



Study on the Legal Status and Responsibilities of Providers of Generative Artificial Intelligence Technology

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Abstract. The continuous advancement of generative artificial intelligence challenges the existing infringement governance model centred on service providers. Service providers, technical enablers, and content users collectively form the generative AI industry ecosystem, with each entity potentially inducing infringement risks. Restricting infringement governance solely to service providers and content users obscures the complexity of practical issues and hinders effective governance of generative AI infringements. Technical enablers, as potential infringing parties within the generative AI ecosystem, should be held liable for infringement under either general tort liability or product liability principles.

Keywords: Generative artificial intelligence; Technology providers; Tort liability

1 Introduction

Generative artificial intelligence has unleashed society's innovative potential, yet it also presents risks and challenges, raising questions of legal liability.[1] In the world's first AIGC platform infringement case—Xinchuanghua v. a Technology Company—generative AI infringed on Tsuburaya Productions' copyright over Ultraman. Here, the court found the service provider, the Technology Company, liable for infringement, ordering cessation of the infringement and compensation for damages. Regarding the plaintiff's request to remove materials from the training dataset, the defendant argued that it was not the service provider. The disappearance of technical providers in this case reflects the limitations of governance mechanisms for AI-generated content infringement.

2 The Particularities of Generative Artificial Intelligence Behaviour

China's governance of AI-related infringements adopts a subject-based governance paradigm, progressively unfolding around the delineation of the primary responsibilities

of algorithmic entities.[2] Generative AI primarily involves three entities: technical enablers, service providers, and content users, each of which bears distinct infringement risks. Current content governance for generative AI infringements primarily targets service providers, exhibiting characteristics of fragmented regulation. However, service providers' control over infringing content is diminishing, rendering the governance of infringement rules centred on them ineffective.

2.1 The Increasing Complexity of Behavioural Agents

As the business models of generative artificial intelligence continue to evolve, the scope of infringement mitigation measures available to service providers is progressively narrowing. Service providers are progressively separating from technical providers. In the early stages of generative AI development, service providers were also the technical providers. Should a service provider infringe, they could swiftly take action to remedy the infringement by removing infringing material from the training model. However, generative AI models are transitioning from specialised to general-purpose models. This signifies that multimodal large models, exemplified by the GPT series, demonstrate the potential to become a new type of infrastructure [3] serving as the foundational logic for diverse application scenarios. Technical providers and service providers have become distinct entities: technical providers supply the underlying algorithmic models, while service providers build application scenarios on top of these foundational models. Consequently, when generative AI-generated content triggers infringement disputes, service providers lack the capacity to modify the underlying algorithmic models and thus cannot fully cease infringing activities. The entities liable for generative AI infringements have shifted from solely the service provider to encompass both the service provider and the technical supporter.

2.2 Intelligent Infringement

The sophistication of infringing activities is reflected in generative AI's significantly enhanced ability to circumvent literal replication, thereby increasing the difficulty for service providers to identify infringing content. The text generation of ChatGPT models does not involve directly searching a corpus for matching information before outputting it. Instead, it leverages ChatGPT's real-time learning capabilities to continuously predict the next word based on preceding text. This means the output is not a direct replication of corpus content but rather a rephrasing.[4] When conversing with ChatGPT, its responses are not pasted from existing texts but rather rearranged combinations of relevant content. This approach closely resembles human thought and expression.[5] The enhanced generative capabilities of AI systems make infringement harder to identify and curb. Service providers currently employ measures such as halting generation, ceasing transmission, and removal to address infringements. These actions rely on accurate identification of infringing content, yet the increasing sophistication of infringing practices significantly impedes service providers' ability to halt such activities.

3 The Legal Status of Providers for Generative Artificial Intelligence Technology

Given that current Chinese legislation does not confer legal personality upon artificial intelligence entities, this paper proceeds on this premise, focusing liability on the providers of generative artificial intelligence technology. To clarify their tortious liability, it is first necessary to establish the legal status of such providers.

3.1 Providers of Generative Artificial Intelligence Technology are the Principal Agents

The application of generative artificial intelligence involves at least four categories of entities: technical providers, service providers, users, and recipients. Among these, recipients—as the intended audience for content generated by users—typically assume the role of victims in cases of infringement involving generated content. Consequently, they bear no corresponding obligations under legal regulation. Therefore, when regulating generative artificial intelligence, it is essential to clearly distinguish between three categories of obligated parties: technical providers, service providers, and users.

The concept of technical providers was first defined in Article 23(6) of the 2022 Regulations on the Administration of Deep Synthesis for Internet Information Services as organizations or individuals providing technical support for deep synthesis services. These regulations impose regulatory requirements on them, highlighting their critical role in the generative AI value chain. As entities developing generative AI models, technical providers may open-source and publish their models on websites for downstream integration and utilization in practice.

3.2 Obligations Undertaken by Technical Providers

Compliance and Disclosure Obligations Regarding the Source of Pre-trained Data. Technical providers provide pre-trained models, while service providers fine-tune these models to create customised, smaller models.[6] Technical providers are not required to guarantee the authenticity or accuracy of data sources, but must ensure the compliance of pre-training data sources and disclose relevant details. Such disclosure allows websites to independently take legal action if they believe their data was unlawfully obtained via web scraping, at a far lower cost than official data reviews. Moreover, the capabilities of enforcement bodies are questionable; their technical expertise and computational power may fall short of those they regulate, particularly when compared to large digital enterprises.[7]

The Obligation to Take Measures to Avoid Content that Contravenes Social Ethics and Morality or is Discriminatory in Nature. Requiring foundational model developers to implement exhaustive risk mitigation measures prior to deployment in specific use cases would impose excessive and inefficient compliance obligations.[8] Conversely, requiring service providers and AI users to implement risk control measures

may be unfeasible due to limited resources. Since preventing generative AI from producing harmful content is nearly technically impossible, risk management should shift from technical regulation to controlling the application of harmful information. However, exceptions exist: socially unethical or discriminatory content should be regulated at the generation stage, not just the application stage, as such harmful content itself can harm users.

Research indicates that content produced by generative AI may ethically manipulate humans in ways imperceptible to them, thereby influencing societal ethical standards.[9] Pursuant to Article 4(1) of the Interim Measures for Administration, Technical Providers must implement technical measures to eliminate such content at its source. This aligns with China's requirements for ethical governance of science and technology, which emphasise strengthening source governance, prioritising prevention, and integrating ethical standards throughout the entire process of scientific research, technological development, and other scientific activities.[10]

4 Determination of Liability for Infringement by Proponents of Generative Artificial Intelligence Technology

The Interim Measures for the Administration of Generative Artificial Intelligence Services do not stipulate the duty of care or liability for infringement of Technical Providers. In practice, there are numerous approaches to determining the liability for infringement of Technical Providers. This article primarily analyses the matter from the perspectives of product liability and general tort liability.

4.1 Analytical Approach to Product Liability

Whether content generated by generative artificial intelligence can be subject to product liability remains unresolved under current legislation. In practice, its applicability hinges on judicial interpretation of this matter. This paper endeavours to analyse whether the attribution of liability for generative AI infringements can be analogously applied to product liability through the following aspects.

Generative Artificial Intelligence Systems are Services. The provisions concerning product liability in China's Civil Code and Product Quality Law are structured around the concept of 'product'. The object of product liability lies in the product itself, which stands in opposition to the concept of service. Whether generative artificial intelligence constitutes a product or a service represents a fundamental threshold issue determining its applicability under product liability.

Generative AI belongs to the category of software. Chinese judicial practice has not explicitly defined whether software constitutes a product, while US practice treats mass-marketed software as a product and custom software for specific clients as a service. Generative AI is provided with free basic and paid advanced features. Classifying

it differentially as product or service would confuse remedies and increase victims' burden of proof, undermining rights protection. Moreover, generative AI provides continuous, personalized services to users despite not being developed for specific individuals. China's Interim Measures for the Administration of Generative Artificial Intelligence Services explicitly defines it as a service. Consequently, under product liability definitions and current legal provisions, generative AI systems should be classified as services.

The Liability of Technical Providers under Product Liability. Article 1203 of the Civil Code stipulates: Where a product defect causes damage to another person, the injured party may seek compensation from either the manufacturer or the seller of the product. Where the defect is attributable to the manufacturer, the seller shall be entitled to seek recourse from the manufacturer after making compensation. Where the defect arises from the seller's fault, the manufacturer shall be entitled to seek recourse from the seller after making compensation. Taking the case of *Xinchuanghua v. A Technology Company* as an example, the plaintiff *Xinchuanghua* sought compensation from the seller, the technology company, for damages arising from copyright infringement caused by model-generated content. Since copyright infringement stems from infringing training materials input by the technical supporter, the service provider may seek indemnification from this third party. This effectively establishes the technical supporter's fault-based liability for training-phase infringements, entitling the service provider to recourse. Purely technical defect cases are relatively rare in generative AI content generation.

The application of product liability in generative AI has lost its foundation. The ultimate outcome remains rooted in the fault principle, while additionally imposing liability upon the service provider. Technical providers cannot be held strictly liable for infringement; liability should adhere to the fault principle, following the standard analytical framework for general tort liability.

4.2 Analytical Approach to General Tort Liability

General tort liability is fault-based: a defendant is liable only if at fault, with the plaintiff bearing the burden of proof. Generative AI usually causes no direct tangible harm and entails low risk, so it should be governed by the fault-based general tort liability framework.

In *Xinchuanghua v. A Technology Co.*, the plaintiff sued the technical supporter to remove infringing training data, as the infringement arose from the supporter's provided materials. The technical supporter's negligence established liability for the copyright infringement.

5 Conclusion

Generative artificial intelligence technology continues to advance, yet the prevailing approach to rights protection remains a singular governance model focused solely on

service providers. This approach is no longer sufficient to meet the demands of contemporary rights protection. To address the infringement issues emerging in the realm of generatively produced content within the new era, we must broaden the scope of accountability and turn our attention to the technical enablers of generative AI. Technical enablers represent the source of infringement risks, being the developers of foundational models. Regulating their infringing conduct facilitates governing generative AI infringements. For technical enablers, liability should still be based on the fault principle.

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