Copyright Infringement Risks and Regulatory Pathways in AI Singer Cover Songs — A Case Study of "AI Stefanie Sun"

ZOU Zheqi[1][1]
[1] Faculty of Law, Xiangtan University, Xiangtan 411105, China

Abstract—The rise of AI singer cover technology has reshaped music creation and dissemination while posing critical challenges to copyright protection systems. Using the "AI Stefanie Sun" phenomenon as an example, this technology generates cover songs by mimicking specific singers'vocal characteristics, potentially infringing upon copyrights of original works, performers' rights, and sound recording producers' rights throughout data training, content generation, and distribution processes. Specific risks include violations of reproduction rights, performance rights, communication rights, as well as damage to performers' moral rights, economic rights, and producers'remuneration claims. Current legal frameworks struggle to address these challenges due to ambiguities in liability attribution, difficulties in applying fair use doctrines, and outdated licensing mechanisms. The study proposes establishing a three-tier accountability framework (technology providers-users-platforms), integrating AI covers into statutory licensing systems, and enhancing collective management organizations'technological governance capabilities. These measures aim to balance innovation incentives and rights protection through dynamic fee models and tech-enabled licensing systems, providing institutional safeguards for AI music industry development.

Index Terms—Artificial Intelligence; Performers' Rights; Statutory Licensing; Collective Management

The rapid development of artificial intelligence technology is profoundly transforming the ecosystem of music creation and distribution. In April 2023, "AI Stefanie Su" went viral on short video platforms, triggering widespread social attention. According to incomplete statistics, the songs performed by "AI Stefanie Su" have exceeded one thousand, far surpassing the total works of singer Sun Yanzi herself. On the video website Bilibili, a video of "AI Stefanie Su" covering "Hair Like Snow" posted by user "Chen Motong1995" has garnered over 3 million views, and multiple cover videos performed by "AI Stefanie Su" have exceeded one million views, demonstrating remarkable dissemination power and influence.[1] However, behind the viral success of artificial intelligence "singers", there remain numerous legal issues regarding copyright protection, voice rights, performer rights, and sound recording producer rights. On one hand, technological development requires a permissive innovation environment; on the other hand, the legitimate rights and interests of rights holders must also be effectively protected. How to seek balance between the two and construct a copyright protection mechanism adapted to the AI era has become a focal point of attention in both theoretical and practical circles.[2]

I. Problem Statement

In *the Interim Measures for the Management of Generative Artificial Intelligence Services* issued by the Cyberspace Administration of China (hereinafter referred to as the "*Interim Measures*"), it is explicitly stated that "organizations and individuals that provide services such as chatting, text, image, and audio generation using generative artificial intelligence products, including those who support others to independently generate text, images, audio, etc. through programmable interfaces, shall bear the responsibility as producers of the generated content of such products," and that "pre-training and fine-tuning datasets used in generative artificial intelligence products shall not contain content that infringes intellectual property rights"[3]. However, these requirements fail to take into account that AI is increasingly becoming an agentive entity in parallel with humans in the field of music creation, and they do not provide a clear delineation of copyright ownership for AI-generated music. Consequently, the legitimate rights and interests of relevant stakeholders remain inadequately protected.

The core of AI cover song technology lies in using open-source software such as so-vits-svc, which employs content encoders to extract features such as tone and pitch from a song, segments each audio file into clips ranging from a few seconds to several tens of seconds, and then inputs the data into an algorithm that matches the vocal characteristics of the cover performer with the segmented song data. After post-processing and optimization, a complete AI-generated cover song can be produced[4]. Compared with traditional human covers, AI covers present a relatively low technical threshold, a significantly shortened production cycle, and can achieve near-perfect replication of the target singer's vocal timbre.

From a legal evaluation perspective, AI-generated music involves potential infringement of multiple rights, including the copyright of original works, performers' rights, and the rights of phonogram producers[5]. These include not only the

copyrights of lyricists and composers but also the personality and property rights of performers, along with the various interests of sound recording producers. The overlapping of multiple rights renders the legal analysis and resolution of related issues particularly complex.

Different stakeholders hold varying positions on AI-generated covers based on their respective interests. Listeners generally welcome this new technology as it enables any singer to be simulated to perform any song, fulfilling personalized demands. Even if some listeners harbor concerns about the legality of AI covers, according to Article 10 and Article 24, Paragraph 1 of *the Copyright Law of the People's Republic of China* (hereinafter referred to as the " *the Copyright Law* "), which stipulate a "closed enumeration of copyright powers" and "fair use" exceptions, the act of listening to infringing music does not constitute copyright infringement. Thus, most listeners remain supportive of this practice.

Conversely, attitudes among original singers and lyric-composers show clear divergence. For instance, domestic singer Sun Yanzi, Australian singer Nick Cave, and Canadian singer Grimes have respectively expressed three distinct views on AI covers—"ambivalence," "opposition," and "support"—via Weibo, CNN, and Twitter[6].

On the other hand, recording producers and copyright management organizations, who occupy a pivotal position in the industrial chain, generally adopt a cautious or even oppositional stance toward AI-generated music. For example, music publisher Abkco Music filed a lawsuit against Anthropic for allegedly infringing copyrights by using musical works without authorization to train its AI model, which reportedly generated lyrics substantially similar to famous songs[7].

The legal controversies triggered by AI-generated covers are challenging the current regulatory framework. When technological means can precisely replicate a singer's vocal fingerprint, how should such digital cloning behavior be legally characterized? Does it constitute secondary creation or voice appropriation? The current *the Copyright Law* has not clearly extended the protection of performers' rights to include vocal characteristics, resulting in a legal vacuum for determining infringement. Meanwhile, the conflict of interest among creators, technology developers, and distribution platforms is intensifying: musicians fear that AI covers will dilute their personal brand value, tech companies advocate for the principle of technological neutrality, while platforms gain substantial profit through traffic monetization. Striking a balance between encouraging technological innovation and establishing a fair interest distribution mechanism has emerged as a pressing legislative challenge.

II. Forms of Copyright Infringement Risks in AI-Covered Songs

At present, the "covering" process performed by AI singers generally consists of three stages: "data input – output generation – content dissemination." These stages may respectively infringe upon the rights of lyricists and composers, performers, and phonogram producers.

2.1 Risks of Infringing Copyright of Original Works

2.1.1 Risk of Infringing the Right of Reproduction

During the training phase, AI models require large volumes of original songs as datasets. By analyzing and extracting melodies, lyrics, chords, and other musical elements, the models construct algorithms capable of mimicking the style of the original singer, probabilistically approximating their vocal timbre and performance style, ultimately reaching a level indistinguishable from the original. The construction of such databases necessitates importing numerous digitized music works as training materials and storing their digital copies, which may constitute infringement of the reproduction rights of the original musical works. When AI covers involve direct copying of essential content from original works without the copyright holder's authorization during the collection or adaptation of audio material, such behavior likely falls under the scope of reproduction rights protection[8].

2.1.2 Risk of Infringing the Right of Performance

The risk of infringement upon performance rights must be analyzed from the perspectives of live performance and mechanical performance. Under China's current copyright framework, the definition of "performance" explicitly requires the subject to be a natural person, as confirmed by Article 5(6) of *the Implementing Regulations of the Copyright Law of the People's Republic of China* (hereinafter referred to as the " *the Implementing Regulations* "), which defines performers. Therefore, as a non-human technical tool, AI-generated covers cannot constitute live performances in legal theory and thus do not infringe upon live performance rights.

As for mechanical performance rights, when AI imitates music works using technological means, the essence is the aural reproduction of the work, which precisely aligns with the characteristics of mechanical performance. According to Article 10(9) of *the Copyright Law*, "publicly broadcasting performances of works through various means" falls within the protection scope of performance rights. Therefore, unauthorized AI covers are likely to constitute infringement of mechanical performance rights[9].

2.1.3 Risk of Infringing the Right of Communication to the Public

The right of communication to the public, a key proprietary right of copyright holders, includes the right of network dissemination and the right of broadcasting. Regarding network dissemination rights, according to *the Regulations on the Protection of the Right of Communication through Information Networks*, any act of providing works to the public via the internet in a manner that allows access regardless of time or location constitutes network dissemination. At present, AI covers are mainly disseminated via two channels: music platforms (such as QQ Music, NetEase Cloud Music) and short-video platforms (such as Douyin and Bilibili). Regardless of the channel, such activities meet the "provision" element and may infringe the right of network dissemination.

Regarding the broadcasting right, the key distinction from network dissemination lies in interactivity. Since the 2020 revision of *the Copyright Law*, cover performances in live-streaming settings have been included under the scope of

broadcasting rights. Thus, whether through live streaming or other non-interactive means of dissemination, as long as the content includes copyrighted music, it falls within the domain controlled by broadcasting rights and entails potential infringement risks. In practice, although live streaming may obscure the synthetic nature of AI, this does not affect the legal determination regarding infringement of broadcasting rights[10].

2.2 Risks of Infringing Performers' Rights

2.2.1 Risk of Infringing Personal Rights of Performers

According to Article 39 of *the Copyright Law*, performers enjoy the rights to be identified and to protect their performance image from distortion. In practice, using a singer's name in AI-generated covers without consent may infringe upon the right to name. Although such covers are often labeled as "AI + singer name," the intent is still to capitalize on the commercial value of famous singers and lead the public to associate the AI-generated content with the real artist. This use may cause confusion and amount to "free-riding."

If the AI cover fails to properly attribute the original performer, it may violate the right to be identified. Furthermore, if the cover distorts or degrades the performance image of the singer, even if the audience understands that the content is AI-generated, the associative link established may still harm the singer's reputation, thereby infringing the performer's image right[11].

2.2.2 Risk of Infringing Performers' Property Rights

According to Article 39(5) of *the Copyright Law*, performers have the right to "authorize others to reproduce sound recordings of their performances and receive remuneration." Although AI-generated covers produce similar voices through model training rather than direct copying of performances, if the training process involves the use of sound recordings containing performers' performances, such use may still constitute reproduction and infringe upon the performers' rights.

In commercial contexts, AI-generated covers may also affect the performers' economic interests. In the traditional music industry, singers decide whether to authorize covers of their works and benefit commercially from their popularity. AI covers bypass this step, depriving performers of control over the commercial use of their vocal features, thus infringing upon their right to remuneration and other proprietary rights. Moreover, unauthorized covers may negatively impact the market value and share of the original performers[12].

2.3 Risks of Infringing Phonogram Producers' Rights

2.3.1 Risk of Infringing Reproduction and Network Dissemination Rights of Phonograms

According to Article 44 of *the Copyright Law*, phonogram producers have the rights to authorize others to reproduce, distribute, lease, and disseminate their recordings via information networks and to receive remuneration.

If, during the process of producing AI-generated covers, original sound materials are sourced from officially released phonograms of target singers, those recordings contain the rights of phonogram producers. Technical processes such as extraction, denoising, segmentation, and recombination of original phonograms essentially constitute reproduction or adaptation. Such acts, if carried out without the consent of the phonogram producers and not falling within statutory exceptions, constitute infringement of reproduction rights[13].

Regarding network dissemination, if AI-generated covers are used only in private, closed environments for tuning purposes without public dissemination, actual harm to the phonogram producers may be minimal. However, if such content is uploaded to online platforms for streaming or download without proper authorization, it may infringe the phonogram producers' right of network dissemination.

2.3.2 Risk of Infringing the Right to Remuneration for Communication to the Public

To safeguard the interests of phonogram producers and encourage industry development, the 2020 amendment to *the Copyright Law* introduced a "right to remuneration for the communication of phonograms." This provision governs two types of acts:

First, the remote dissemination of phonograms to the public using non-interactive transmission technologies;

Second, the public on-site dissemination of phonograms using sound-playing devices. These are the same acts previously discussed under the copyright holder's communication rights.

Thus, infringing the copyright owner's dissemination rights simultaneously infringes upon the phonogram producer's rights. According to Articles 39 and 42 of *the Copyright Law*, if there is no authorization or remuneration paid to the copyright owner and the use exceeds the legally permitted scope of fair use of published works—especially in commercial performances or activities in public domains including online platforms—then such acts constitute infringement. In such cases, the copyright-holding company has the right to pursue legal liability for infringement[14].

III. Dilemmas in Regulating AI-Covered Music under Existing Legal Frameworks

3.1 Theoretical Dilemma in Identifying the Liable Party

Under the current legal framework, artificial intelligence cannot be regarded as an independent legal subject. According to *the Copyright Law*, there are two pathways to qualify as a legal subject of copyright: one is through intellectual creation as a natural person; the other is by legal fiction, designating a legal entity as the author[15]. As previously discussed, most applications of AI technology still function as auxiliary tools to human creators. In the "performance" process of AI, the technology merely serves as an instrumental carrier and lacks substantive autonomous consciousness[16]. This type of AI relies on data such as motion and voice provided by a "中の人", and the content and form of the AI's "performance" depend entirely on the subjective choices of its human operator. Thus, AI remains a non-personified object under the current legal framework and cannot assume legal responsibility.

When AI cover songs involve infringement, identifying the responsible party becomes highly complex. The entire process of AI-generated cover music involves multiple actors,

including:

(1) Technology providers: Entities that develop and provide AI cover software, such as developers of open-source tools like Sovits. Although these providers support cover creation technologically, their software is neutral in nature and can be used both legally and unlawfully. According to the principle of technological neutrality, the mere potential for infringement does not automatically render the technology provider liable.

(2) Actual users: Individuals who use AI to create cover songs. Their behavior may involve multiple types of infringement, including infringement of copyright, performers' rights, and phonogram producers' rights. However, liability determination must consider whether the user's actions constitute fair use and whether they serve commercial purposes.

(3) Platform service providers: Online platforms that host, store, or disseminate AI-generated cover content, such as music streaming or short-video platforms. Their liability is often assessed under the "safe harbor" principle. Traditionally, if a platform did not know or have reasonable grounds to know of user infringement prior to notice, it may be exempt from liability. However, in light of the rapid growth of AI-generated content, whether platforms should bear more stringent pre-screening obligations remains a matter of intense debate.

Although Articles 4 and 7 of *the Interim Measures* provide general principles that AI services must respect lawful rights and refrain from infringing upon intellectual property rights, there is no clear guidance on liability allocation post-infringement. This regulatory gap exacerbates the complexity of interests among stakeholders.

3.2 Practical Difficulties in Determining Fair Use

The fair use doctrine, as a key exception under copyright law, aims to balance the rights of copyright holders with public interest, allowing certain uses of protected works without authorization under specific conditions. Article 24 of *the Copyright Law* enumerates twelve circumstances constituting fair use and includes a general catch-all clause for other situations provided by laws and regulations. The article employs a closed-list structure supplemented by a residual clause and requires compliance with the "three-step test": (1) the use must be for a specific situation; (2) it must not conflict with the normal exploitation of the work; and (3) it must not unreasonably prejudice the legitimate interests of the copyright holder[17].

Although AI cover creators may claim "non-commercial" or "transformative" use, their technological and behavioral characteristics make it difficult to meet the core requirements of fair use, as illustrated below:

First, AI covers heavily depend on large-scale replication and utilization of original works. For instance, to produce an "AI Stefanie Suni" cover, the training phase requires downloading numerous audio tracks of Sun Yanzi or other artists for machine learning and timbre modeling. This inevitably involves copying, storing, and processing original works and phonograms, often using pirated content, which clearly exceeds the fair use scope of "personal study, research, or appreciation," and causes unreasonable economic harm to the copyright owner[18]. Moreover, AI covers are disseminated mainly via traffic-driven platforms like social media and short video apps. Even if users claim "entertainment sharing," platforms profit indirectly through advertising and monetization mechanisms, imparting a commercial character to such use. Free performances must meet the "dual free" standard (no payment to performer or by audience), yet AI cover videos often generate income based on views or followers, failing this standard.

Second, fair use requires that the use of original works be limited to what is "necessary," but the logic of AI cover creation demands large-scale and systematic use. AI model training typically involves vast amounts of audio data to optimize output, often incorporating core expressions (melodies, lyrics) and even replicating the original performer's vocal timbre. The scale and efficiency of AI output far surpass human creation, easily forming a substitute for the original work[19]. The high degree of realism in AI covers may mislead listeners into believing the content is a new release by the original performer, diverting attention and revenue, and directly violating the third prong of the three-step test—prohibition of unreasonable harm to the copyright holder's legitimate interests.

Third, AI covers are essentially mechanical imitations and vocal substitutions, lacking original expressive content and failing to qualify as "transformative use." Take "AI Stefanie Suni covering 'A True Man's Song'" as an example—the technical process merely extracts Sun Yanzi's voice model and replaces Liu Huan's original vocal line while retaining the melody and accompaniment. This is not a commentary, critique, or artistic reinterpretation, but a mechanical substitution. As such, the resulting work risks substantial similarity with the original and constitutes a market substitute, making it difficult to justify as fair use[20].

3.3 Absence of Authorization and Management Mechanisms

In the context of digital technology restructuring the music industry ecosystem, AI-generated covers could potentially reinvigorate existing musical assets and create new value. Ideally, this would be achieved through collective rights management organizations granting centralized licenses. Such centralized authorization reduces transaction costs and enables a virtuous cycle of "technology-enabled creation—copyright-backed industry development"[21]. However, the current licensing framework is systematically failing to address AI-generated content, transforming technological dividends into legal risks. This failure is manifested in three major aspects:

First, there is a structural contradiction between traditional licensing models and the features of AI creation. The existing music copyright licensing system was designed during the physical media era, and its assumptions regarding use cases and rights categories are incompatible with the cross-media, fragmented inputs required for AI training. For example, to create an "AI Stefanie Suni" cover, a developer must simultaneously manage complex rights—lyrics and composition copyrights, performance rights, and phonogram producers' rights. The current system of "itemized negotiation and layered authorization" is entirely inadequate for this. Acquiring full authorization for classic songs like "Hair Like Snow" or "Encounter" may require negotiations with multiple rights holders over several months. Given the time-sensitive

nature of internet innovation, this cumbersome process acts as an institutional barrier to innovation and pushes creators into a "first infringe, then remedy" grey zone.

Second, the music industry lacks a pricing model for AI-generated covers, leading to a "dual-layer pricing chaos." On one hand, there are divergent views among rights holders about the value of AI-generated works: some record labels treat them as new distribution channels and charge standard digital licensing fees; others regard AI training as "deep adaptation" and demand substantial base model training fees. On the other hand, the conflation of UGC (user-generated content) and PGC (professionally generated content) exacerbates pricing confusion. Amateur AI cover videos and commercial virtual singer projects are placed under the same pricing structure, significantly dampening grassroots creative enthusiasm[22].

Third, fragmented authorization channels have intensified systemic blockages. The current copyright landscape resembles isolated "islands," with lyrics/composition collective management organizations, performers' rights associations, and record labels each maintaining closed licensing ecosystems. As a result, AI service providers and users must shuttle between the Music Copyright Society of China, the China Audio-Video Copyright Association, record labels, and individual performers. This "multi-point negotiation" model entails high coordination costs. Moreover, existing collective management organizations have yet to recognize AI cover music as a distinct licensing category. Even when creators apply for licenses, they are told that "no such licensing method exists." These roadblocks force many to adopt "technical evasion" strategies, such as vocal desensitization and melody alterations, skirting the edges of legality.

The lack of authorization and management mechanisms results in the following: rights holders are unable to monetize the traffic surge triggered by AI covers (despite AI-generated covers driving significant increases in plays of original songs, the rights holders receive no revenue share); creators face compliance costs that far exceed their earnings (for instance, an AI cover video may generate only a few hundred yuan in income but carry potential infringement liability of tens of thousands); users suffer from the frequent takedown of high-quality AI covers due to copyright issues, severely impairing cultural consumption experiences.

IV. A Systemic Pathway for Regulating AI-Cover Song Copyright

4.1 Clarifying the Allocation of Responsibilities Among Stakeholders

Copyright disputes arising from AI-produced cover songs fundamentally reflect conflicts centered on the use of technical tools. The core of regulatory solutions lies in clearly delineating the rights and obligations of each participant within the technology application chain. To address ambiguity in identifying responsible parties under the current legal framework, judicial interpretations and policy guidance should establish a tripartite responsibility allocation mechanism among technology providers, actual users, and platform service providers[23].

Infringement determination for AI cover songs requires moving away from traditional linear copyright analysis and adopting a review framework encompassing "technical characteristics—nature of use—harmful consequences," thus thoroughly evaluating the legality and infringement risk of technical use.

First, the specific means of implementation must be closely examined, including the legality of training data sources, the logic behind model parameter settings, and the content generation mechanisms. For instance, using unauthorized pirated music for training directly infringes the reproduction right, whereas employing voice-anonymization to generate virtual voices may legally circumvent performers' rights.

Second, the purpose and business model of usage must be evaluated. On one hand, a distinction should be made between personal creative use and large-scale commercial application. The former might be exempt under "personal use" exceptions, while the latter must undergo rigorous copyright scrutiny. On the other hand, economic substitutability effects on original works should be considered; if usage causes significant decline in streaming volumes or licensing income of original works, substantial infringement may be concluded. Finally, after technical and usage analyses, actual damage should be assessed in a comprehensive evaluation.

For example, in the case of "Yin v. Beijing Tech Co., Ltd.", the court established a principle that maps "technical control—subjective fault": upstream technology providers have elevated obligations in scrutinizing third-party voice data. Beijing Tech developed products and licensed them using unauthorized voice data, reflecting subjective fault, and was thus liable for damages. In contrast, downstream users who acquired the product at a reasonable price and used it without technical modifications relied legitimately on the technology provider and thus bore no subjective fault or liability. Accordingly, tailored liability standards should apply to different participants.

Technology providers should bear a "gatekeeper" duty corresponding to their level of technological control. Drawing from the Yin case, providers must rigorously verify the legality of training data sources, implement copyright validation systems, and enforce filter mechanisms against infringing content[25]. If the technology is specifically designed to exploit particular rights holders' IP or if the business model clearly depends on third-party IP, providers should be deemed to have failed in exercising reasonable care. They should also institute data provenance tracking and require mandatory registration for models trained on substantial commercial music.

Actual users should be subject to a tiered liability regime based on "commercial intent—distribution scale—subjective fault." Non-commercial personal use may be exempt under Japan's version of a "personal use special exception" (§30), within certain limits. Commercial users, however, must fulfill complete copyright review obligations—including securing licenses for underlying works, performers' rights, and phonogram producers' rights[26]. Courts in Beijing and Changshu have affirmed that AI users, as the actual controllers of generated content, enjoy copyright in the works they

generate but must also assume corresponding liability for any infringement[27].

Platform service providers must balance innovation and rights protection. UGC platforms should refine the "notice–take-down" mechanism, allowing rights holders to file complaints upon detecting infringing AI-generated content and enabling platforms to implement blocking measures[28]. Functional platforms (e.g., those providing API or models) need enhanced pre-publication review duties and should explore "copyright revenue-sharing" models—reserving a fixed proportion of traffic-derived profits for a copyright compensation fund.

4.2 Developing Statutory Licensing Safeguards

Currently, Article 24 of *the Copyright Law* clearly permits certain non-commercial uses like personal study, research, or appreciation. However, when users publish cover content on short-video platforms and receive advertising revenue, live-stream donations, or brand partnership income—even without explicitly designating the use as commercial—the behavior effectively constitutes "indirect profit." Utilizing AI cover content to attract fans and drive e-commerce traffic falls outside the "free performance" exception under Article 24. In a context where large-scale monetization, traffic-based revenue, and partnerships occur, maintaining a traditional "non-profit use" exemption produces a serious imbalance of interests between rights holders and users. Statutory licensing mechanisms serve not only to address authorization difficulties but to establish a balanced system of "use freedom—compulsory payment"[29]. Thus, it is necessary to innovate institutionally by incorporating qualifying AI cover behavior into statutory licensing schemes.

AI-rendered covers have substantive characteristics of phonogram production; their technical workflow aligns with the core elements of "making phonogram" as defined in Article 42 of *the Copyright Law*. Regardless of whether algorithms extract voice fingerprints or deep learning generates realistic audio, the activities fit within "using others' lawfully recorded works to produce phonograms." According to the "substantial functional equivalence" principle, AI covers aiming to create voice-bearing recordings should be governed under the same legal rules as human-made covers.

To qualify for statutory licensing for AI covers, three substantive conditions must be met:

First, legitimacy of underlying works: Music, performance recordings, and samples used for AI training must originate from legitimate sources—such as legally purchased digital albums or right-holder-authorized open databases. Covers produced using pirated material should irrevocably fall outside statutory licensing and constitute clear infringement.

Second, negative exclusions via rights-holder declarations: If a copyright owner formally prohibits AI usage of their works, this exclusion should be honored. Drawing from Article 42, where "works declared off-limits by the copyright owner may not be used," AI inclusion of "no-AI-use" markers in digital watermarks or creation of "AI-prohibited work lists" by collective management organizations should apply. However, to prevent rights-holder abuse, such declarations should only apply prospectively and not retroactively to works already in the public domain.

Third, compliance of usage: AI covers must not materially substitute for the original work's market value. Assessment standards may reference U.S. doctrine—if AI covers cause a measurable drop in the original's streaming volumes or licensing income, the use may be deemed substitutive. Even if licensing conditions are otherwise met, liability remains. However, non-appreciative uses lacking market substitution effect are exempt, as public domain works are not impacted.

The vitality of statutory licensing lies in enforceable remuneration mechanisms. A combined fee model ("basic usage fee + revenue share") should be established (see Table 1).

Table 1: Tiered Fee Model for AI-Cover Songs

Usage Dimension	Evaluation Metrics	Basic Rate	Value-added Rate	Applicable Scenarios
Basic Dissemination	Cumulative Play Count (calculated jointly across multiple songs)	Fixed Rate: 0	Cumulative Play Count Tiered Rate: 100K-500K plays: 1,000 RMB; 500K-1M plays: 5,000 RMB; >1M plays: determined based on actual circumstances	Video Platforms, Audio Platforms, Live Streaming Platforms
Hidden Benefits	1. Direct Revenue (advertising/tips/subscriptions, etc.) 2. Fan Growth Rate	Fixed Rate: 0	Direct Revenue Share: 15%; Fan Growth Tiered Rate: 10K-100K fans: 10,000 RMB/song; 100K-500K fans: 100,000 RMB/song; >500K fans: determined based on actual circumstances	Video Platforms, Audio Platforms, Live Streaming Platforms
Commercial Monetization	1. Traffic Conversion Rate 2. Business Collaboration Frequency 3. GMV Contribution	Basic Fee: 3,000 RMB/song	Direct Revenue Share: 15%; Indirect Revenue Share: 8%; GMV Commission: 3%	E-commerce Live Streaming, Brand Partnerships, Paid Content
Brand Value	1. User Profile Matching Degree 2. Brand Voice Enhancement 3. Market Influence	Licensing Fee: 5,000 RMB/song	Brand Licensing Fee: 20%; IP Derivative Share: 10%; Cross-industry Collaboration Share: 12%	IP Licensing, Brand Endorsement, Derivative Development

Notes:

1. Different dimensions may be calculated cumulatively, but a total rate cap should be set—recommended not to exceed 30% of total artwork revenue.

2. For non-commercial use (such as personal enjoyment or educational purposes), the base rate can be waived; fees apply only at the lowest tier once actual revenue is generated.

3. Rates should be dynamically adjusted based on market developments, recommended for quarterly review.

4. Malicious evasion or falsifying data should incur punitive rates—suggested at double the standard rates.

This model is a proposal that reflects differences in commercial value of usage while using tiered rates to protect small creators from excessive burden. Specific rates can be adjusted based on actual market value of AI cover versions.

4.3 Enhancing Collective Management Mechanisms for Copyright

Relying solely on judicial rulings or individual case determinations is insufficient to resolve the complex copyright challenges posed by AI-generated music. To fundamentally harmonize innovation and rights protection, the unique advantages of collective management must be fully leveraged. Via institutional, model, and technological innovations, a regulated, inclusive, and orderly governance system for AI music copyright should be constructed, achieving a virtuous balance between innovation and rights protection.

From the perspective of improving the AI music copyright ecosystem, collective management organizations should expand institutional space for multi-stakeholder co-governance. Currently, AI enterprises hold core algorithmic technology, music/video platforms control distribution channels, and collective management organizations represent rights-holder interests—making these three parties closely interlinked. Considering the specific context of collective management in China, to meet training needs of generative AI works, on top of the existing five traditional collective management organizations (music, audiovisual, literary, photographic, and film rights associations), new quasi-collective management bodies may be introduced to jointly handle collective licensing[30].

In terms of organizational structure, collective management bodies should establish a specialized department for AI music copyright management within their existing frameworks. Responsibilities should include licensing of AI-generated music, compliance supervision, and infringement enforcement, with differentiated management systems tailored to the nature of AI-generated music.

For licensing innovation, collective management should focus on the unique scenarios of AI music and move beyond traditional "itemized licensing" to a "bundled licensing" model. Rights for composition, performance, and phonogram production should be combined per complete musical work into one license package[31]. Given the variation in commercial nature and usage intensity of AI music, differentiated price-setting mechanisms should be established. This integrated yet flexible "bundle + tiered" licensing approach facilitates convenience and lowers transaction costs while maximizing rights-holder returns based on market demand.

In terms of revenue allocation, collective management organizations should leverage smart technologies to build more accurate, dynamic big-data distribution systems. Traditional allocation methods—such as sample audits or usage estimates—are inadequate for the high volume and frequency of AI usage. By deploying blockchain, AI, and other technologies, these organizations can comprehensively capture usage data, carry out smart matching and real-time analysis, dynamically adjust distribution ratios among rights holders, and enhance transparency and fairness[32]. Simultaneously, specialized centers for monitoring and enforcing rights over AI music should be established, using audio fingerprinting and content recognition technologies for full-scale supervision of licensed use, ensuring protection of rights holders' lawful interests.

V. Conclusion

Artificial intelligence has evolved into a strategic industrial technology and the core engine of a new wave of industrial transformation[33]. Whoever leads in AI technology will have a competitive edge internationally. The application of AI in music is a double-edged sword: it reveals the vast potential of technology in art and highlights the urgent need for normative reconstruction. The AI cover controversy—exemplified by the "AI Stefanie Suni" phenomenon—demonstrates that improving copyright protection mechanisms can compensate rights holders and promote a healthy music industry ecosystem. This requires forward-looking legal scholarship on copyright objects and rights boundaries, and industry exploration of technological standards and commercial ethics, via scientific risk-assessment frameworks, transparent revenue-distribution mechanisms, and open cooperation platforms. We should adopt a more inclusive stance toward technological innovation and more precise institutional arrangements to address real-world issues, letting AI ignite a Promethean flame for human art.

References

[1] Yan Y.Y. "AI Stefanie Suni" goes viral: how technology replicates voices (in Chinese). Computer News 2023, 5(15), 010.

[2] Hildebrandt M. Smart Technologies and the End(s) of Law: Novel Entanglements of Law and Technology. Edward Elgar Publishing, 2015, xii.

[3] Hu L.Y., Yu D.S. Reflections on copyright ownership of AI-generated music from the perspective of media technology (in Chinese). People's Music 2024, (5), 80–85.

[4] Pan S.Y. Research on user characteristics and emotional practice of AI singers from human-computer interaction perspective—A case study of "AI Stefanie Suni" (in Chinese). News Research Guide 2024, 15(20), 22–26.

[5] Drott E. Copyright, compensation, and commons in the music AI industry. Creative Industries Journal 2021, 14(2), 195.

[6] Zeng M., Chen N. Legal nature disputes and risk response of AI music covers (in Chinese). Study Forum 2024, (4), 125–136.

[7] Concord Music Group Inc. v. Anthropic PBC, No. 3:23-cv-01092 (2023-10-18) \[EB/OL]. (accessed 2025-03-08). https://storage.courtlistener.com/recap/gov.uscourts.tnmd.96652/gov.uscourts.tnmd.96652.1.0.pdf

[8] Zheng S. Copyright regulation on AIGC-generated songs (in Chinese). In: Emerging Rights, Vol. 2—Legal Issues of Generative AI, School of Law, Jiangsu Normal University, 2024, 143–149.

[9] Sui M.Z. How can AI and music copyright protection coexist (in Chinese). China Press, Publication, Radio and Television News 2024, 9(26), 007.

[10] Jiao H.P., Liang L.K. Copyright risks and resolution paths for AI-generated music (in Chinese). Intellectual Property 2023, (11), 103–125.

[11] Zou K.L., Zhang M.Y. Regulating AI singer cover behavior under the Anti-Unfair Competition Law (in Chinese). Journal of Chongqing Three Gorges University \[J/OL], 1–12 (accessed 2025-03-09).

[12] Zhou X. Infringement risks and countermeasures for AI singer covers (in Chinese). Rule of Law Forum 2024, (3), 102–112.

[13] Chen J. Research on intellectual property issues of AI performance (in Chinese). Intellectual Property 2023, (7), 56–75.

[14] Wu J.H. Research on infringement issues of AI singers in music dissemination: a case study of "AI Stefanie Suni" (in Chinese). Musical Instrument 2024, (4), 114–117.

[15] 1Yi L., Yin S.Y. Denial of subject qualification of AI in China's copyright law (in Chinese). Science and Technology and Law (Bilingual) 2021, (4), 66–72+148.

[16] Li M. Research on frontier issues of AI-derived inventions and patent law (in Chinese). Innovation Science and Technology 2021, 21(12), 69–79.

[17] Qi X.Y., Wang C.M. Challenges and responses to the fair use system under virtual public scene construction (in Chinese). Study Forum 2023, (5), 129–136.
[18] Han R. “Fair use + right to remuneration” model for generative AI works (in Chinese). Publishing Perspective 2024, (19), 75–80.
[19] Yu X.B., Wu Z.Y. Copyright infringement and right confirmation of AIGC songs: from the perspective of “AI virtual singers” (in Chinese). Journal of Hubei Polytechnic Institute 2024, 27(6), 77–82.
[20] Zhao X. Fair use of generative AI in machine learning (in Chinese). Jinan Journal (Philosophy and Social Sciences) 2024, 46(3), 79–95.
[21] Finkelstein H. ASCAP as an example of the clearing house system in operation. Bulletin of the Copyright Society of the U.S.A. 1966, 14(1), 2.
[22] Meng L. Copyright collective management in the intelligent era: challenges, reflections, and reconstruction (in Chinese). Publishing and Distribution Research 2020, (1), 46–49.
[23] Turner J. Robot Rules: Regulating Artificial Intelligence. Palgrave Macmillan, 2019, 320.
[24] Drexl J. Licensing of Intellectual Property: Volume I (in Chinese). Translated by Wang C.Y. et al. Beijing: Tsinghua University Press, 2003, 172.
[25] Yuan F. Research on copyright infringement liability of AI service providers (in Chinese). Journal of Hunan University (Social Sciences) 2024, 38(6), 149–157.
[26] Liu X.L., Xiao H.J. Ethical regulation of AI based on soft law: analysis of Japan’s system (in Chinese). Modern Japanese Economy 2023, 42(4), 28–44.
[27] Huang Y.Y., Yang Y.N. Building a “two-tier safe harbor” rule for generative AI copyright infringement (in Chinese). Intellectual Property 2024, (11), 37–58.
[28] Jiang Y.K. Licensing model of digital music copyright: discussion on necessity and design of statutory licensing (in Chinese). Oriental Law 2019, (1), 147–160.
[29] Li K.X., Xiao D.M. Japan’s fair use rules for AI training data and its implications (in Chinese). Library Tribune \[J/OL], 1–9 (accessed 2025-03-11).
[30] Wang J.Y. Theory and construction of compensation fund system for generative AI copyright (in Chinese). Publishing and Printing \[J/OL], 1–14 (accessed 2025-03-12).
[31] Yan S.F. Analysis of payment for broadcasting use of music works through collective copyright management organizations (in Chinese). Television Research 2020, (8), 55–57.
[32] Zhang W\.S. Promoting copyright collective management by leveraging “two positivities” (in Chinese). Editorial Friend 2019, (12), 84–87.
[33] Yao Y., Zhang R. U.S. AI patent trends and implications for China: based on the report “Tracking the Diffusion of AI Patents in the U.S.” (in Chinese). Innovation Science and Technology 2021, 21(6), 74–83.