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Intellectual Property Protection for Generative AI-Created Works: Challenges and Countermeasures in Administrative Penalty Discretionary Benchmarks

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Abstract: With the rapid advancement of generative artificial intelligence (AI) technology, the intellectual property protection of its creations has become a critical issue, wherein administrative penalty discretionary benchmarks play a pivotal role. Current benchmarks face challenges including ambiguous conceptual definitions, high subjectivity, lack of dynamic adaptability, and insufficient transparency. Drawing upon relevant legal principles and theories, this paper proposes countermeasures such as establishing clear formulation principles, enhancing scientific objectivity, strengthening dynamic adaptability, and improving transparency. These aim to refine administrative penalty discretion benchmarks, thereby providing robust support for the intellectual property protection of generative AI creations and promoting the healthy and orderly development of AI technology.

Keywords: Generative artificial intelligence, Intellectual property protection, Administrative penalties, Discretionary benchmarks



1. Introduction

Amidst the digital revolution, generative AI technologies such as OpenAI's GPT-4 are reshaping cultural, artistic, and technological innovation landscapes. The diverse creations generated by these models significantly expand the boundaries of human creativity. However, Kuang (2020) this technological revolution also raises prominent intellectual property protection issues. Without effective safeguards, investor and developer enthusiasm may be dampened, stifling creative output and hindering the AI industry's advancement.

Regarding rights attribution, generative AI creations involve multiple stakeholders—developers, users, investors—each with distinct roles and contributions. This complexity renders rights attribution ambiguous, presenting an urgent legal challenge. Existing intellectual property protection frameworks, designed for human creative activities, lack clear standards for assessing originality, determining rights attribution, and defining protection scopes for AI-generated works, frequently leading to disputes in judicial practice.

Administrative penalties, as a crucial means of intellectual property protection, rely on the reasonableness of their discretion benchmarks to regulate infringement effectively. However, current legal provisions contain gaps, making it difficult to determine the factors for discretion. Moreover, the rapid pace of technological development exacerbates the lag in these benchmarks, rendering them ill-suited to new circumstances.

Academic research in this field remains nascent: firstly, regarding rights attribution, scholars generally agree that multiple factors must be considered, yet diverge on specific benefit allocation—some advocate determining rights based on human contribution levels, while others seek a balance of interests through utilitarian perspectives; secondly, concerning the adaptability of existing protection models, scholars point to shortcomings in traditional systems and the need to explore new protective pathways; thirdly, concerning administrative penalty discretion benchmarks, while research has yielded some outcomes in fields such as taxation and food safety,



challenges including legal gaps and insufficient flexibility persist in the context of AI-generated works' intellectual property protection.

Existing research predominantly focuses on the overall framework of intellectual property protection or the applicability of specific legal provisions, with relatively scarce dedicated exploration of administrative penalty discretion benchmarks. There is a lack of in-depth, systematic analysis concerning their formulation, implementation, and adaptation to technological advancements. This gap constrains the effectiveness of legal practice and impedes the healthy development of artificial intelligence technology. Consequently, in-depth research into these discretion benchmarks is both urgently necessary and of significant practical value.

2. Characteristics of Generative AI-Created Works and Current Status of Intellectual Property Protection

2.1. Characteristics of Generative AI-Created Works

High Complexity and Diverse Variations: Chen (2023) The generation process involves intricate algorithms and massive data processing. Text generation models can produce multiple text types, while image generation models can create visual works with distinct styles. These creations share similarities with traditional human works yet exhibit fundamental differences.

Autonomous Creation with Data Dependency: Sun and Shen (2023) Works are autonomously generated through algorithms learning from extensive datasets. Deep learning algorithms master linguistic structures and semantic patterns to create content, though the degree of creative autonomy remains contentious. Moreover, the quality and diversity of input data significantly impact the output's calibre.

Simple Prompt-Driven Generation: Alhadeff et al. (2024) With only the simplest text prompt input, generative AI can generate new creative outputs based on the knowledge acquired from the creative content in training data.



Rapid Generation and Extensive Dissemination: Leveraging multi-source heterogeneous resources and autonomous knowledge construction capabilities, these systems can generate vast quantities of creative output within short timeframes. Li et al. (2024) Rapid dissemination via the internet facilitates knowledge transfer and cultural exchange while simultaneously increasing the likelihood of infringement and complicating its detection and control.

2.2. Challenges in Intellectual Property Protection for Generative AI-Created Works

Ambiguous Work Attributes: The core criterion of “originality” under copyright law proves difficult to apply to AI-generated works. Tang and Xie (2024) Their creation process lacks human subjective emotion and independent thought, yet may exhibit high similarity to human works in form, challenging traditional perceptions of work attributes and creating recognition difficulties. For instance, in a copyright infringement case heard by the Beijing Internet Court, determining the work attributes of AI-generated images required considering multiple complex factors.

Ambiguity in Rights Attribution: Under traditional copyright law, rights vest with the author or relevant entity. However, artificial intelligence lacks legal personhood, and the creative process involves multiple parties—programmers, developers, users—each contributing differently, rendering rights attribution exceptionally complex.

Challenges in Defining Protection Scope: Overly broad protection may stifle technological innovation and foster monopolies, while overly narrow protection fails to adequately safeguard creators’ interests. A balanced approach is required, weighing technological innovation, public interest, and creators’ rights.

3. The Role of Administrative Penalty Discretionary Benchmarks in Protecting Intellectual Property Rights of AI-Generated Works



3.1. Regulating Administrative Penalty Practices: Establishing a Rule-of-Law Enforcement Foundation

Anchoring Precise and Clear Enforcement Bases: Addressing the complex scenarios of AI-generated intellectual property infringement, these benchmarks provide detailed enforcement guidance. They clarify the legal elements of infringement, criteria for classifying circumstances, and penalty ranges, thereby preventing subjective interpretation and arbitrariness in enforcement. This enhances the legitimacy and fairness of administrative penalties, with China's Trademark Law and relevant judicial interpretations providing the legal foundation.

Ensuring Coherent and Steady Administrative Enforcement: Administrative liability serves to supplement and reinforce civil liability within the intellectual property protection framework, necessitating avoidance of premature or excessive recourse to criminal measures. Unified standards of discretion enable enforcement personnel across different regions and levels to apply consistent criteria when handling similar cases. This eliminates regional disparities and the influence of subjective judgment, prevents unfair enforcement, and strengthens public trust in administrative law enforcement. For instance, the Administrative Adjudication Case Handling Guidelines for Patent Infringement Disputes ensure uniformity in the enforcement standards applied to patent infringement cases.

3.2. Balancing Diverse Interests: Fostering Synergy Between Intellectual Property Protection and Innovation

Safeguarding Intellectual Property Owners' Rights: Reasonable discretion benchmarks enable precise targeting of infringements through penalties such as fines, confiscation of illicit gains, and orders to cease infringement. Feng (2006) This provides economic compensation to rights holders, exerts legal deterrence, and curbs the spread of infringement. China's Copyright Law and its implementing regulations offer robust protection for software copyrights and similar rights.



Supporting the Development Needs of the AI Industry: Aligned with the requirements of the New Generation Artificial Intelligence Development Plan, the formulation of discretion benchmarks should fully consider the unique characteristics and developmental needs of the AI industry. A reasonable penalty gradient should be established, with lenient measures applied to unintentional infringements or those with minimal impact. This approach balances punitive functions while affording enterprises sufficient space for rectification and innovation, thereby aligning with the innovation-driven development strategy.

4. Challenges of Administrative Penalty Discretionary Benchmarks in Protecting Intellectual Property Rights of Generative AI Creations

4.1. Ambiguity in Discretionary Benchmarks

Confusion over “Originality” Criteria. Traditional “originality” standards prove difficult to apply directly to AI-generated works. These creations, based on algorithmic and data processing, may exhibit formal novelty yet lack a core element of independent human creation. Consequently, practical assessments of originality lack uniform standards, creating uncertainty for administrative authorities in exercising penalty discretion.

Challenges from Cross-Domain Emerging Creative Forms. AI creations span cultural entertainment, healthcare, fintech, and other sectors. These novel forms integrate diverse technological and artistic elements, presenting unique intellectual property protection issues. Existing discretion benchmarks fail to adequately address sector-specific complexities, undermining the accuracy and effectiveness of penalties.

4.2. Subjectivity in Discretionary Benchmarks

“Arbitrary” Deviations in Enforcement Discretion. Enforcement officers must evaluate the artistic, economic, and social value of AI-generated works. However,



variations in cultural backgrounds, aesthetic perceptions, and professional expertise among officer's lead to divergent value assessments. This, in turn, impacts infringement determinations and penalty severity, resulting in arbitrary enforcement and unfair outcomes.

Imbalance in “Partisan” Interest Considerations. The AI industry involves multiple stakeholder groups that may influence the formulation of discretion benchmarks through lobbying. Local administrative bodies may also be swayed by local protectionism, treating minor infringements by domestic enterprises leniently while enforcing stricter penalties on foreign entities. This undermines fair market competition and erodes the impartiality and authority of intellectual property protection.

4.3. Lack of Dynamic Adaptability in Discretionary Benchmarks

Multiple Challenges from Rapid Development. The swift advancement of generative AI technologies has spawned novel infringement pathways, such as the misuse of image synthesis and voice cloning techniques. These infringements are highly covert, propagate rapidly, and cause widespread harm. However, existing discretionary benchmarks lag behind technological progress, struggling to incorporate these emerging forms of infringement and leaving enforcement without a clear basis. Concurrently, technological innovation challenges core intellectual property concepts, such as blurred author attribution and evolving dissemination models undermining “distribution rights” and “communication rights”, rendering the benchmarks ill-suited to contemporary realities.

Adapting to the “Fluidity” of Legal Policies. Intellectual property laws and regulations undergo continuous revision and refinement. However, legal updates lag behind technological advancements, creating legal application dilemmas for administrative enforcement bodies. Penalties imposed based on outdated discretion benchmarks may provoke disputes. Concurrently, shifts in government policy priorities influence the focus of intellectual property protection. Failure to promptly adjust discretion benchmarks risks undermining the accurate implementation of policy intent.



4.4. Transparency Issues in Discretion Benchmarks

The Secrecy of “Closed” Discretionary Processes. Wang and Weng (2023) Certain administrative bodies employ unpublished implicit rules when formulating and applying discretion benchmarks, such as considering factors not explicitly listed—like an infringing enterprise’s market share or industry influence. Parties remain unaware of the true basis for discretion, making it difficult to predict consequences of their actions or exercise effective oversight. This undermines the right to know, fosters rent-seeking behavior, and erodes the fairness and credibility of administrative enforcement.

The Hidden Risks of “Complex” Algorithmic Decision-Making. When algorithms assist in discretionary decisions, the decision-making process becomes a “black box” for parties and the public. The intricate model structures and data processing logic are difficult for non-specialists to comprehend. Li (2022) Parties cannot ascertain the specific grounds for infringement determinations, making effective challenges challenging. Furthermore, algorithms may exhibit bias and discrimination due to training data skew, contravening the principle of fairness.

5. Strategies for Refining Administrative Penalty Discretionary Benchmarks in Protecting Intellectual Property Rights of Generative AI Creations

5.1. Establishing Principles for Creating Discretionary Benchmarks

Uphold the Principles of Legal Supremacy and Reservation. The formulation of discretionary benchmarks must align with higher-level laws such as the Copyright Law, Patent Law, and Trademark Law, avoiding conflicts. Conflicting provisions should be promptly revised or repealed. Within the statutory framework, administrative authorities should retain appropriate discretion, defining reasonable margins to prevent arbitrary enforcement arising from excessive latitude, thereby ensuring lawful penalties adaptable to complex realities.



Emphasizing Fairness and Rationality. Parties must be treated equitably regardless of identity, status, location, or enterprise scale. Identical or similar penalties should apply to infringements of comparable nature and severity, safeguarding fair market competition. Penalties shall be reasonably calibrated by comprehensively weighing factors including the nature, circumstances, consequences, subjective fault, and public interest implications of the infringement. Minor, unintentional infringements shall incur lighter sanctions such as warnings or corrective orders, while malicious, large-scale infringements shall face severe penalties including substantial fines and confiscation of illicit gains, thereby balancing deterrence with industrial development needs.

5.2. Enhancing the Scientific Fairness of Discretionary Benchmarks

Introduce Expert Deliberation and Technical Assessment Mechanisms. Establish a multi-disciplinary team comprising intellectual property legal experts, artificial intelligence technology specialists, industry representatives, and economists. This team shall participate in the initial formulation of key content to ensure the scientific and reasonable definition of concepts, standards for infringement determination, and penalty scales. Conduct periodic evaluations during implementation, refining the discretion benchmarks in light of technological advancements, legal policy changes, and emerging practical issues. Establish an expert consultation mechanism to provide professional opinions for complex and challenging cases, safeguarding the accuracy and fairness of discretion.

Establish a Case Guidance System. Extensively collect and collate intellectual property infringement cases involving AI-generated works across diverse types, circumstances, and technical domains. Document case facts, points of contention, basis for discretion, and outcomes in detail. Organize expert analysis of representative cases to distil universally applicable rules and principles. Enforcement personnel may refer to these precedents when determining discretion standards, enhancing consistency and accuracy. Regularly update the case repository with new exemplary cases to reflect the latest developments and practical experience in the field.

5.3. Enhancing the Dynamic Adaptability of Discretionary



Benchmarks

Establish a Mechanism for Periodic Assessment and Updating. Recognize the rapid evolution of technology and legal policies, adopt a reasonable assessment cycle of one or two years. Closely monitor technological innovations, market dynamics, legal amendments, and shifts in judicial practice within the AI sector, gathering relevant information. Revise the discretion benchmarks promptly based on assessment outcomes. The revision process should extensively solicit feedback from AI enterprises, creators, experts, industry associations, and the public to ensure representation of all stakeholders' concerns. Revised benchmarks shall be promptly published and accompanied by explanatory materials to enhance transparency and credibility.

Deepen Collaboration with Industry Associations and Research Institutions. Establish an information-sharing platform enabling administrative bodies to access industry developments, technological innovations, intellectual property issues, and technological trends to support benchmark adjustments. Jointly undertake intellectual property protection research projects exploring the relationship between technology and legal systems, providing theoretical foundations for benchmark refinement. Conduct training for enforcement personnel to enhance their understanding and application of AI technology and intellectual property law, thereby improving the quality and efficiency of administrative enforcement.

5.4. Enhancing Transparency of Discretionary Benchmarks

Publicize the Formulation Process and Details of Discretionary Benchmarks. Fully disclose all stages—project initiation, drafting, consultation, deliberation, and publication—to the public. Publish drafts for public comment during the drafting phase, disclose relevant information during deliberation, and release the formal text alongside an explanation of adopted opinions upon publication. Employ plain language to provide detailed explanations of specialized terminology, legal concepts, infringement criteria, and penalty measures within the benchmarks. Enhance public comprehension and practical applicability through examples, interpretative manuals, or guidance documents.



Explaining Algorithmic Decision-Making Mechanisms. Where algorithms assist in discretionary decisions, disclose to parties and the public the fundamental principles, primary data sources, model architecture, computational methods, and parameter settings of the algorithm. Clarify data collection methods, scope, and quality control measures. Following algorithmic discretionary decisions, provide detailed explanations to affected parties, clarifying the weighting and influence of each factor. Establish robust appeal channels with clearly defined eligibility criteria, procedures, and timeframes. Where necessary, engage third-party professional bodies for assessment to safeguard legitimate rights and interests, thereby enhancing transparency and credibility in discretionary decision-making.

6. Conclusion

The intellectual property protection of generative artificial intelligence creations is complex and dynamically evolving, with administrative penalty discretion benchmarks playing a pivotal role. Currently, these benchmarks face challenges including ambiguity, subjectivity, lack of dynamic adaptability, and insufficient transparency. However, through measures such as clarifying formulation criteria, enhancing scientific fairness, strengthening dynamic adaptability, and improving transparency, these benchmarks can be progressively refined. This will better align them with the developmental demands of artificial intelligence technology, providing robust institutional safeguards for intellectual property protection.

This approach not only safeguards the legitimate rights and interests of intellectual property owners and fosters a fair competitive market environment but also propels the sustained, lawful, and orderly innovation and development of artificial intelligence technology. It facilitates a virtuous cycle between technological advancement and legal frameworks. Moving forward, continuous attention must be paid to technological and societal shifts, with ongoing refinement of the penalty guidelines to address emerging issues and challenges. This will cultivate a sound legal environment conducive to the flourishing innovation of the artificial intelligence industry.



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Works Cited

- Alhadeff, J., Cuene, C., & Real, D. M. (2024). Limits of algorithmic fair use. *Washington Journal of Law, Technology & Arts*, 19(1), 1–53.
- Beijing Internet Court. (2023). *Li v. Liu* (Civil Judgment No. 11279 of 2023, First Instance, Civil Division of Beijing Internet Court). China Judgments Online. <https://wenshu.court.gov.cn/>
- Chen, B. (2023). Risk challenges brought by the innovative development of general artificial intelligence and their legal response [In Chinese]. *Zhishi Chanquan* [Intellectual Property], (8), 53–73.
- Feng, X. Q. (2006). *The interest balance theory of intellectual property law* [In Chinese]. China University of Political Science and Law Press.
- Kuang, J. (2020). On the copyright law protection of AI creations [In Chinese]. *Zhongguo Chuban* [China Publishing Journal], (18), 63–67.
- Li, J. Y. (2022). On the legal control of automated administrative punishment [In Chinese] [Doctoral dissertation, Nanchang University].
- Li, S. Y., Li, X. Q., Ding, X. Y., Li, W., & Zhang, Y. (2024). Network ideological risks and prevention of Sora-like generative artificial intelligence [In Chinese]. *Xinan Minzu Daxue Xuebao (Renwen Shehui Kexue Ban)* [Journal of Southwest Minzu University (Humanities and Social Sciences Edition)], 45(8), 198–206.
- Sun, L., & Shen, C. Y. (2023). Empowerment and reconstruction: New paths of animation creation under the generative artificial intelligence wave [In Chinese]. *Dianying Pingjie* [Movie Review], (20), 6–11.
- Tang, Z. Y., & Xie, Y. J. (2024). Copyright infringement risks and governance of data use in generative artificial intelligence [In Chinese]. *Zhongguo Chuban* [China Publishing Journal], (21), 56–61.
- Wang, Q. B., & Weng, M. J. (2023). Practical hidden worries and approach adjustment of intelligent administrative discretion in administrative punishment [In Chinese]. *Beijing Xingzheng Xueyuan Xuebao* [Journal of Beijing Administrative College], (3), 98–109.