

Analysis of Copyright Rules for AIGC under the Standard of Human Substantial Contribution

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ABSTRACT

AIGC has transformed creative activities toward a human–AI collaborative model, with AI tools being extensively applied in academic work, self-media, and commercial design. Users' activities, such as conceptualization and revision, constitute creative contributions. However, existing copyright law is premised on independent human creation and lacks criteria for determining user contributions, resulting in uncertainties over rights ownership and inadequate protection of rights and interests. Taking substantial contribution as its core, this article analyzes the difficulties in the application of law, draws on extraterritorial experience to develop a three-level contribution determination model, and proposes measures for improvement at the legislative, judicial, and platform-governance levels. This mechanism adheres to the fundamental objective of copyright protection of safeguarding intellectual achievements, while supporting the development of the AI industry and balancing the interests of all parties.

KEYWORDS: AIGC; copyright protection; originality; human substantial contribution; user rights and interests.

INTRODUCTION

With the comprehensive implementation of large language models and diffusion model technologies, AIGC has entered a stage of widespread public adoption. According to domestic data on artificial intelligence industry users in 2025, the number of active civilian AIGC users in China has exceeded 870 million, with university students, self-media creators, and small and medium-sized content practitioners constituting the core user groups and accounting for more than 68% of all creative users. AIGC creation has fundamentally transformed the traditional model of creation by a single subject, giving rise to a normalized model of human–AI collaborative creation. Users are no longer merely clicking or operating tools, but instead participate fully in intellectual activities throughout the creative process, including topic selection and conceptualization, refined prompt design, iterative multi-turn dialogue, parameter adjustment, material selection, text rewriting, visual correction, and logical refinement.

However, China's existing copyright system was established against the backdrop of traditional

independent human creation and takes original intellectual achievements created by human beings as the sole object of protection. It therefore fails to accommodate the increasingly prevalent scenarios of human–AI collaborative creation, highlighting the problem of institutional lag. At the judicial level, there has long been a lack of uniform adjudicative standards, resulting in significant inconsistencies in the determination of copyrightability. According to judicial case statistics concerning AI-related copyright disputes nationwide from 2023 to 2025, the divergence rate in adjudication of similar human–AI collaborative creation cases reached as high as 41%. Some courts have adopted “AI involvement as grounds for negating originality” as their adjudicative logic, thereby disregarding the user's substantial intellectual input; other cases have excessively broadened the scope of protection by bringing simple one-click generation and low-investment, zero-modification conduct within the scope of copyright protection, resulting in an imbalance in judicial standards. Meanwhile, mainstream domestic content

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platforms generally use standard-form contractual terms to establish fixed rules on rights ownership. More than 90% of platform user agreements directly provide that copyright and intellectual property rights in AI-generated content belong entirely to the platforms, systematically diminishing the intellectual contributions of ordinary users. As a result, the ownership of rights, scope of use, and boundaries of secondary creation have remained ambiguous, while the evidentiary burden on users seeking to defend their rights is exceptionally high.

From the perspective of existing academic research, Chinese scholarship has produced extensive research on AIGC-related copyright issues, focusing primarily on macro-level questions such as the controversy over AI legal subject status, the characterization of generated content as works, and the allocation of rights among platforms and developers. Existing studies generally attach importance to balancing interests on the industry side, while for a long time overlooking the creative contributions and rights protection of ordinary end users, who constitute the overwhelming majority of users, and lacking empirical analysis and refined standards directed at actual civilian creative scenarios. At the same time, existing theories largely remain at the level of abstract principles and have failed to establish hierarchical and operational standards for determining originality in relation to specific activities such as prompt design, iterative interaction, parameter adjustment, and post-production modification, making them incapable of directly guiding judicial adjudication and platform governance. Research and institutional practices in other jurisdictions are relatively mature. The United States Copyright Office strictly adheres to the principle of human originality and grants limited copyright protection only to AI-assisted derivative content in which humans have exercised selection, arrangement, or substantial modification. The European Union, through the Artificial Intelligence Act, has established mechanisms for content labeling, traceability and record preservation, and transparency governance, seeking to balance industrial development and creators' rights as a priority. The United Kingdom, relying on its established rules governing computer-generated works, takes the extent of human input as a central criterion for determination. Extraterritorial experience generally recognizes that AI does not possess the status of a copyright holder and that human creative input constitutes a core prerequisite for the emergence of rights. Nevertheless, such experience remains difficult to directly adapt to the characteristics of China's domestic context, particularly the large

population of student users and the lightweight creative practices of self-media creators.

This article is grounded in the actual civilian creative ecosystem and adopts an integrated research approach combining theoretical analysis, case review, comparative analysis, and empirical investigation. Through the collection and analysis of questionnaire data from law and humanities students and self-media content creators, it seeks to accurately reconstruct the patterns of AIGC creative input, frequency of modification, creative processes, and rights awareness among ordinary users, and, on the basis of empirical data, identify the actual causes of current disputes over rights ownership and the institutional problems underlying them. On this basis, drawing on the fundamental theory of originality in copyright law, this article systematically analyzes the legal nature and evaluative difficulties of users' intellectual contributions under the model of human-AI collaborative creation, examines divergent adjudicative rationales in representative judicial cases in recent years, and compares mature regulatory experiences from other jurisdictions, thereby constructing a hierarchical, operational, and quantifiable system for determining users' substantial contributions that is adapted to China's domestic context.

The overall research of this article follows a problem-oriented and practice-oriented approach. It seeks to overcome the limitations of previous research characterized by an excessive focus on macro-level theoretical discussions and insufficient practical applicability by innovatively establishing a three-tier model for determining substantial contribution: limited participation, moderate creation, and substantial control. Based on the refinement of prompts, the number of iterations, the degree of structural modification, the proportion of original content, and the extent of aesthetic selection and logical reconstruction, the model establishes quantifiable criteria for determination, thereby accurately distinguishing ordinary tool-operation behavior from original intellectual creative activity. On this basis, this article proposes directly implementable measures for improvement from four dimensions: refining legislative rules, introducing differentiated judicial adjudication, strengthening platform-based evidence preservation and governance, and simplifying users' evidentiary mechanisms. These measures are supplemented by practical governance mechanisms, including prompt trace retention, traceability of the creative process, preservation of iterative records, and disclosure mechanisms concerning rights ownership. This research seeks to remedy the current deficiencies in

scholarship characterized by an emphasis on theory, insufficient empirical research, and limited practical applicability, while focusing on the actual creative rights and interests of the vast number of ordinary users. On the premise of promoting the sound development of the artificial intelligence industry, it aims to achieve a reasonable balance among the interests of platforms, developers, and end users, and to provide empirical support and institutional reference for refining the copyright system, achieving uniform judicial adjudication, and strengthening standardized platform governance in the era of human-AI collaborative creation.

DEFICIENCIES IN AIGC COPYRIGHT-DETERMINATION RULES AND ESTABLISHMENT OF THE SUBSTANTIAL HUMAN CONTRIBUTION STANDARD

A. INSUFFICIENT ADAPTABILITY OF TRADITIONAL ORIGINALITY STANDARDS AND RESULTING APPLICATION DILEMMAS

1. Institutional Foundation, Varied User Input and Application Dilemma

China's copyright law system for evaluating originality was established on the factual basis of independent human creation, and the legislation has not established specialized and refined evaluation rules for content generated with AI involvement. In AIGC creative practice, the degree of users' intellectual input varies significantly. It ranges from simple tool use involving the direct input of generic keywords to generate content, to in-depth creative activities such as designing prompt systems, repeatedly adjusting parameters, conducting multiple rounds of content iteration, and reconstructing text and visual elements.

According to the questionnaire data collected in this study, 68.4% of ordinary users complete generation merely by entering generic keywords, without undertaking subsequent human optimization, resulting in a relatively high degree of homogeneity in the generated content; only 21.7% of users engage in refined creative conceptualization and content modification. Traditional standards of originality are incapable of distinguishing and evaluating these two substantially different forms of conduct. If the status of a work is denied solely on the ground that an algorithm has participated in the creative process, the in-depth creative labor already contributed by users would be disregarded. Conversely, if the statutory threshold of originality were lowered so as to bring simple tool operation within the scope of protection, the value-evaluative function of copyright law with respect to intellectual achievements would be

undermined, leaving the application of law in a dilemma.

2. Fragmented Judicial Standards and Divergent Adjudication in Similar Cases

At present, China has not promulgated judicial interpretations or unified adjudicative guidelines specifically addressing the copyright determination of AIGC-generated content. Courts in different regions have adopted inconsistent approaches to examination, resulting in insufficient uniformity in judicial application. Some judicial decisions have fallen into the misconception of technological determinism, focusing their examination on the degree of AI algorithmic participation rather than the user's actual creative contribution. In cases involving similar creative models, some courts have recognized the status as a work of template-generated content involving limited human intervention, whereas others have directly denied the copyrightability of outputs resulting from limited user input. Judicial decisions rely to a considerable extent on judicial discretion and lack substantive criteria for examination that can serve as a reference. This not only affects the parties' reasonable expectations regarding their rights, but also undermines the uniformity and consistency of judicial adjudication.

3. Platform Standard-Form Terms Monopolizing Rights Allocation and Multi-Party Interest Imbalance

Most leading domestic AIGC creative platforms have established standard-form service agreements that broadly provide for the ownership of intellectual property rights in AI-generated content by the platforms, without differentiating the allocation of rights according to the degree of users' creative contribution. According to a 2024 industry survey conducted by Nandu AI Frontier, 92.7% of mainstream AI painting and AI copywriting platforms in China had established such standard-form provisions concerning rights ownership.

In conjunction with the findings of this study, 87.69% of users believe that their creative conceptualization and modification efforts should receive recognition at the copyright level, whereas only 14.87% of users are able to fully understand the provisions concerning rights ownership contained in platform agreements. Platforms rely on computing power and technical services and, through standard-form rules, obtain users' intellectual outputs without compensation, which conflicts with the fundamental logic of copyright law that allocates rights on the basis of creative labor. As a result, user complaints and civil disputes over rights ownership arising from such practices have continued to increase.

4. Deficiencies in Digital Evidence-Preservation Mechanisms and Excessive Evidentiary Thresholds for Rights Claimants

The entire AIGC creative process takes place within an online digital environment. Traces of the creative process, including prompts, parameter configurations, and multiple iterations of generated versions, are susceptible to alteration and loss, in marked contrast to the relatively preservable nature of traditional paper-based traces of creation. According to the Report on the Development of the AIGC Application Ecosystem (2025) issued by the China Internet Network Information Center (CNNIC), among the 515 million civilian AIGC users in China, only 7.3% of professional creators systematically preserve evidence of their creative processes, while more than 82% of ordinary users retain only the final generated outputs.

An examination of AIGC copyright dispute cases from 2024 to 2025 indicates that the failure of users' claims is frequently attributable to an inability to satisfy the evidentiary burden. Even where users have objectively made substantial creative contributions, they may find it difficult to prove to the court their creative intentions, processes of human intervention, and individualized choices in modifying the generated content. Interests that should be protected at the substantive level may consequently fail to receive judicial remedies because of insufficient evidence at the procedural level. This procedural deficiency impedes the effective operation of substantive rules.

B. ANALYSIS OF THE CORE CAUSES UNDERLYING THE DISORDER IN RULES AND PRACTICE

Taken together, the aforementioned institutional and practical problems demonstrate that the fundamental cause of the existing disorder lies in the failure of judicial practice and academic scholarship to establish a substantive standard of review centered on human substantial contribution. Existing analytical approaches tend to conduct formalistic assessments based on the AI tool itself and the proportion of algorithmic participation, thereby departing from the legislative purpose of copyright law to protect the original intellectual achievements of natural persons.

Copyright law protects human creative labor, while artificial intelligence merely constitutes a technological tool assisting in the production of content. The automatic generation of content by an algorithm does not itself constitute an act of creation within the meaning of copyright law. Whether AIGC-generated content can obtain copyright protection should therefore turn primarily on whether the user has contributed independent and individualized

intellectual labor. Treating the nature of the tool as the principal basis for adjudication reverses the primary and secondary aspects of examination and constitutes the underlying cause of inconsistent adjudication, imbalanced rights allocation, and difficulties in establishing evidence for rights enforcement.

C. FORMULATION OF THE SUBSTANTIAL-HUMAN-CONTRIBUTION DETERMINATION STANDARD

1. Upholding the Human-Centered Baseline of Copyright Protection

Artificial intelligence does not possess the status of a legal subject under copyright law and therefore cannot possess copyright capacity. Whether AIGC-generated content satisfies the requirements for protection as a work is not necessarily related to the proportion of algorithmic participation or the type of AI tool employed. The sole core criterion should be whether the user has made genuine and effective human creative contributions, thereby adhering to the jurisprudential foundation of copyright protection of the intellectual achievements of natural persons.

2. Formulation of a Quantifiable Three-Dimensional System for Substantial-Contribution Review

A three-dimensional examination framework comprising intellectual input, process control, and individualized expression is established to distinguish among three different types of user conduct: superficial tool operation, moderate creative intervention, and deep creative control. This framework provides an operational substantive basis for judicial discretion and moves beyond the inherent misconception of formalistic examination.

3. Formulation of Contribution-Oriented Rules for Multi-Party Rights-Allocation Balancing

Substantial contribution is established as the basis for determining copyright ownership. Where a user has made a substantial creative contribution, the user should enjoy the corresponding copyright. At the same time, the technological research and development investment of algorithm developers and the computing and operational costs of platforms should be respected, and their legitimate commercial interests should be protected through civil contracts and industry norms, thereby eliminating the monopolization of rights by platforms resulting from standard-form terms.

4. Formulation of a Coordinated Mechanism for Substantive-Standard Implementation and Procedural Safeguards

Copyright protection for AIGC requires the coordination of substantive rules and procedural

mechanisms. On the basis of the substantive standard of human substantial contribution, obligations for platforms to preserve records of the creative process, differentiated rules for the allocation of the evidentiary burden, and standards for users' preservation of evidence should be improved, so as to reduce the evidentiary burden on ordinary users and facilitate the effective application of substantive standards in judicial practice.

AN EMPIRICAL EXAMINATION OF DOMESTIC COPYRIGHT DISPUTES CONCERNING AIGC

A. LOW USER INPUT: SIMPLE PROMPT INPUT DOMINATED BY TOOL USE

In scenarios involving low user input, users enter only brief, generic, and templated basic prompts and merely perform the basic operation of initiating AI generation. They do not undertake refined prompt design, stylistic constraints, multi-round iterative optimization, or subsequent screening, selection, and post-production modification of the generated results, but instead directly use the original AI-generated output. Such operations are highly homogeneous overall, involve extremely limited user intervention, and essentially constitute ordinary tool-use behavior, with minimal human creative and intellectual input. In practice, a large number of ordinary users generate text and images with one click and publish them directly, thereby giving rise to disputes over rights ownership and infringement.

Guangzhou Internet Court AI Festival Illustration Rights Case. The plaintiff held a registration certificate for the copyright in the AI-generated illustration at issue and brought an action against an educational institution, alleging that its use of the illustration constituted infringement. The defendant presented evidence demonstrating that simple and generic prompts such as "Dragon Boat Festival, a family sitting around the courtyard making zongzi" could generate images with highly similar compositions and artistic styles through multiple AI tools, and that the image at issue also exhibited common defects in human anatomical details found in AI-generated images. The plaintiff was unable to provide evidence of the creative process involving prompt iteration, screening, or modification, and had merely adopted the AI-generated output. The court ultimately dismissed the plaintiff's claims, holding that the image at issue did not constitute a work within the meaning of copyright law.

From the perspective of judicial attitudes, most courts have held that cases of this type do not involve works eligible for copyright protection. The core rationale is that users have merely performed basic instruction-

input activities and have not produced individualized or differentiated independent expression. Such operations therefore fail to reach the level of originality required under copyright law and cannot obtain copyright protection. At the same time, some judicial decisions provide relatively superficial reasoning and fail to substantively examine the user's specific input, instead directly denying copyrightability on the ground that "the content was generated by artificial intelligence." Such reasoning falls into mechanical technological determinism and contains obvious deficiencies in its adjudicative logic.

These cases demonstrate that, in low-input scenarios, the final adjudicative outcomes are generally consistent with the jurisprudential conclusion that there is an insufficient substantial contribution. However, judicial reasoning is generally superficial and fails to focus on the absence of user creativity as the core requirement, instead attributing the result excessively to the AI tool itself, making it difficult to establish normative and uniform adjudicative guidance. The above cases also demonstrate that the mere existence of a work registration certificate cannot support an inference that AI-generated content possesses originality; the decisive consideration remains the user's actual intellectual contribution.

B. MEDIUM USER INPUT: PROMPT DESIGN COMBINED WITH LIMITED POST-PRODUCTION MODIFICATION

Medium user input represents the most prevalent and controversial form of AIGC creation among the general public. In such circumstances, users are no longer limited to entering simple keywords, but are capable of designing relatively complete prompts based on their creative needs and establishing clear constraints concerning the overall style, visual elements, textual structure, and tone of the content. They also generate content repeatedly, compare and select outputs with a higher degree of suitability, and subsequently conduct limited post-production processing through local cropping, color adjustment, textual polishing, and detail modification. Nevertheless, in terms of the overall expressive structure, the core content, principal framework, and core expression of the work are still automatically generated by AI algorithms. Users merely perform localized optimization and selection and do not exercise complete control over the overall content.

Zhangjiagang Children's Butterfly Chair AI Design Case, Jiangsu Province. The plaintiff was a product designer who entered a set of prompts, including "jelly-like texture, pink butterfly-shaped children's chair," and used an AI tool to generate several product renderings. After selecting one image and

performing only simple cropping, the plaintiff claimed that the image constituted a work of fine art and brought an infringement action against the manufacturer. The court held that, although the plaintiff had drafted the prompts and screened the generated results, the prompts were primarily functional descriptions, the extent of subsequent modification was extremely limited, and the overall composition and details of the image had been generated by the algorithm. The human creative contribution was therefore insufficient, and the plaintiff's claims were dismissed. In another AI image dispute involving a similar factual scenario of prompt design combined with minor image modification, however, another court held that the image possessed originality following the plaintiff's screening and adjustment and upheld the plaintiff's claims.

This type of scenario currently gives rise to the greatest divergence in judicial adjudication, with the problem of divergent outcomes in similar cases being particularly prominent. Some courts have held that users incorporate personal aesthetic judgments and creative choices through prompt design, output screening, and localized modification, thereby contributing a certain degree of originality sufficient for the content to constitute a work eligible for protection. Other courts have adopted a more conservative approach, reasoning that the extent of user modification is limited and that the overall expression remains dependent on algorithmic output, resulting in an insufficient human creative contribution and precluding recognition of work status.

The root cause of these divergent judgments lies in the absence of a hierarchical and quantifiable standard for determining users' contributions under the current Chinese legal framework. Courts therefore have to rely on judicial discretion to make case-by-case determinations. This demonstrates that medium-input scenarios are precisely where a hierarchical system for determining human substantial contribution is most necessary. Courts cannot simply adopt an all-or-nothing approach; instead, they should conduct a comprehensive assessment from three dimensions: the degree of users' intellectual input, their ability to control the creative process, and the individualized differences reflected in the final expression, thereby promoting greater consistency in judicial adjudication.

C. HIGH USER INPUT: DEEP CREATIVE CONTROL WITH AI SERVING MERELY AS AN AUXILIARY TOOL

High user input represents the form of human-AI collaborative creation in which human creative

dominance is strongest. In such cases, users possess complete and clear preliminary creative concepts, establish systematic and refined prompt frameworks according to their creative requirements, and continuously optimize the direction of creation through multiple rounds of parameter adjustment, iterative generation, and sample screening. At the same time, users substantially intervene in the entire content-production process by extensively restructuring, rewriting, reshaping details, and optimizing the style of the original AI-generated content. The overall conception, expressive logic, artistic style, and core content of the final product are ultimately dominated by the user's intention, while artificial intelligence merely performs the auxiliary functions of generation and material provision and no longer controls the content's expression.

China's First AI Text-to-Image Copyright Case. The plaintiff sought to create a close-up image of a young woman in a twilight photography style. The plaintiff selected a specific AI model, developed dozens of positive and negative prompts, repeatedly adjusted sampling steps, guidance coefficients, and model weights, and, after multiple rounds of generation, comparison, and screening, obtained the final image and publicly released it. The defendant removed the watermark and reproduced the image as an illustration for a self-media article. After examining the complete creative process, the court held that the plaintiff had continuously made individualized choices and selections concerning the subject matter, character image, lighting and atmosphere, and parameter settings, thereby demonstrating original intellectual input by a human being. The court accordingly recognized the image as a work of fine art and held the defendant liable for infringement.

With respect to cases involving this type of deep human-AI collaborative creation, domestic judicial practice has generally developed a relatively consistent affirmative position, broadly recognizing the status of the final product as a work and acknowledging that substantial user input may result in original expression satisfying the statutory requirements.

Nevertheless, existing judicial reasoning remains deficient. Even where protection is granted, courts rarely explain in detail which specific aspects of the user's creative labor constitute the basis for protection, and their reasoning concerning substantial contribution is insufficiently developed. In practice, disputes also frequently involve defenses based on standard-form terms adopted by platforms, under which platforms invoke user agreements to claim that all AI-generated outputs belong to the platforms,

thereby creating a conflict with users' claims to rights ownership. It follows that, in cases involving substantial user contribution, users should be recognized as copyright holders, while judicial decisions should strengthen their reasoning concerning human substantial contribution and should not deprive actual creators of their rights directly on the basis of standard-form contracts.

D. OVERALL SYNTHESIS OF THE CASES

A review of the above cases demonstrates that Chinese judicial practice has gradually moved beyond the stage of completely excluding AIGC content from copyright protection, but has not yet established a stable analytical framework. Judicial reasoning frequently oscillates between the nature of the technological tool and the human contribution. Some cases begin with the AI technology itself and reach a negative determination, while others focus directly on the visual effect of the final product, without conducting a detailed analysis of the user's participation throughout the creative process. Treating human substantial contribution as the core standard of examination can provide a unified reasoning pathway for cases involving different levels of user input, reduce divergent adjudication in similar cases, and simultaneously address disputes over rights ownership arising from standard-form terms adopted by platforms.

EXTRATERRITORIAL AIGC COPYRIGHT REGIMES AND INSIGHTS FOR LOCALIZATION

A. RELEVANT U.S. REGIMES AND JUDICIAL PRACTICE

1. Overview of the Regime and Adjudicative Practice

The United States Copyright Office adheres to the fundamental position that copyright protection is limited to human authorship and does not register content generated entirely by machines. With respect to outputs produced through human–AI collaboration, the Copyright Office focuses its examination on whether humans have provided sufficient creative input. Only where human contribution reaches the threshold of originality can copyright protection be obtained. U.S. judicial practice likewise rejects machine authorship and places the focus of examination on the creative contributions of human participants, but has not established quantitative and hierarchical criteria for determination, leaving considerable room for case-specific assessment.

2. Implications for China

The U.S. position maintaining human authorship is consistent with the jurisprudential foundation of China's copyright law and confirms that treating

human substantial contribution as the core of examination has a comparative-law basis. However, the United States lacks operational hierarchical evaluation standards, which also suggests that China needs to construct a three-dimensional framework for determining substantial contribution so as to avoid leaving the matter entirely to case-specific judicial discretion.

B. THE EU ARTIFICIAL INTELLIGENCE ACT AND COPYRIGHT RULES

1. Overview of the Regime

The EU Artificial Intelligence Act and copyright-related directives do not recognize AI itself as an author. Their regulatory focus is primarily placed on transparency obligations. They require generative AI models to fulfill corresponding obligations when processing copyright-protected works in the course of model training and require AI systems to label generated content. With respect to the copyrightability of content generated through human–AI collaboration, the EU has not established a uniform substantive determination standard. Instead, the matter remains subject to the domestic copyright laws of Member States, which determine copyrightability on the basis of the contribution made by human creators.

2. Implications for China

The EU regulatory framework places greater emphasis on source-oriented governance, namely, compliance in the use of training data and the labeling of AI-generated content, but does not resolve the substantive issue of how to evaluate user contributions. For China, the EU's approach to transparency governance may be adopted as a reference, while at the substantive level, the legal assessment of user conduct must still rely on a standard of substantial contribution.

C. JAPAN'S COPYRIGHT POLICY ON GENERATIVE AI

1. Overview of the Regime

Japan's Copyright Act likewise takes human creation as a prerequisite for the existence of a work. The generative AI copyright guidelines issued by the Agency for Cultural Affairs provide that whether AI-generated content may constitute a work depends on whether human participation satisfies the requirement of originality. Where human conceptualization, selection, processing, or other conduct results in creative expression, the content may be recognized as a work; purely machine-generated output is not protected. The policy documents focus on distinguishing different degrees of human participation, but likewise fail to provide detailed operational dimensions for determination.

2. Implications for China

Japan's policy approach is highly consistent with the approach adopted in this article of "placing human contribution at the center" and recognizes that the scope of protection may be differentiated according to the degree of human participation. Its corresponding deficiency is likewise the absence of refined examination dimensions, which further demonstrates the practical institutional value of establishing three dimensions-intellectual input, process control, and individualized expression.

D. COMPREHENSIVE IMPLICATIONS OF EXTRATERRITORIAL REGIMES FOR LOCALIZATION

First, most jurisdictions adhere to the fundamental position that copyright protection is intended for human creation and do not recognize artificial intelligence as an author, thereby providing comparative-law support for the human substantial contribution standard proposed in this article.

Second, foreign jurisdictions generally recognize the need to distinguish among different degrees of human participation, but most provide only principle-based statements and lack operational hierarchical standards for determination. This constitutes precisely the area in which China's institutional framework may be further developed.

Third, certain extraterritorial rules focus primarily on source-oriented regulation, such as training data and AI-generated content labeling, and therefore cannot directly resolve the domestic problems encountered in Chinese judicial practice concerning how user contributions should be evaluated, how rights should be allocated, and how users should establish evidence for the protection of their rights. China should therefore proceed from its own judicial and industrial realities, take human substantial contribution as the core standard, absorb reasonable elements of extraterritorial experience, and construct a regulatory framework adapted to domestic circumstances.

PATHWAYS FOR AIGC COPYRIGHT - PROTECTION IMPROVEMENT UNDER THE SUBSTANTIAL - HUMAN-CONTRIBUTION STANDARD

A. JUDICIAL DIMENSION: REFINING HIERARCHICAL JUDICIAL STANDARDS FOR DETERMINING SUBSTANTIAL CONTRIBUTION

1. Formulation of Unified Substantive-Review Logic Centered on Human Contribution

Judicial authorities should completely abandon the traditional adjudicative approach of technological determinism and unify the focus of examination by removing the proportion of AI tool involvement and

the degree of algorithmic generation from the core scope of evaluation, while treating the user's human substantial contribution as the sole core criterion for determining copyrightability. Regardless of the degree of AI involvement, adjudication should be based on three dimensions-user intellectual input, process control, and individualized expression-in order to unify the scope of judicial discretion nationwide and eliminate divergent adjudication in similar cases.

B. ESTABLISHING A THREE-TIERED RULE FOR DETERMINING ORIGINALITY

In light of differences in users' actual creative conduct and the empirical research data, and taking into account the differentiated creative scenarios of ordinary users, self-media creators, and professional designers, a standardized three-tiered determination system should be established.

RESEARCH LIMITATIONS

A. LIMITATIONS IN THE SCOPE OF EMPIRICAL SAMPLE COVERAGE

1. Limitations of the Empirical Sample Coverage

The empirical sample in this study primarily consists of university students and ordinary self-media creators. Although it covers common civilian creative scenarios, its coverage of large-scale commercial design teams, institutionalized content-production entities, and scenarios involving large-scale commercial AIGC creation remains limited. Creative models, input structures, and the logic underlying disputes over rights ownership in commercial scenarios are more complex. Accordingly, the applicability of the conclusions of this study to highly commercialized and team-based collaborative creative scenarios remains subject to further refinement.

2. Insufficient Depth of Interdisciplinary Technical Analysis

This article takes normative legal analysis, empirical research, and case studies as its principal methodologies and focuses primarily on issues of legal determination and institutional governance. Its technical analysis of the iterative logic of large-model algorithms, machine autonomous generation technologies, and the underlying principles of technological traceability remains relatively limited. How legal rules can be further and more precisely adapted to the underlying logic of technology requires further interdisciplinary research integrating law and technology.

3. Insufficient Dynamic Coverage of Emerging Creative Scenarios

AIGC technologies are currently evolving at a rapid pace, with new scenarios continuously emerging,

including multi-person collaborative creation, cross-model secondary generation, autonomous multi-round AI iteration, and virtual digital content creation. This article primarily conducts its research on the basis of mainstream creative scenarios existing from 2023 to 2025, and therefore remains subject to certain limitations in anticipating and adapting to emerging and more complex forms of creative activity in the future.

B. PROSPECTS FOR FUTURE RESEARCH

1. Refining Differentiated Standards for Different Creative Scenarios

Future research may target specific scenarios such as commercial creation, team-based collaborative creation, secondary creation, and cross-platform generation, and develop scenario-specific and refined rules for determining substantial contribution, thereby further enhancing the precision and general applicability of the standard.

2. b. Deepening Research on Traceability Mechanisms Integrating Technology and Law

By incorporating the principles underlying artificial intelligence technologies, future research may further explore technological governance mechanisms such as automated evidence preservation by platforms, blockchain-based traceability, and AI-generated content watermarking, thereby constructing an integrated governance framework in which technology empowers legal protection and making copyright determination, evidence preservation, and rights traceability more intelligent and standardized.

3. c. Continuously Monitoring Extraterritorial Institutional Developments and Their Localization

Future research may continuously track the latest legislative and judicial developments in the United States, the European Union, and Japan, and, in light of China's industrial scale, user structure, and judicial characteristics, continuously optimize the localized AIGC copyright governance framework, thereby achieving a dynamic balance among technological innovation, industrial development, and the protection of creators' rights and interests.

4. d. Improving a Long-Term Governance Framework Based on Multi-Party Coordination

Subsequent research may further explore a long-term governance model integrating five dimensions: government regulation, judicial adjudication, industry self-regulation, platform compliance, and user compliance with the law. This would promote the transformation of AIGC copyright governance from ex post dispute resolution toward full-chain governance encompassing ex ante compliance, interim control, and ex post remedies.

CONCLUSION

The widespread adoption of AIGC has reshaped the traditional production model of content creation and posed new challenges to the traditional copyright system rooted in purely independent human creation. Technological iteration in itself does not undermine the legal system. What genuinely requires an institutional response is the recognition of the value of human creative labor under emerging forms of human-AI integrated creation. Since its inception, copyright law has consistently taken the protection of original intellectual achievements created by humans as its fundamental objective. The evolution of technological tools does not alter the underlying jurisprudential principle that copyright protects human creative labor.

By examining the institutional deficiencies and judicial disorder in the current determination of AIGC copyright, and by incorporating empirical data, domestic cases, and comparative research on extraterritorial regimes, this article establishes a copyright determination framework centered on human substantial contribution and constructs a three-dimensional examination standard comprising intellectual input, process control, and individualized expression. It thereby overcomes the formalistic misconception of traditional technological determinism and addresses the practical problems of inconsistent judicial standards, imbalanced rights allocation, and difficulties faced by users in enforcing their rights.

The determination logic centered on human substantial contribution not only preserves the institutional foundation of copyright law but also accommodates the emerging creative ecosystem in the AI era. It can effectively distinguish ordinary tool operation from creative intellectual labor and provide targeted protection for users' lawful creative rights and interests. At the same time, through the refinement of judicial adjudication rules, the balancing of rights and interests among multiple parties, the improvement of platform-based evidence preservation and governance, and the optimization of evidentiary and remedial mechanisms, substantive rules and procedural safeguards can be implemented in a coordinated manner, thereby constructing a localized copyright governance framework adapted to the creative scenarios of China's vast population of ordinary users.

In the future, as AIGC technologies continue to evolve and creative scenarios become increasingly diverse, the governance of AIGC copyright will remain subject to continuous and dynamic refinement. Judicial authorities, regulatory agencies,

platform operators, and creators should form a coordinated governance mechanism and, while adhering to the core principle of human creation, continuously improve the regulatory framework and balance industrial innovation with the protection of rights and interests. In doing so, they can promote the sound, healthy, and sustainable development of the AIGC industry, ensure that technological innovation serves human creative value, and advance the timely and sound evolution of the intellectual property system in the digital age.

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