A Study on the Copyrightability of AI-Generated 'Text-to-Image': A Classification-Based Analysis

Jiao Xue
Basic Courses Department, Zhejiang Police College, Hangzhou 310053,Zhejiang, P.R.China
xuejiaozjjpc@163.com

Xuemei Yang*
Basic Courses Department, Zhejiang Police College, Hangzhou 310053,Zhejiang, P.R.China
xuemyzjpc@126.com

Abstract: The advent of text-to-image generative AI models such as DALL-E 2, Stable Diffusion, and Dreamfusion has brought the convergence of artificial intelligence and art to contemporary aesthetic discourse. At the same time, these developments present unprecedented challenges to traditional copyright law. The highly automated nature of AI-generated content often renders conventional criteria for defining "works" inadequate. Additionally, this issue is influenced by many factors, including cultural contexts, social structures, economic policies, and legal systems, contributing to its complexity and underscoring the necessity for a global consensus. This paper builds on the legal framework governing the copyright protection of photographic works to propose differentiated legal protection strategies for distinct categories of text-to-image generative content: Original Works, Derivative Collaborative Works, and Automated Outputs. Specifically, it advocates for a classification-based approach to protection, guided by the originality, degree of creative effort, and aesthetic value inherent in the generated content. Furthermore, the paper recommends introducing aesthetic evaluation criteria and establishing formal appraisal mechanisms to refine standards for copyright eligibility. This framework aims to balance the dual imperatives of robust copyright protection and the broader public interest by addressing the distinctive characteristics of generative AI creations. Ultimately, it provides new theoretical insights and practical guidance for the legal regulation of generative AI content, offering a pathway for harmonizing innovation with legal and societal norms.
Keywords: Text-to-Image; Artistic Aesthetics; Copyrightability; Classification-based Approach; Artificial Intelligence.

1. INTRODUCTION

Since 2023, Generative Artificial Intelligence (GenAI) technology has rapidly evolved, producing content that increasingly matches or surpasses human-quality creations. This technological advancement has found extensive applications in fields such as the creative industries. In many cases, recipients of such content need help to discern whether the works

they encounter are human-created or machine-generated (Gao et al., 2023; Lu et al., 2024). Scholars argue that it is only a matter of time before AI-generated works consistently outperform those produced by human authors (Abbott & Rothman, 2023; Kurzweil, 2005). Compared to text-based AI outputs, image-generation models (commonly called "text-to-image" systems) present unique challenges due to visual data's high-dimensional nature and intricate details. These systems are more likely to produce outputs resembling their training data and hold substantial economic potential, making them particularly susceptible to copyright infringement disputes. Such disputes are increasingly manifesting in legal proceedings, as artists and writers express widespread opposition to their works being used as training data for AI systems. Concerns have also been raised that user-generated AI content could compete with or replace human-created works, further complicating the landscape (Samuelson, 2023). This confluence of factors foreshadows a future judicial environment marked by a surge in infringement litigation (Sag, 2023). In the era of intelligent technology and pervasive media, whether AI-generated images—hereinafter referred to as "text-to-image creations"—qualify for copyright protection has become a critical focus of academic and legal discourse. The growing frequency of disputes surrounding this issue underscores its complexity and urgency. National approaches to the copyrightability of AI-generated content remain inconsistent, and no international consensus has yet been achieved. In China, for instance, neither legislative nor administrative frameworks have explicitly addressed the copyright status of AI-generated works. Nonetheless, several judicial cases have begun to articulate a tentative position. In December 2023, the first judicial decision in China regarding AI-generated imagery was handed down in *Li v. Liu*, a case concerning the infringement of the right of information network dissemination. Commonly referred to as the "Spring Breeze" case, the Beijing Internet Court held that AI-generated images demonstrated sufficient originality, assigning copyright ownership to the AI tool user. Similarly, in 2024, the People's Court of Changshu in Jiangsu Province issued a civil judgment (known as the "Companionship" case), once again affirming the copyrightability of text-to-image creations. Both cases centered on the core requirements for defining a "work" under Article 3 of the *Copyright Law of the People's Republic of China*, emphasizing the criterion of originality. While the facts and reasoning in these judgments were not entirely consistent, they revealed a degree of judicial coherence in several respects. First, both courts emphasized the importance of human agency in making individualized choices and associations during the

creative process, underscoring the role of human contribution in establishing originality. Second, the judgments considered the complexity of the generation process and the proportion of human input as critical factors in determining copyrightability. This reflects a tendency among Chinese courts to recognize AI-generated outputs as "works" when the process involves substantial human effort and demonstrates a high degree of complexity. Finally, the courts incorporated policy considerations and a balancing of interests into their determinations, aligning their reasoning with broader AI industry development and cultural innovation goals. For example, in the "Spring Breeze" case, the Beijing Internet Court explicitly highlighted the importance of encouraging creation, a principle widely regarded as the cornerstone of copyright law. The court reasoned that proper application of copyright protections, supported by appropriate legal mechanisms, would incentivize creators to adopt advanced tools, thereby promoting both artistic innovation and the advancement of AI technologies. This reflects a nuanced understanding of the interplay between technological progress, cultural dissemination, and the foundational objectives of copyright law. By contrast, the United States has consistently rejected copyright registration for AI-generated works. U.S. courts and administrative bodies have repeatedly denied the copyrightability of such creations, maintaining a skeptical stance toward granting legal protection to content generated by AI systems. For example, in the famous Zarya case, the US Copyright Office explicitly denied the user's original contribution to AI products. Thus, the diverging approaches between jurisdictions, exemplified by China's relatively open stance and the United States' more restrictive position, reveal a critical tension in the global discourse on the copyrightability of AI-generated works. This divergence highlights the complex legal and policy considerations at play. It sets the stage for a deeper exploration of the theoretical foundations and practical implications of recognizing copyright in AI-generated content, which will be examined in the subsequent sections.

2. THEORETICAL JUSTIFICATIONS FOR THE COPYRIGHTABILITY OF TEXT-TO-IMAGE CREATIONS

Technological advancements have long been a driving force for reexamining copyright law (Greenberg, 2015). Historically, every major technological innovation has prompted societal concerns, ranging from fear of the unknown to skepticism over its potential to stretch the

boundaries of existing legal frameworks (Lemley, 2024). Similar controversies over copyright protection once arose with the advent of photography, film, phonographs, radio, television, and other communication technologies (Kretschmer & Kawohl, 2015). These debates ultimately led to expanding the scope and subjects of copyright protection (Ginsburg, 2006). Therefore, whether works generated by artificial intelligence (AI) should receive copyright protection is familiar. Scholars began exploring the legal implications of computer-generated works as early as the 1960s (Kanarik & Sergienko, 2019). By 1965, the U.S. Copyright Office identified the problem of computer authorship as one of its three key challenges, alongside computer program registration and the office's automation initiatives (Bainbridge, 1991). The following theories offer representative perspectives on this issue. First, the Value-Based Theory argues that any work deemed valuable to someone should merit protection. This theory traces its origins to the landmark English case *University of London Press v. University Tutorial Press*, where the court held that "what is worth copying is prima facie worth protecting." The underlying implication is that if a computer-generated work holds commercial value, it should correspondingly have an identifiable rights holder (Poghosyan & Hovhannisyan, 2023). In this view, if AI's creative outputs are deemed applicable, the AI and its results must be protected. However, this theory has been criticized for overgeneralization, as copyright law protects works without apparent value. Consequently, value alone cannot serve as a definitive criterion for protection. Second, the Market Competition Theory asserts that failing to grant copyright protection to computer-generated works could lead to unfair market competition between AI-generated content and human-created works, potentially resulting in market confusion (Yu, 2016). Through copyright protection, AI-generated content could be licensed, ensuring fair compensation and promoting an equitable commercial environment. However, this theory raises further questions: Does AI-generated content genuinely require the incentive of copyright protection? From an economic perspective, granting copyright to AI-generated works may not significantly increase the incentives for creators, as the cost of generating such content is negligible (Aziz, 2023). Third, regarding the question of authorship, two prominent theories have emerged. The Work-for-Hire Theory suggests that, rather than redefining the concept of authorship, AI systems could be treated as "hired tools," analogous to employees. Under this framework, the rights to AI-generated works would be assigned to the entity that controls or invests in the AI system (Lee et al., 2021). However, this theory faces significant conceptual

challenges. AI systems lack the legal capacity to form relationships with an "employer," and the traditional notion of work-for-hire fundamentally emphasizes the contributions of human creators. As a result, this theory struggles to account for works generated exclusively by machines without substantial human input. The second theory, the Derivative Works Theory, encompasses two perspectives. The first posits that machine-generated works are derived from preexisting copyright-protected materials, while the second views these outputs as derivative products of the underlying computer programs (Veiksa, 2021). However, AI-generated content typically results from analyzing patterns and correlations in data rather than expressing the creative originality traditionally required of derivative works. Furthermore, such outputs often exclude the original code or dataset, further complicating the application of this theory to AI-generated creations. Finally, the Aesthetic Value Theory contends that works possessing aesthetic significance should qualify for copyright protection. However, EU law explicitly rejects aesthetic or qualitative value as a criterion for copyright eligibility (Denicola, 2016). This limitation underscores the inadequacy of relying solely on aesthetic attributes to justify protecting AI-generated works. Although these theories each provide valuable perspectives on the copyrightability of AI-generated content, more is needed to comprehensively resolve whether AI-generated works can be considered copyrightable subject matter. As a result, both theoretical and practical circles remain deeply divided on this issue. If judicial decisions universally adopted the approach seen in the "Spring Breeze" and "Companionship" cases, treating text-to-image creations as an extension of artistic expression, the definition of a "work" would no longer be confined to traditional artistic endeavors. Instead, it would hinge on the manifestation of human individualized choices. In such a context, even a simple user command like "create a picture of a beautiful woman" could qualify as a creative act. This raises a critical question: in the broad spectrum of human behavior, what actions should be excluded from the realm of "creation"? Virtually any human act could, under such reasoning, be interpreted as creative. Conversely, if the judicial branches of different countries' attitudes uniformly mirrored the position of the U.S. Copyright Office, which categorically denies copyright protection for AI-generated works, this could stifle creative enthusiasm in the AI era and have profound implications for preserving artistic value. Text-to-image creations, characterized by efficiency and accessibility, have already permeated nearly every facet of artistic production. If the copyright system fails to respond promptly to this emerging phenomenon, it risks significant institutional lag,

undermining the legal system's authority and exacerbating governance challenges. The crux of copyright reform in the AI era lies in balancing protecting artistic value and incentivizing creativity. Only by updating legal standards and fostering societal recognition of the value of AI-generated works can the dual threats of institutional stagnation and cultural decline be mitigated.

3. DETERMINATION OF ORIGINALITY IN TEXT-TO-IMAGE CREATIONS

This paper posits that the copyrightability of text-to-image creations can be analogized to that of photographic works. Scholars frequently explore the parallels between text-to-image creations and photography, and examining copyright protections afforded to photography offers significant insights for analyzing the copyright status of AI-generated works. From a production perspective, text-to-image creations and photography share a crucial characteristic: the ability to produce high-quality outputs at low costs. However, contentious cases in the realm of photography, such as the "monkey selfie" case and the "Visual China black hole photograph incident," reveal the complexities of copyright practice. The latter case is particularly instructive, as it exposed copyright misuse issues and highlighted how "copyright trolls" can exploit systemic vulnerabilities. Such landmark cases provide valuable theoretical and practical lessons for addressing the copyright challenges posed by text-to-image creations. As the "Visual China black hole photograph incident" demonstrated, when image works lack rigorous scrutiny and regulation, they risk becoming tools for exploitation and abuse. Similarly, the potential for AI-generated works to facilitate new forms of copyright misuse warrants thorough investigation.

3.1. Analogizing Text-to-Image Creations with Photographic Works

Some scholars argue that text-to-image creations and photographic works are incomparable, contending that the latter reflects human control while the former represents machine-dominated processes. Text-to-image creations are thus dismissed as products of preprogrammed systems and integrated technologies, lacking individualization (Wang, 2017). However, this paper adopts a different view based on the following reasons: First, the essence of control in generative AI remains human-centered. Although generative AI (GenAI) outputs may appear to exhibit a degree of

randomness and strong content generation capabilities (Henderson et al., 2023), these features should not obscure that its creative autonomy operates strictly within human-defined parameters. GenAI is, fundamentally, a tool designed to augment human creativity rather than an independent creator. Its role parallels that of a camera or software like Photoshop, which expands creative possibilities without supplanting the primacy of human agency. The outputs of these tools remain confined to the user's operational scope, settings, and instructions. Similarly, GenAI operates within the rules and parameters predetermined by human input. This phenomenon, aptly described as "controlled unpredictability", reflects the superficial autonomy of GenAI, which is, in fact, a function of human-defined rules. Thus, GenAI's outputs are not the product of independent creativity but the result of human-initiated and guided collaboration. Second, iterative innovation and human aesthetic judgment in the creative process. The generation process in GenAI is not a mere act of replication but one of producing innovative content through deep learning and analysis of extensive datasets. Importantly, this innovation occurs under continuous human influence through the user's iterative input and feedback. For instance, when using platforms like MidJourney, a user's prompt, such as "blue ocean," consistently produces content that adheres to the "blue" theme. Similarly, prompts requesting a "circle" will not result in a "triangle." This precision underscores the determinative role of human instruction. Furthermore, the refinement process exemplifies the user's originality and creative judgment as they iteratively modify prompts or edit outputs to align the generated content with their artistic vision. This active human involvement ensures that GenAI outputs reflect the creator's aesthetic sensibilities, creative ideas, and individual preferences. This provides a solid basis for analogizing text-to-image creations with photographic works. Third, there is a fundamental similarity in content generation between text-to-image creations and photography. Despite differences in medium, the core processes underlying content generation in both cases are fundamentally similar. Photography relies on cameras, while text-to-image creations depend on AI models. Both are human-assisted tools. Their distinction lies in execution: photography captures physical reality, while text-to-image systems computationally synthesize virtual content. However, this divergence does not diminish the human control inherent in both processes. In photography, the creator deliberately manipulates lighting, composition, and focus. Similarly, in text-to-image generation, users exercise control by crafting prompts, iterative refinements, and post-processing. In both cases, the creator's intention

drives the process. Furthermore, just as the originality of photographic works derives from the selective and artistic depiction of real-world scenes, the originality of text-to-image creations emerges from the innovative recombination of data and algorithmic creativity. These parallels affirm the validity of analogizing the two mediums.

3.2. Classification of Text-to-Image Creations Using Photography as a Reference

Given the conceptual similarities between photography and text-to-image creations, the latter's copyright attributes can be assessed by adopting a classification framework akin to photography. Based on an analysis of the creation process and defining features, text-to-image creations can be categorized as Original Works, Derivative Collaborative Works, and Automated Outputs. This classification elucidates the scope of copyright protection and provides practical legal guidance for various text-to-image creations. The originality standard determines whether a text-to-image creation qualifies as a copyrightable work. Similar to traditional artistic works, such as photography, text-to-image creations should adhere to a consistent standard of originality. Specifically, originality does not require extraordinary artistic merit but must reflect intellectual creation and individual expression by a natural person. Unlike photography or other digital images, AI-generated artistic works are fundamentally shaped by the operator's instructions, translating signifiers into signifieds to embody the operator's aesthetic intentions. Through textual instructions, operators direct the data generation process, positioning AI as a tool for expressing human aesthetic consciousness and producing images that often transcend conventional imaginative boundaries. By leveraging extensive image databases, AI frequently generates works that surpass human cognitive expectations. This phenomenon challenges individuals their desire to apply their aesthetic experiences to anticipate AI-generated outcomes, satisfying to control the unknown and fostering immersive, interactive engagement with AI-driven art. When a text-to-image creation demonstrates a sufficient "creative spark" or aligns with the Kleine Münze Prinzip principle recognized in German intellectual property law, it should be considered eligible for copyright protection. For creations that lack total originality but involve substantial intellectual effort—such as detailed prompt crafting, iterative refinements, or post-production modifications—neighboring rights may offer an appropriate legal framework. Neighboring rights are intended to acknowledge the labor and value invested in such works, providing a balanced solution that safeguards creators' interests while

promoting broader content dissemination. This framework addresses the needs of creators whose contributions, while significant, do not meet the stringent threshold of originality. Conversely, text-to-image creations that neither exhibit originality nor reflect significant creative effort should remain excluded from copyright and neighboring rights protection. Examples include fully automated outputs generated by preprogrammed instructions, such as surveillance footage, random snapshots, or unedited AI outputs derived from minimal user input. Such works lack the requisite intellectual engagement to qualify for legal protection. This approach ensures a clear delineation between protected works and those that do not meet the criteria for intellectual property rights, maintaining a fair and functional legal system for creative outputs. Nevertheless, even minimal creative and aesthetic contributions by AI users—comparable to the "pressing the shutter" standard in photography—can be sufficient to establish originality. For instance, the deliberate crafting of prompts or the iterative refinement of outputs incorporates the user's creative input into the final product, thereby meeting the criteria for originality. However, applying this standard requires a careful balance. Overextending copyright protection risks diluting the integrity of the legal framework, potentially leading to the monopolization of commonplace or mechanistic outputs. Conversely, insufficient protection could discourage innovation and diminish the incentives for creators to invest intellectual and creative effort in developing new works. To address these challenges, the following sections will delve into the nuanced role of originality in determining the legal status of text-to-image creations. By examining its conceptual foundations and practical implications, this discussion seeks to clarify how originality can be effectively applied to ensure a fair and balanced intellectual property regime that fosters both creativity and accessibility in the realm of AI-generated art.

4. PROPOSALS FOR ESTABLISHING COPYRIGHTABILITY STANDARDS BASED ON AESTHETIC CRITERIA

One critical question in determining the originality of text-to-image creations is whether their originality aligns with the interpretation of originality in photography. In a landmark ruling, the Beijing Intellectual Property Court noted that originality in photographic works does not lie in mere replicating objective reality but in the artistic value exhibited through the photographer's subjective understanding, creative expression, and

deliberate choices in composition and layout. While this perspective underscores the artistic contributions inherent in photography, this paper argues that conflating originality with any form of subjective choice risks undermining the legislative purpose of copyright law and may lead to overprotection. Instead, copyright law originality should balance aesthetic standards and human creativity to ensure clarity and applicability. To this end, the following recommendations are proposed to standardize the criteria for determining originality in text-to-image creations.

4.1. Revisiting the Requirements of Originality

The concept of originality in text-to-image creations can draw inspiration from the "pressing the shutter" standard in photography, establishing a baseline level of creativity required for copyright protection. In photography, originality is reflected in decisions made before capturing the image, such as composition, lighting adjustments, and framing. Similarly, the originality of text-to-image creations can be evaluated based on two essential factors: whether the creator has demonstrated creative effort and whether the output possesses artistic and aesthetic value. The degree of user involvement in the creation process is a pivotal determinant of originality. This creative effort can be evaluated across three dimensions: First, Clear Direction in the Generation Process: Users articulate their intentions through prompt creation, specifying elements such as style, theme, and details. This guidance embodies the creator's design and vision. Second, Iterative Adjustments of Outputs: Users refine the initial outputs by revising prompts or providing feedback, demonstrating an ongoing creative decision-making process. Third, Post-Generation Editing: Users enhance or reshape the generated content through subsequent modifications, embedding their aesthetic judgments and unique expressions into the final work. These efforts are valuable and often form the basis for court rulings. For example, in the "Spring Breeze" case, the court emphasized the plaintiff's extensive use of Stable Diffusion, including detailed prompt configurations, parameter adjustments, and image refinements. These steps demonstrated high complexity and creative input, satisfying the threshold for originality. Similarly, in the "Companionship" case, the court observed that the plaintiff's iterative use of tools like MidJourney and Photoshop reflected significant creative contributions. Such creative efforts, which are technically traceable, are integral to assessing originality. However, more than creative effort alone is required to qualify text-to-image creations for copyright protection. As artistic works, their core value lies in their aesthetic significance. Ignoring aesthetic

considerations and relying solely on labor complexity could lead to overgeneralizing copyright protections. Such a scenario might result in a "tragedy of the anticommons"(Heller, 2001), where an overly broad scope of protection dilutes the legal system's efficacy and devalues the concept of art itself. Similar issues have emerged in photography, where aesthetic judgment is pivotal in distinguishing artistic creations from mere documentary records. Likewise, text-to-image creations must demonstrate discernible aesthetic attributes to qualify as protectable works(Table).

Table 1: The Originality Judgment

Type	**Aesthetic value**	**Intellectual Effort**	**Originality**	**Copyrightability**
Original Works	✓	✓	✓	✓(Copyright)
Derivative Collaborative Works	×	✓	×	✓(Neighboring rights)
Automated Outputs	/	×	×	×

Note: ✓: Indicates that the corresponding type of work meets the requirement for the given criterion. Indicates that the corresponding type of work does not meet the requirement for the given criterion. Indicates that this criterion is irrelevant to the judgment, and whether it is met does not affect the classification result.

Aesthetic judgment, though inherently subjective, is central to the relationship between copyright law and originality. For instance, Article 2 of the Chinese *Copyright Law* defines works as intellectual creations within literature, art, and science and requires originality as a fundamental criterion. However, this does not imply that judges can avoid aesthetic judgments about art. Judicial application of legal reasoning does not exclude aesthetic judgment from copyright law (Yen, 1997). In many copyright cases, aesthetic judgment is particularly crucial in resolving the case. In practical copyright matters, judges often need to make aesthetic evaluations of the works involved. For example, In the "Spring Breeze" case, the court stated: "The user freely chose the model used during the creation process, and the user's aesthetic preferences determine the specific model selected." "In the image at issue, the plaintiff's input of the prompt words aimed to showcase a close-up of a beautiful woman under twilight lighting conditions with a photographic style, reflecting the plaintiff's aesthetic inclination." "After obtaining the first image by inputting prompt words and setting relevant parameters, the plaintiff continued adding prompt words, modifying parameters, and making adjustments, ultimately obtaining the image in question. This adjustment and modification process

reflects the plaintiff's aesthetic choices and personal judgments." These statements highlight the artistic or aesthetic significance of the work, which in turn is used to assess its originality. Art's subjective and unpredictable nature undeniably complicates its legal conceptualization, as illustrated by cases such as Cy Twombly's "blackboard doodles." While such works fetch astronomical prices in auctions, similar creations by non-artists may need more comparable recognition, reflecting the nuanced complexity of aesthetic evaluation. Overly strict standards risk undervaluing artistic contributions, while overly lenient criteria could trivialize creative processes. In addition, despite its importance, aesthetic evaluation poses significant challenges due to judges' potential lack of artistic analysis expertise and aesthetic criteria's inherent subjectivity. Misjudgments rooted in outdated or erroneous evaluations could deviate from contemporary artistic trends and practices. This concern underpins the U.S. copyright doctrine of "aesthetic non-discrimination," which seeks to avoid privileging certain artistic forms over others (Farley, 2004). Nonetheless, courts are anticipated by the public and obligated by the duty to engage with aesthetic criteria when determining creativity. Many courts have done so. For example, in China, courts have explicitly stated that artistic works should possess independent aesthetic significance. The Beijing Third Intermediate People's Court, in the case of Beijing Peking University Founder Group Corporation v. Shanghai Yuexingwang Trading Co., Ltd. for copyright infringement, held that "the constituent elements of an artistic work, in addition to the general elements of other works, should also meet the requirement of having aesthetic significance.". Some courts further equate "aesthetic significance" with "aesthetic feeling" or "aesthetic value." For instance, the Beijing First Intermediate People's Court, in the case of National Stadium Co., Ltd. v. Panda Fireworks Group Co., Ltd. for copyright infringement, held that "buildings or structures can be protected as works because they possess artistic beauty independent of their practical functions, reflecting the unique architectural aesthetic views and creativity of the architect."The Guangzhou Intermediate People's Court, in the case of Shanghai Fuyute Imaging Technology Co., Ltd. v. Shenzhen Yidao Network Co., Ltd. for copyright infringement, also held that "(the two images in question) respectively display different forms of two small fish through line curvature and color intensity, possessing originality and aesthetic value, meeting the requirements of artistic works' originality and artistic beauty."

4.2. Establish Aesthetic Value Assessment Mechanism to Determine Originality

Judges need more specialized knowledge to evaluate the artistic value of works due to the limitations of judicial expertise and the inherent uncertainty of aesthetic value. As a result, judicial rulings on aesthetic value carry inherent risks, as outdated or erroneous legal assessments may deviate from the trends or principles of artistic development (Farley, 2004). This concern underpins the "aesthetic non-discrimination" principle in U.S. copyright law. To enhance the scientific and rational basis of judicial decisions, it is necessary to provide aesthetic support for judges to make appropriate judgments. The "artistic community" standard is a crucial reference for judges in choosing aesthetic judgment. Judges should regard the "artistic community" as a critical source of expert opinion in the judicial process. By interpreting the form of the work, the AI user's intention, and the audience's aesthetic experience, the "artistic community" can form relatively consistent aesthetic judgments. Such judgments are reflected in the evaluation of the artistic form of a work and the determination of its artistic value. The court may consult art experts from relevant fields as expert witnesses to provide professional opinions on aesthetic judgment, offering a scientific basis for the case. Additionally, the court can incorporate public perspectives by seeking public opinions and forming a preliminary consensus within the "artistic community." This approach enhances the objectivity and rationality of aesthetic judgments and alleviates the pressure on judges to make such determinations. The establishment of new categories of judicial appraisal could also be explored. Theoretically, judicial appraisal can encompass various specialized disciplines and technical fields; any technical issue arising in litigation may be addressed with judicial appraisal to assist in fact-finding. Developing specialized judicial appraisal mechanisms for artistic aesthetic value assessment is necessary. While existing forensic categories in China, for example, only focus on areas such as forensics, materials, audio-visual evidence, and environmental damage, there is scope to establish new categories tailored to aesthetic assessments. Judicial appraisal could involve consulting art historians, critics, or practitioners to provide objective insights into the aesthetic merits of a disputed work. In future legal practice, courts should supplement expert opinions and judicial appraisal decisions with guiding principles derived from precedent cases to prevent inconsistencies and overgeneralization in copyright standards. These elements can clarify the aesthetic criteria for text-to-image creations, ensuring uniformity and coherence in judicial practice. Key considerations

include the following: The first element is the purpose of creation**.** Courts should evaluate whether the user's intent reflects a creative purpose, such as expressing unique ideas, instead of fulfilling mundane or mechanical tasks. The second element is the creation Process. The level of intellectual engagement during the creation process, such as using complex prompts, iterative refinements, or other forms of active participation, should be scrutinized. The third element is the aesthetic value. The work's aesthetic attributes—composition, style, and expressive form—should be assessed for artistic merit. Expert opinions from the field of aesthetics can provide objective criteria for this evaluation. The fourth element is the innovative use of prompts. The creativity or thoughtfulness inherent in the user's prompt design can indicate the artistic value embodied in the generated content. It is worth mentioning that certain prompt words, despite potentially possessing aesthetic qualities, may originate from publicly available sources and require minimal creative effort. As such, they lack the originality and intellectual input necessary to meet the threshold of copyright protection, rendering them ineligible for copyrightability. By integrating these considerations into a comprehensive framework, courts can ensure that only text-to-image creations meeting elevated originality standards with minimum artistic aesthetics value shall receive copyright protection. This approach not only preserves the fairness and integrity of the copyright system but also safeguards the artistic standards necessary for fostering cultural enrichment. Furthermore, it mitigates the risk of overgeneralization, preventing works lacking artistic merit from diluting copyright protections' cultural and legal significance. It is worth emphasizing that, as long as a work possesses aesthetic value, it should be entitled to copyright protection, with its artistic value being secondary, as the law primarily focuses on whether the work has aesthetic characteristics. By incorporating the aesthetic community, considering public opinions, and drawing on aesthetic authority, a relatively fair and widely accepted solution to this issue can be achieved.

4.3. Grant Neighboring Rights Protection to Derivative Collaborative Works

For the second category of text-to-image creations, although these images do not meet the originality requirement for copyright protection mainly due to the lack of artistic aesthetics, they are not entirely products of autonomous generative AI. Their creation process reflects the user's active engagement and labor through generation, adjustment, and post-production. These works involve significant user intellectual labor input

and deserve a certain degree of legal recognition. Compared to entirely automated outputs, these images are characterized by higher levels of user labor, demonstrated through complex prompt engineering, iterative feedback, and post-generation edits, which impart a certain distinctiveness to the results. From recognizing labor investment and encouraging dissemination, granting legal protection to such works is reasonable and necessary. Providing neighboring rights for these works represents a logical extension of the copyright system, incentivizing users to engage with technological tools creatively and fostering innovation in their application (Poghosyan & Hovhannisyan, 2023). Germany's copyright law offers a relevant exemplary model for distinguishing between works that qualify for copyright protection and those eligible for neighboring rights. For photographic works, German law stipulates that such works must reflect the creator's unique intellectual and artistic perspective, expressed through choices in subject matter, lighting, and editing techniques. Only photographs that embody these elements are recognized as copyrightable. Meanwhile, other photos that lack originality, such as simple snapshots, are protected under neighboring rights. Similar distinctions are found in the copyright laws of Italy, Spain, and Austria, which separately recognize original photographic works and general photographs within a neighboring rights framework (Margoni, 2018). Drawing on this approach, neighboring rights can be extended to text-to-image creations that fail to meet originality standards but involve significant creative effort. This fills a gap in traditional copyright law and prevents legal protections from being arbitrarily excluded in cases of substantial user labor. Neighboring rights for this category could include the following fundamental protections. For example, the right of distribution means users have the authority to control the distribution of generated images, including preventing unauthorized commercial use. The Right of Attribution: Users could require that their role as creative contributors be acknowledged in any dissemination or public display of the images. The Right to Grant Licenses means users can license the use of the images and receive appropriate remuneration, ensuring their labor is fairly compensated. Implementing neighboring rights should also include a defined term of protection analogous to those established for video recordings and other derivative works. By granting neighboring rights, users would be incentivized to continue investing in generative AI applications, promoting technological development and widespread adoption while maintaining a fair balance between labor recognition and legal protections.

4.4. Setup Public Domain for Automated Outputs

For the third category of text-to-image creations—those lacking originality and intellectual effort—such outputs should be classified as automated outputs. These works do not qualify for copyright or neighboring rights protection and should be considered part of the public domain. Typically, these images are generated with minimal user input, such as simple prompts like "generate a beautiful woman" or "draw a forest," relying entirely on preconfigured algorithms. The resulting outputs fail to reflect specific user intent, creative effort, or intellectual input. In such cases, users contribute neither meaningful creative labor nor intellectual investment, and they often incur no costs, mainly when using free generative AI tools. However, excluding these works from protection does not imply a lack of aesthetic value. Instead, it reflects the absence of intellectual or creative contribution, which is foundational for legal protection. Analogous scenarios are well-documented in photography: images captured through automated processes—such as drone photography, surveillance footage, or accidental animal-triggered shots—are generally regarded as mechanical outputs rather than expressions of human creativity. From a legal perspective, these works are appropriately classified as public-domain content (Margoni, 2018). Public domain works are open-access resources available for unrestricted use without permission. This classification offers several advantages. First, it prevents the overextension of copyright law, which would dilute its purpose if trivial or mechanistic creations were granted legal protection. Second, from an economic standpoint, extending copyright to such works would neither incentivize nor discourage their creation, as they are produced at near-zero cost.(Kretschmer & Kawohl, 2015) Lastly, it avoids the risk of double compensation for AI developers or platform owners. These stakeholders already benefit from copyright protections for the underlying software, and extending rights to the outputs would create unnecessary barriers for users seeking to utilize generative AI tools, ultimately hindering technological adoption and innovation. Placing such works in the public domain mitigates the administrative and economic costs of expanding copyright protections. It also preserves a balance between private legal rights and the public interest. This approach prevents monopolistic control of trivial resources by ensuring open access to low-effort AI outputs, fostering innovation and equitable use of digital tools. Through this classification, the copyright framework can more effectively delineate protection boundaries for text-to-image creations, safeguarding substantive user labor where warranted while avoiding overreach into mechanistic or trivial

outputs.

5. CONCLUSION

In the era of GenAI, the rapid evolution of AI technologies—though still in its nascent stages—has already posed significant challenges to the judicial application of copyright law in jurisdictions such as China and the United States. Much like the advent of photography and other image production technologies, which initially raised concerns about displacing traditional artistic practices, historical precedent demonstrates that humanity can peacefully coexist with new media technologies. Indeed, these innovations have often been leveraged to create entirely new forms of aesthetic expression. Similarly, in addressing the legal dilemmas arising from technological innovation, we must neither underestimate its impact nor resort to overly radical measures. Insights from the relatively well-established copyright protection framework for photographic works offer valuable guidance for navigating the copyright issues associated with generative AI creations. While AI technology is advancing rapidly, the copyrightability of text-to-image creations is not inherently more complex than the legal challenges posed by previous technological revolutions. This paper proposes a differentiated protection strategy grounded in the originality and degree of creative effort involved in such works. For content that involves significant labor but lacks originality, neighboring rights could provide an appropriate form of legal protection. Conversely, content lacking originality and creative labor should be relegated to the public domain, serving as a shared resource for societal benefit. Furthermore, particular emphasis should be placed on AI-generated content's artistic and aesthetic value when assessing originality. This classification-based approach offers a nuanced and practical framework for addressing the unique challenges of generative AI works, bridging the gap between technology-driven creativity and existing legal systems. By achieving a dynamic balance between copyright protection and public interest, it safeguards the integrity and dignity of artistic creation. Ultimately, this framework provides a valuable reference for harmonizing technological advancements with legal principles, ensuring the sustainable co-evolution of innovation and legal norms.

References

Abbott, R., & Rothman, E. (2023). Disrupting creativity: Copyright law in the age of generative artificial intelligence. *Fla. L. Rev.*, *75*, 1141.

Aziz, A. (2023). Artificial intelligence produced original work: A new approach to copyright protection and ownership. *European Journal of Artificial Intelligence and Machine Learning*, *2*(2), 9-16.

Bainbridge, D. I. (1991). The scope of copyright protection for computer programs. *Mod. L. Rev.*, *54*, 643.

Denicola, R. C. (2016). Ex machina: copyright protection for computer generated works. *Rutgers UL Rev.*, *69*, 251.

Farley, C. H. (2004). Judging Art. *Tul. L. Rev.*, *79*, 805.

Gao, C. A., Howard, F. M., Markov, N. S., Dyer, E. C., Ramesh, S., Luo, Y., & Pearson, A. T. (2023). Comparing scientific abstracts generated by ChatGPT to real abstracts with detectors and blinded human reviewers. *NPJ Digital Medicine*, *6*(1), 75.

Heller, W. B. (2001). Making policy stick: why the government gets what it wants in multiparty parliaments. *American Journal of Political Science*, 780-798.

Henderson, P., Li, X., Jurafsky, D., Hashimoto, T., Lemley, M. A., & Liang, P. (2023). Foundation models and fair use. *Journal of Machine Learning Research*, *24*(400), 1-79.

Kanarik, Y. S., & Sergienko, B. (2019). Legal Protections of Computer Programs as Objects of Intellectual Property Rights. *Legal Horizons*, 31.

Kretschmer, M., & Kawohl, F. (2015). *The history and philosophy of copyright*. SSRN.

Kurzweil, R. (2005). The singularity is near. In *Ethics and emerging technologies* (pp. 393-406). Springer.

Lee, J.-A., Hilty, R., & Liu, K.-C. (2021). *Artificial intelligence and intellectual property*. Oxford University Press.

Lu, Z., Huang, D., Bai, L., Qu, J., Wu, C., Liu, X., & Ouyang, W. (2024). Seeing is not always believing: benchmarking human and model perception of AI-generated images. *Advances in Neural Information Processing Systems*, *36*.

Margoni, T. (2018). *Digitising the public domain: non original photographs in comparative EU copyright law*. Springer.

Poghosyan, N., & Hovhannisyan, A. (2023). Copyright in artificial intelligence generated results. *Bulletin of Yerevan University C: Jurisprudence*, *14*(1 (38)), 77-87.

Sag, M. (2023). Copyright safety for generative ai. *Hous. L. Rev.*, *61*, 295.

Samuelson, P. (2023). Generative AI meets copyright. *Science*, *381*(6654), 158-161.

Veiksa, I. (2021). Protection of computer-generated works in the era of new technologies. *IAES International Journal of Artificial Intelligence*, *10*(1), 234.

Wang, Q. (2017). On the characterization of artificial intelligence-generated content in copyright law. *Legal Science (Journal of Northwestern University of Political Science and Law)*, *5*, 148-155.

Yen, A. C. (1997). Copyright opinions and aesthetic theory. *S. Cal. L. Rev.*, *71*, 247.

Yu, R. (2016). The Machine Author: What Level of Copyright Protection is Appropriate for Fully Independent Computer Generated Works. *U. Pa. L. Rev.*, *165*, 1245.