

Determination of Legal Liability for Infringement Caused by Generative AI-Generated Content and Improvement of Supervision

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Abstract: With the rise of generative artificial intelligence represented by ChatGPT, DeepSeek, and other tools, the modes for creation and dissemination of publications, short video clips, musical works, and other content have been transformed. While bringing convenience to the public, such technologies also exert impacts on the traditional intellectual property rights legal system. Therefore, it is urgent to construct an intellectual property rights legal system adapted to the development of generative artificial intelligence, which is of great significance for boosting the development of new media, publishing, and film and television industries. This paper analyzes the jurisprudential basis for defining the legal liability of generative artificial intelligence, elaborates on the necessity of intellectual property rights legal protection for generative artificial intelligence, and explores optimized supervision paths for content infringement cases triggered by generative AI. Elaborated from four dimensions: promoting the improvement of laws in specific fields, establishing classified liability determination rules, advancing the optimization and reconstruction of the legal regulation system, and strengthening popular science publicity of intellectual property rights, this paper provides references for improving intellectual property rights protection for content generated by generative artificial intelligence.

Keywords: Generative artificial intelligence; Content infringement; Intellectual property rights protection; Liability determination; Improvement path

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1. Introduction

In July 2023, seven government departments, including the Cyberspace Administration of China, issued the *Interim Measures for the Administration of Generative-Artificial-Intelligence Services* (hereinafter referred to as the *Measures*). This marks a key step in China's construction of a legal system related to generative AI technologies and promotes the "synchronized development" of technological innovation and legal regulation. Article 123 of the *Civil Code of the People's Republic of China* explicitly includes "data and algorithms"

within the scope of intellectual property right objects. Nevertheless, according to Article 13 of the *Civil Code*, natural persons possess civil law capacity, while artificial intelligence does not yet have independent legal personality. Against such a backdrop, the determination of legal liability for content infringement caused by generative artificial intelligence faces numerous dilemmas, and relevant laws and regulations call for urgent improvement. Hence, the jurisprudence circle shall attach importance to intellectual property rights protection issues triggered by generative AI, gradually improve the existing legal system, clarify legal determination criteria for content infringement, and perfect relevant legal provisions, so as to safeguard citizens' legitimate rights and interests in accordance with law and lay a sound foundation for the development of various industries.

2. Jurisprudential basis for defining legal liability for content infringement of generative artificial intelligence

Generative artificial intelligence can simulate human thinking processes, automatically extract keywords, retrieve relevant online resources, and generate logically coherent content to satisfy the demands of diverse user groups. In the "Internet Plus" era, generative artificial intelligence has penetrated all walks of life and spawned new business models. However, amid its rapid expansion, a series of content infringement problems related to generative AI have gradually emerged. Under such circumstances, it is urgent to clarify the characteristics of generative AI content infringement and the applicable legal provisions.

The determination of legal liability for generative AI content infringement shall be carried out from two dimensions: the technical level and the legal value level. From the technical perspective, generative AI content covers links including data collection, model training, content generation, and multi-scenario application, and involves multiple stakeholders such as data uploaders, model developers, service providers, and end-users, which increases the complexity of liability determination^[1]. With the participation of multiple subjects, the identification of generative AI content infringement shall focus not merely on the infringing act of an individual subject, but also on diverse subjects across the whole industrial chain, so as to divide infringement liabilities on a well-grounded basis. From the legal value perspective, the determination of generative AI content infringement shall strike a balance between demands for technological innovation and risk prevention and control. It shall avoid excessive intervention in the development of generative AI technologies, while strengthening supervision over such technologies to prevent abuse of generative AI from endangering citizens' privacy and violating intellectual property rights of individuals and enterprises. Therefore, the definition of legal liability for generative AI content infringement shall follow the principle of matching liable subjects with risk prevention and control requirements^[2].

3. Necessity of intellectual property rights legal protection for generative artificial intelligence

3.1. Requirement for coping with risks arising from unbalanced technological development

By means of intelligent algorithms and deep learning technologies, generative AI technologies collect and screen massive internet data, and automatically generate new texts, pictures, videos, and other content according to user demands. Nevertheless, existing laws and regulations on intellectual property rights

protection can hardly define ownership of rights for content produced by generative AI, and fail to protect original creators' intellectual property rights, which virtually hinders the development of cultural industries. Hence, the jurisprudence circle shall promote the improvement of laws and regulations concerning intellectual property rights protection for generative AI content, safeguard original creators' intellectual property rights, stimulate their enthusiasm for creation, and further coordinate the relationships among technological innovation, industrial development and intellectual property rights protection ^[3].

3.2. Development and governance demands for emerging industrial chains

Under existing laws, the division of rights and obligations for intellectual property related to content generated by generative artificial intelligence remains ambiguous, which virtually undermines the sound development of the whole industrial chain. For instance, generative AI technologies can produce songs, game code, paintings, and short video clips in response to user requirements, yet data sources are not indicated. Ownership of rights can hardly be clarified, which tends to infringe intellectual property rights of original data creators and adversely affects subsequent transactions ^[4]. To boost the sound development of industrial chains, the state shall promptly perfect laws and regulations on intellectual property rights protection for generative AI-generated content, clarify rights of each subject as well as criteria for content infringement identification and punishment, guarantee legitimate interests of all stakeholders, and provide safeguards for the development of emerging industries.

3.3. Objective requirement for safeguarding public interests of society

Generative artificial intelligence is a double-edged sword. While bringing convenience to economic development and people's work and life, it also gives rise to public risks including dissemination of false information, cultural homogenization and knowledge monopolies, threatening social security and public interests of society. Once key data and advanced models of the AI industry are controlled by a small number of enterprises, intellectual property barriers are likely to come into being. Other enterprises and research institutions have to pay high fees to obtain core technologies, which virtually raises enterprises' costs for applying AI technologies and threatens the survival of small-and-medium-sized enterprises. Accordingly, the state shall gradually improve intellectual property rights-related laws and regulations, build an intellectual property rights protection mechanism covering disclosure of data sources, reservation of public domain works and exception mechanisms, provide services for technology application by various enterprises, government departments and scientific research institutions, and facilitate high-quality socio-economic development ^[5].

4. Optimized supervision paths for defining the boundaries of legal liability for generative AI content infringement

4.1. Promote improvement of laws in specific fields

Judicial organs shall push forward the construction of intellectual property rights laws in the generative AI field, perfect relevant intellectual property rights laws and regulations, and provide guidance for determining legal liability for generative AI content infringement. First, clarify ownership of rights for works created by generative artificial intelligence ^[6]. Content generated by generative AI via programs and algorithms features strong anthropomorphic attributes, which gradually blur the dividing line between human creative

thinking and program algorithms, making it difficult to identify the creator. For example, users may adopt generative AI technologies to write martial arts novels imitating Jin Yong's writing style, yet they shall explicitly indicate reference to Jin Yong's works so as to avoid infringement risks. Second, judicial organs may attempt to set up intellectual property rights arbitration institutions composed of judges and lawyers with rich experience in handling intellectual property rights cases, to arbitrate intellectual property rights disputes triggered by generative AI and accelerate case-hearing procedures ^[7]. Third, clarify contractual confidentiality obligations for generative artificial intelligence. Multiple subjects are involved in the development, application, and operation of generative AI content, which may easily touch upon trade secrets. Therefore, enterprises shall define the scope of use, confidentiality measures, and liabilities for breach of contract in generative AI-related cooperation to better constrain each party's conduct and prevent leakage of trade secrets ^[8].

4.2. Establish classified liability determination rules

Judicial organs shall clarify liabilities of generative AI service providers, require them to deliver technical security guarantees for users to avoid damage to users' interests caused by technical defects, and specify their compensation liabilities ^[9]. For general technical risks, judicial organs may apply the fault-based principle by analogy and impose sanctions against service providers for breach-of-contract acts. For generative AI service providers in public security-related fields such as medical diagnosis and government affairs data, judicial organs may try to introduce strict liability or "elevated duty-of-care standards." If users generate illegal content with generative artificial intelligence, they shall bear direct tort liability. If users merely adopt generative AI technologies for auxiliary creation without interfering in the generation process, they shall only undertake the duty of rational review over generated content. In addition, judicial organs shall also clarify the liabilities of platform operators ^[10]. If an operating platform detects violating or infringing acts yet fails to delete violating and infringing contents in a timely manner, it shall bear joint and several liability for the expanded portion of damages. Judicial organs may attempt to establish a hierarchical review mechanism to implement real-time supervision over high-risk contents such as medical diagnosis and public security, automatically detect and intercept violating contents, and explore applying strict liability to define platform operators' liabilities. Such measures can not only terminate infringing acts in a timely manner, but also purify the online environment ^[11].

4.3. Advance the optimization and reconstruction of the legal regulation system

China's fundamental legal framework for artificial intelligence-related fields calls for further improvement, and the decentralized supervision system can hardly realize effective collaborative governance or efficiently handle legal disputes concerning content generated by generative artificial intelligence. First, the government shall build a multi-subject collaborative governance mechanism, clarify the rights and obligations of multiple stakeholders including the government, judicial organs, enterprises, and individuals in generative AI-driven creation, accept public supervision, perfect laws and regulations concerning public security data and citizens' privacy protection, and gradually form a multi-subject collaborative governance model featuring "government leadership, market self-discipline and social supervision" ^[12]. Second, proceeding from the development demands of the digital economy, judicial organs shall promulgate programmatic laws for intellectual property rights protection of AI-generated works. On the one hand, actively participate in global legislative

conferences on artificial intelligence, draw on relevant laws and regulations of developed countries, improve China's governance system, and enhance China's discourse power in the field of AI legislation. On the other hand, judicial organs shall formulate detailed rules for determining generative AI content infringement, lay down general rules and infringement identification criteria for generative artificial intelligence, and reserve interfaces for data collection, model training, content generation and multi-scenario application, so as to boost the development of relevant industries^[13].

4.4. Strengthen popular science publicity for intellectual property rights

Courts and law firms shall strengthen intellectual property rights popular science publicity, publicize the *Copyright Law of the People's Republic of China* and the *Interim Measures for the Administration of Generative-Artificial-Intelligence Services* via online and offline channels, and enhance citizens' awareness of intellectual property rights protection. First, law firms and courts shall clarify ownership rules for AI-generated content. Artificial intelligence itself does not qualify as a copyright subject. Only when users integrate personalized prompts and independently design plots in AI-assisted creation to produce original intellectual achievements can they enjoy copyright. Contents automatically generated merely by AI technologies without users' creative input shall not be protected by copyright^[14]. Second, judicial organs shall draw a clear dividing line between infringement red lines and lawful use boundaries. For instance, enterprises shall not arbitrarily crawl texts, pictures, film and television works of others without authorization during large model training. Data that has been legally disclosed without explicit licensing restrictions may be adopted for non-commercial research within a reasonable scope, yet others' works shall not be directly copied or reproduced. Users shall take the initiative to mark contents as "AI-generated" when releasing them so as to avoid disputes. Online platforms shall strengthen supervision over AI-generated works. Once violating content or complaints concerning users' work infringement are detected, relevant works shall be deleted in a timely manner; otherwise, the platform shall bear joint-and-several liability for expanded damages. Infringers shall bear civil liabilities; those with serious circumstances shall be subject to criminal liabilities. Finally, judicial organs shall diversify popular science forms and carry out targeted publicity for different groups. For enterprises, clarify self-inspection mechanisms for AI-produced content, infringement red lines, and lawful-use boundaries. For students and self-media users, disseminate intellectual property rights protection knowledge via new media platforms such as Douyin and Weibo. Urge users to mark works prominently as "AI-generated" when disseminating AI-produced works, and preserve prompts and creation process records as evidence for rights confirmation^[15].

5. Conclusion

To sum up, while releasing technological dividends, the wide application of generative artificial intelligence has also triggered a series of legal challenges, including questionable compliance of training data, ambiguous ownership of generated content, and unclear distribution of infringement liabilities. By analyzing the jurisprudential basis and the necessity of protection for generative AI content infringement, this paper systematically puts forward concrete paths for supervision optimization from four dimensions: improvement of laws in specific fields, classified liability determination rules, reconstruction of the legal regulation system, and intellectual property rights popular science publicity. In the future, formulating a

special *Artificial-Intelligence Law*, unifying criteria for determining infringement liabilities, and actively participating in global rule-making constitute core paths for realizing effective governance. Only by striking a dynamic balance between encouraging technological innovation and protecting legitimate rights and interests can people promote the sound and orderly development of the artificial intelligence industry and ensure that technological advances truly enhance social well-being.

Disclosure statement

The author declares no conflict of interest.

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