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The Challenges Posed by Generative AI to Copyright Originality and Institutional Responses

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Abstract. The rapid advancement of generative artificial intelligence is profoundly transforming content creation and also challenging the originality principle of authorship in copyright law, which is centered on human authorship. Currently, there are significant differences among national judicial practices regarding whether AI-generated content meets the originality requirement, leading to difficulties in applying originality assessments. This paper employs case analysis, literature review, and comparative research to examine typical judicial cases in China and other jurisdictions, as well as how different legal systems establish originality standards. It further explores the specific impacts of generative AI on the constituent elements of originality and the practical challenges in applying traditional originality criteria. The study finds that although countries have different originality standards, 'substantial human contribution' is gradually becoming the core consensus for determining the copyright eligibility of AI-generated content. This paper proposes establishing a tiered protection model based on the level of human contribution, aiming to strike a dynamic balance between incentivizing technological innovation and upholding the primacy of human authorship. This research provides theoretical references and institutional recommendations for improving China's generative AI copyright system and helps promote the adaptive development of copyright law in the digital age.

Keywords: Generative AI, Originality in Copyright, Copyright

1. Introduction

Since 2020, generative artificial intelligence has entered a phase of rapid development. Generative models represented by the GPT series, Midjourney, Sora, Deepseek, and other platforms, leveraging the Transformer architecture and learning from massive datasets, can generate works based on users' input keywords and instructions that are visually and content-wise indistinguishable from traditional creations, covering multimodal domains such as text, audio, images, and video [1]. While this technological transformation greatly enhances the efficiency of content creation, it also poses new challenges to the copyright system centered on "human authors" and the originality requirement of copyright. Against this backdrop, a core question arises: in the process of human-involved generative AI creation, can the generated content constitute a "work" in the sense of copyright law? The central tension lies in the application dilemma of the originality principle. As the core standard distinguishing "works" from "non-works," the traditional principle of originality is based on the

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"human subject," but the emergence of generative AI blurs this principle. When AI generates content from prompts and instructions trained on massive data, the boundary between creators and the source of expressive originality is further blurred, creating challenges for originality determination.

From the perspective of judicial practice, there are significant differences among countries in their determinations on related issues.For example, in the 2023 case Spring Breeze Brings Gentleness, the Beijing Internet Court ruled that AI-generated images may qualify as artistic works, and regarded users' acts of repeatedly adjusting prompts and parameters as demonstrating "individualized expression", thereby satisfying the originality requirement. In contrast, in the U.S. Copyright Office's case "Zaria of Dawn," it was determined that images generated by Midjourney are not protected by copyright due to the lack of "sufficient human control" over expressive elements [2]. This difference further illustrates the uncertainty in applying originality standards in the context of generative AI and the urgency of institutional responses.

Based on this, this paper aims to explore the impact of generative AI on the principle of copyright originality and its institutional responses.The research adopts a case study method, focusing on typical judicial cases at home and abroad to analyze the practical application and differences of originality determination standards; it uses a literature analysis method to review representative views in academia and the judiciary regarding the copyright ability of AI-generated content; it employs legal provision analysis to examine the provisions and application scenarios of the "originality" requirement in China's Copyright Law and related judicial interpretations; and it uses a comparative research method to compare the copyright eligibility of AI-generated content under different legal systems.

2. The theoretical foundation and comparative law framework of the originality principle

2.1. Components of originality

Originality is generally regarded as the standard for determining whether an object constitutes a work under copyright law, and it is also a substantive requirement widely recognized by copyright laws of various countries [3]. Although the Berne Convention, the TRIPS Agreement, and the WIPO Copyright Treaty do not provide a clear definition of originality, they establish the basic requirement that a work must possess a certain amount of creativity through the term "intellectual creation."For example, Article 10 (2) of the TRIPS Agreement and Article 5 of the WCT both stipulate that compilations of data or other materials shall be protected by copyright if the selection or arrangement of their content constitutes intellectual creation.

From the perspective of its components, originality should include two parts: "independence" and "creativity." Among them, "independence" means that the work is completed by the author independently, rather than copied or plagiarized from others. Creativity means that the work must reflect a minimal degree of creativity and the author's individual expression.

2.2. Comparison of originality standards across countries

However, at the global level, neither different legal systems such as the common law and civil law traditions nor individual jurisdictions have established a unified standard for the originality principle. This section will compare the standards of originality in civil law systems, common law systems, and China's Copyright Law.

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2.2.1. Originality standards in common law systems

Under UK law, the originality standard has evolved from the traditional 'skill, judgment, and labor' to being based on the 'author's own intellectual creation.' The Court of Appeal ruling in the 2023 THJ Systems case ultimately confirmed and continued to apply this standard [4]. For the THJ Systems case, professional commentary pointed out: 'This case confirms that UK courts will continue to apply the originality standard established by pre-Brexit EU case law, namely that the work must be the 'author's own intellectual creation,' and through 'free and creative choices,' the author leaves a 'personal imprint' on the work' [5]. According to the 2026 International Comparative Legal Guides (ICLG) report on UK copyright law, current UK law does not require a work to exhibit high originality or novelty; the originality assessment merely considers whether it constitutes the "author's own intellectual creation" [6]. This definition further clarifies that under the current UK legal framework, originality does not require the originality or novelty of ideas, and the standard of judgment is whether the work is the 'author's own intellectual creation."

In the United States, the modern originality standard was milestified by the Feist Publications case in 1999. The U.S. Supreme Court clearly stated that "originality is a necessary condition for copyright, and the work must be created independently by the author and have a minimum of creative origin" [7]. The Court emphasized that this creativity threshold is extremely low, and only a minimal spark of creativity is sufficient to satisfy the requirement [7]. In addition, U.S. copyright law adheres to the principle of "human authorship", with Thaler v. Perlmutter (2025) reaffirming that copyright only applies to works created by humans [8].

2.2.2. Originality standards in civil law systems

The civil law copyright system takes "authorship right" as the core, and its originality standard emphasizes that the work carries the personality characteristics of the author.

France: Article L.112-1 of the Intellectual Property Code protects "all intellectual works", and originality requires that the work reflect the author's personality imprint. The traditional French view that "originality is a reflection of the author's personality" was first defined by the French Supreme Court as "the imprint of personality left by the author on the work he creates" [9]. The 2015 "Glamour" case once again showed that originality is not about the novelty of the work, but about whether it reflects the author's personality [10].

Germany: Article 2, Paragraph 2 of the Copyright Act stipulates that "the term "work" as used in this law refers only to the intellectual creation of an individual" [11]. When sorting out the German originality standards, Professor Lu Haijun proposed that works should come from the intellectual labor created by the author; The intellectual achievements of the author must be conveyed, thoughts or emotions; it must also be able to carry the personality imprint of the creator; and it needs to reach a certain creative height [12]. Accordingly, EU copyright law employs "the author's own intellectual creation" as the originality standard. The core of this lies in whether the author can reflect individuality in his work through "free and creative choice" [13].

2.2.3. China's originality standard position

China's copyright law adopts a "blank" approach to the originality standard. Article 2 of the Implementing Regulations of the Copyright Law stipulates, "Works referred to in the Copyright Law are intellectual achievements in the literary, artistic, and scientific fields that possess originality and can be reproduced in some tangible form" [14]. The Supreme People's Court, in its Practical Guide

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to Intellectual Property Adjudication, stated that originality comprises two elements: first, the work must be independently created by the author, excluding plagiarism and imitation; second, the arrangement of the work's expression should reflect the author's choices and judgments, i.e., intellectual creation. The evaluation standard focuses on the minimum level of intellectual creativity, rather than artistic or market value [15].

3. Challenges of generative AI to "originality"

The widespread application of generative AI has challenged the traditional identification of originality under copyright law, which is mainly reflected in the difficulty of authorship attribution and assessing the extent of human contribution in the generation process. To address the problem of confusion between AI and human authorship, scholars have proposed various theories, including the "instrumental theory," "contribution theory," and "fictitious theory." A comprehensive evaluation finds that each theory has limitations:

The instrumental theory can solve ownership issues at the stage of weak AI but is difficult to apply to content generated by strong AI; the contribution theory can clarify the rights of twin or original content, but for accompanying content, the standards are ambiguous and overly flexible; the fictitious theory grants AI the status of a fictitious legal subject, but does not specify the concrete steps for transferring rights to humans [16].

When AI-generated content accounts for a significant proportion, should the author be the human who provides keywords, parameters, and other data, or the AI that generates a large volume of content based on training? Article 3 of the Implementing Regulations of the Copyright Law of China defines creation as "intellectual activity that directly produces literary, artistic, or scientific works" [14]. However, in the AIGC era, owing to the indirectness of user operations and the "black box" nature of algorithms, current standards can hardly effectively measure the actual human contribution in content generation.

Even if humans do provide intellectual input in entering prompts, adjusting parameters, and selecting results, can these contributions be reflected in the final work and meet the originality requirement? Should the identification of originality emphasize quantitative or qualitative aspects of the contribution? In the complex AI-generated environment, how to reconstruct the standard of originality under the new human-AI collaborative creation paradigm has become an urgent legal issue to be resolved.

4. Responses of domestic and foreign judicial practices and systems

4.1. Application gaps and controversies in Chinese judicial practice

The issue of copyright involving generative AI has already appeared in Chinese judicial practice. The first copyright dispute in China involving computer software creation was the 2018 case Beijing Feilin Law Firm vs. Baidu Online Network Technology Co., Ltd. The court held that "creation by a natural person is still a necessary condition for a work under copyright law," rejecting the status of WeiKe Xianxingku's automatically generated analysis reports as works [17]. This judgment adhered to the traditional stance that "works should be created by human intellect," but it also exposed a gap in the system: when AI-generated content has no natural person as author, it remains unclear how to protect the user's intellectual input. The court suggested that "reasonable means can be used to indicate their related rights," but due to the lack of systemic support, similar outcomes cannot be effectively protected.

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In 2023, in the "Spring Breeze Brings Gentleness" case heard by the Beijing Internet Court, the plaintiff created AI-generated images using the Stable Diffusion model, reflecting intellectual input and personalized expression through input prompts, parameter adjustments, and design of the images. The court confirmed the plaintiff's authorship and recognized the involved images as artistic works protected by copyright [18]. This marked the first case in Chinese judicial practice recognizing that a work created with the participation of generative AI qualifies for copyright protection.

However, in 2025, in the "AI-Generated Image Copyright Dispute" case heard by the Suzhou Intermediate Court of Jiangsu Province, the court rejected the plaintiff's copyright claim on the grounds of "lack of human creative input," and required the provision of original records of the creation process to prove substantial contribution to the expressive elements of the image [19]. These cases illustrate that the threshold of human contribution required for AI-generated content to satisfy the originality requirement remains a recognition challenge.

4.2. Comparative exploration of foreign judicial practice

In the United States, judicial practice attempts to strike a balance between human authorship and the reality of AI-assisted creation, yet the quantitative threshold for the "degree of control" remains ambiguous, with the consequence that the majority of AI-assisted works are ineligible for copyright protection.

(1) Thaler v. Perlmutter (2025): The U.S. Court of Appeals for the Federal Circuit in the District of Columbia confirmed that "copyrighted works must have an identifiable human author, and content generated solely by AI cannot be considered an author in the legal sense" [20].

(2) Copyright Office guidelines and cases: The U.S. Copyright Office's report "Copyright and Artificial Intelligence Part II: Copyright ability" makes it clear that "simply inputting prompts is insufficient to demonstrate sufficient human control over AI-generated content" [21]. In Zarya of the Dawn and Théâtre D'opéra Spatial, even where users entered hundreds of prompts, the U.S. Copyright Office still denied copyright protection to users, emphasizing that the structure and expression of the final work were determined by the AI.

In Europe, there are also difficulties in dealing with AI-generated works.

The Munich District Court of Germany (2026) held that an AI-generated logo did not satisfy the copyrightability requirements under German copyright law, reasoning that "human input through prompts did not attain a level of creativity and personal contribution sufficient to reflect the author's personality." The judgment adhered to the civil law tradition requirement of "author's personality," but there is no unified standard for specific determination [22].

EU level: The Budapest District Court in Hungary submitted a preliminary ruling request to the EU Court in the Like Company v. Google Ireland case, involving whether training large language models constitutes reproduction and the public dissemination of AI-generated content; the ruling is expected in 2027.

In summary, judicial practices at home and abroad demonstrate that for works involving generative AI, there is confusion in determining the originality of works with human authorship, and AI intervention has complicated traditional originality standards—highlighting an urgent need for clear legal norms and institutional safeguards.

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5. The reconstruction and exploration of copyright originality by generative AI

Generative AI has profoundly impacted the copyright attributes and originality of works, prompting various countries to explore new paths for institutional reconstruction in judicial practice. Overall, although different countries have developed diverse solutions based on their own legal traditions, the common trend is that substantial human contribution is gradually becoming the new standard for the principle of copyright originality.

In the European Union, the Infopaq case clarified the standard of "the author's own intellectual creation." In the context of generative AI, originality requires users to inject freedom and creative choice into the generation process through prompt design, parameter adjustment, content selection, etc., so that the work reflects a "personal imprint" [23]. The U.S. Copyright Office, in the "Zarya of the Dawn" case and its 2025 "Copyright Registration Guidance for Works Containing AI-Generated Material", emphasized that only when humans exercise "creative control" over the expressive elements of a work can it receive copyright protection—meaning the human contribution must reach a certain level [24].

Chinese judicial practice also reflects this trend. In the 'Spring Breeze Brings Gentleness' case, the Beijing Internet Court recognized that the plaintiff demonstrated personalized expression through inputting prompts and adjusting parameters, and therefore the work possessed originality [25]. The criteria for determining originality are gradually becoming objective and no longer rely on the expression of ideas or emotions in the work. Professor Wan Yong pointed out, 'With the emergence of new types of works such as databases and computer software, the determination of originality has gradually 'diluted the individuality of natural persons,' shifting towards 'analyzing the final form of the work' [26]. Scholars further suggested that 'the value evaluation dimension of works should be eliminated, and an objective examination system should be established' [26]. As long as the generated content formally meets the requirements of 'independent creation' and 'minimum creativity,' it should be protected.

Besides common features, countries also show differences in responding to originality standards. The United States upholds a strict human authorship principle, excluding copyright protection for AI-generated content [24]; the European Union is more inclusive, focusing on whether the work can reflect the author's freedom and creative choices rather than being confined to the creation tool used. China adopts a flexible approach of preliminary judgments in judicial practice, comprehensively assessing various factors to determine originality [27]. Some scholars propose a 'wide in, wide out' system structure to accommodate large-scale AI training data while ensuring the protection of AI-generated content rights [28].

In general, generative AI is driving the shift of copyright originality from the traditional human-centered individual assessment to objective standards centered on substantive human contribution and analysis of the work's form. Practices in various countries indicate that while ensuring copyright protection, the determination of originality needs to take into account the realities of AI-assisted creation.

6. Conclusion

The challenge that generative AI poses to the principle of copyright originality is essentially a contest between autonomous technological tools and the human-centered concept of creation. When AI generates content on par with human works through massive training data, the traditional notion of human authorship faces unprecedented challenges. Copyright law must clarify: when creative

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tools shift from passive assistance to active generation, how should the boundaries of originality be defined?

Judicial practices in various countries show that the actual contribution of humans in generative AI creation has become a new standard for judging originality. The law focuses more on the choices, creativity, and personalized expression demonstrated by humans during the creative process, and requires proving their actual influence on the generated results through actions such as prompt input, parameter adjustment, and subsequent editing. Only when human contribution reaches sufficient creativity and produces a substantial impact on the work can their copyright be recognized.

Historical experience shows that each technological innovation triggers similar institutional adjustments: photography, film, and now generative AI, with the core of the law always being balance—both encouraging new technological innovation and protecting human creative agency. Generative AI should be regarded as a tool that expands creativity, rather than a replacement for human creation. The future task of copyright law is to clarify the standards for determining originality in human-AI collaboration, thereby protecting genuine creators while encouraging the development of AI-assisted creation.

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