused of any infringement disputes such as plagiarism. Then why should we doubt the originality of AI-generated content? Will the content lacking originality be attached with great value by the practitioners in the field of entertainment, and become the popular creative material to be well-

received by the public? The answer is self-evident. The view that AI-generated content is not original contradicts to the practice in real life.

3 CONCLUSION

At present, although generative AI is not yet mature, its influence continues to expand, and it is constantly iterating and updating at an astonishing speed. The types, styles and quality of generated content are becoming closer to perfection. It is not even a fantasy to replace humans in literary and artistic creation in the future. If the Industrial Revolution liberated humans from heavy physical labor, AI, with its immeasurable potential, may liberate humans from difficult mental activities (Jiang and Xue 2022). As Beijing Internet Court stated in the judgment: "The development of technologies and tools require less human investment, but the copyright system should remain in use in order to encourage the creation of works (Jing 0491 Min Chu No. 11279)."

The Copyright law protects works and encourages creators to obtain rich economic benefits, which in turn stimulates them to create more high-quality works to form a virtuous circle and promote the overall prosperity of the cultural market. If we insist that AI-generated content cannot be regarded as works, but merely content generated by specific algorithms in accordance with mechanical steps, it means that the content, like the "multiplication table", belongs to the public domain and is not protected by the copyright law. The copyright system will also face the risk of being eliminated as AI becomes the dominant force in literary and artistic production in the future (Yi, 2017).Therefore, we need to consider: can we bear to live in a world without the protection of the copyright law?

In such an environment, the hard work and wisdom of creators cannot be respected and protected as they should be. The market will be flooded with a large number of low-quality and uncreative copies, while the truly valuable content will find it difficult to stand out. If this continues, the cultural ecology of the entire society will suffer a heavy blow, leading to declining innovation ability and decreasing cultural richness, and eventually the impoverishment of civilization.

The torrent of history rushes forward, and the leap of productivity is unstoppable. Looking back at the development of human society, every major breakthrough in science and technology is like the beacon to illuminate the way forward for civilization and leading it to a more glorious future. From the roaring steam engines to the bright electric lights, from the birth of the Internet to the application of AI in the daily life of thousands of households, every great invention is the crystallization of collective human wisdom. Nevertheless, science and technology cannot develop without a hitch, and the changes it brings are often accompanied by challenges to ethics, legal systems and even social structures. In response to the problems caused by artificial intelligence and the massive content it generates, the copyright system should be sufficiently forward-looking and adaptable, keep pace with the times with an open and inclusive attitude, and improve itself according to the internal regulatory mechanism, rather than blindly excluding emerging innovations.

In fact, artificial intelligence is an extension of the human body, an externalization of human practice, which carries the infinite possibility of liberating humans from their lifestyles and production methods. As long as the audience of AI creation is human, human subjectivity will not be eliminated. No matter how time changes, the brilliance of human subjectivity will forever shine in the galaxy of history. The copyright law will continue to protect the field that humans have worked hard to cultivate day and night.

REFERENCES

Jiang, L.D. & Xue, L. 2022. Era Challenges and Paradigm Transformations in the Governance of China's New Generation of Artificial Intelligence. *Journal of Public Management* 19(02): 4.

The case of Li (the plaintiff) v. Liu (the defendant) over infringement of the right of authorship and the right of dissemination on the information network, Beijing Internet Court Civil Judgment (2023) Jing 0491 Min Chu No. 11279.

Wei, X.L. 1999. On the Origin of the Empathy and Its Role in Literary and Artistic Creation. *Journal of Beijing Normal University* 3: 74.

Wang, Q. 2017. On the Characterization of Content Generated by Artificial Intelligence in Copyright Law. *Science of Law* 5: 150-152.

Wang, Q. 2023. The Qualitative Analysis of Content Generated by Artificial Intelligence in Copyright Law. *Tribune of Political Science and Law* 41(4): 69-70.

Xu, S.H. 2024. Exploration and Utilization of AIGC in New Media Content Production. *Radio & TV Broadcast Engineering* 51(11): 13-14.

Xu, Y.C. 2021. Reflections and Recollections. In X.L. Liu & X. Zhang & Q.Y. Wang & W.J. Zhang & X.T. Zhao. & J.F. Bi (eds), *Three Hundred Tang Poems Translated*

by XU Yuanchong 2: 664-665. Bejing: China Translation & Publishing Corporation.

Yang, L. 2021. Research on the Copyright of Artificial Intelligence Products. *Modern Law Science* 43(4):104.

Yi, J. M. 2017. Are Artificial Intelligence Creations Works? *Science of Law* 5: 144.

Zhu, G. 2024. Research on Legal Attributes and Ownership Rights of AI-Generated Images. *Intellectual Property* 01: 27.