



Degree Program in Business Administration

Course of Intellectual Property Rights

Artificial Intelligence and Musical Creativity: Synthetic Voices, Deepfakes, and Intellectual Property Protection

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1. Introduction

In April 2023, a song titled *Heart on My Sleeve* was released on YouTube, Spotify, TikTok, and SoundCloud, which appeared to feature the voices of two globally known artists, Drake and The Weeknd, but neither had taken part in creating the song. The track was released by an anonymous user under the pseudonym @ghostwriter977, who created it using generative AI, and quickly gained popularity before it was removed from all streaming platforms following a DMCA takedown notice issued by Universal Music Group. Significantly, the unauthorized replication of the artists' voices did not constitute the legal basis for the takedown, as copyright law does not protect voices per se; rather, the takedown was based on the presence of a Metro Boomin producer tag. The case exposed a structural gap in existing intellectual property law: AI systems can now generate highly convincing synthetic performances that effectively imitate the voice and style of human artists, but the legal frameworks governing copyright protection remain largely unequipped to address the harms posed by such systems.

The advent of generative Artificial Intelligence has exacerbated existing tensions between technological innovation, creativity, and copyright law. As opposed to prior technologies that merely enabled the creation or distribution of creative works, generative AI is actively involved in the generation of new content, such as music, images, text, and synthetic vocal performances. This development necessarily calls into question one of the core assumptions of copyright law across jurisdictions: the idea that authorship is inherently human. Both the U.S. and European copyright systems are rooted in anthropocentric notions of originality, creativity, and authorship, fundamentally requiring the presence of a human creator capable of intellectual and expressive agency. At the same time, works generated by AI are seeing their market value grow exponentially and becoming particularly influential within our cultural landscape, especially in the music industry, where an artist's voice is considered both an economic asset and a central component of personal identity.

This thesis examines the extent to which generative AI challenges the anthropocentric foundations of copyright law and whether extending copyright protection to AI-generated works would remain consistent with the normative and economic purposes of copyright. It contends that the absence of copyright protection for purely AI-generated works is not a temporary doctrinal gap awaiting legislative correction, but rather the structural consequence of a human-centered conception of authorship that remains normatively and economically justified despite the rise of generative AI. The extension of copyright protection for AI-generated works will not address the harm caused by AI-

generated musical deepfakes; on the contrary, it may exacerbate the economic power imbalance between technology companies and human creators.

To answer this question, the thesis pursues a doctrinal and comparative legal research approach combined with an economic analysis of the music industry. It explores the U.S. and European frameworks for AI-generated works as outlined in legislation, case law, institutional reports, and recent policy developments, while investigating the economic repercussions of generative AI for artists and creative markets. Musical deepfakes are explored as a case study, highlighting the crisis of authorship in the AI era more sharply.

The thesis is divided into three chapters. Chapter I introduces the phenomenon of AI-generated musical deepfakes by examining the *Heart on My Sleeve* case and the controversies surrounding vocal imitation and synthetic performances. Chapter II explores the economic effects of generative AI on the music industry, such as revenue displacement, streaming fraud, and market dilution. The core legal analysis is provided in Chapter III, which examines the copyright status of AI-generated works in the U.S. and the European Union, the right of publicity, developing legislative measures, and the overarching normative and economic implications of granting copyright protection to AI-generated content. The conclusion draws together the findings of the analysis and considers whether current legal frameworks are equipped to address the impacts of generative AI on human creativity.

1 Chapter I: The Case Study and the Emergence of Legal Concerns

1.1 *The emergence of musical deepfakes: the “Drake” case*

The interplay between Artificial Intelligence (AI) advancement and innovation has emerged as a particularly significant area of study, as the rapid evolution of AI is reshaping how we understand innovation itself – including the defining factors that drive its growth.¹ Recent technological developments have significantly transformed the music industry, particularly through the rise of

¹ Domenico Marino, Jaime Gil Lafuente, Domenico Tebala, *Innovations and Development of Artificial Intelligence in Europe: Some Empirical Evidences*, *European Journal of Management and Business Economics*, 2023, p. 622.

Generative Artificial Intelligence (GenAI) – systems now capable of replicating artists’ voices with a degree of accuracy that makes artificial performances nearly indistinguishable from genuine ones. Unlike earlier AI systems designed primarily to predict and classify information, generative models are capable of producing entirely novel outputs – including written text, images, and, most significantly for the purposes of this discussion, audio content – from user-provided material. This shift has repositioned AI from a tool of analysis to an active participant in the creative process.² In this context, musical deepfakes have emerged as one of the most legally and ethically consequential applications of this technology: synthetic recordings that rely on AI tools to replicate the voice of a genuine artist, trained on existing audio material from which the distinctive acoustic features on a singer’s voice are extracted and reproduced artificially. As a result, the line between artificial and original performances is becoming progressively harder to detect, raising significant technological, legal, and ethical concerns.³

In April 2023, musical deepfakes also received rather high media attention, when the so-called “Drake” case emerged. In this instance, a user with the pseudonym “@ghostwriter977” uploaded a brief video on TikTok containing the song “*Heart on my Sleeve*”, which seemingly featured the voices of two globally known Canadian artists, Drake and The Weeknd. The general public initially assumed that the song was an unreleased collaboration between the two singers, which added to its fast spread on social media platforms and music streaming sites. The case quickly became one of the most well-known examples of AI voice imitation, attracting the attention of the media and the rest of the music industry.⁴

The video gained popularity quickly, counting over 15 million views on TikTok and around 600,000 views on YouTube,⁵ with speculation of modest financial gain.⁶ However, the song was later found to be AI-generated, a factor that spread debate and concern within the music industry. Despite the absence of any official affiliation from the artists with the content, the song achieved a level of realism such that the line between authenticity and fabrication became completely unrecognizable. The “Drake” case unveiled a vulnerability in the system, as there is now the possibility to appropriate an

² Vaughn Gendron, "A New Frontier: The Music Industry's Struggle Against Generative AI," *University of Miami Business Law Review* 33, no. 1 (2024): 162-163. (Available on HeinOnline).

³ J. Crawforth, «My take: Tackling the problem of deepfakes», *Deloitte Insights*, 7 August 2024, disponibile su: <https://www.deloitte.com/us/en/insights/topics/technology-management/tech-trends/2024/swear-cybersecurity-ceo-discusses-deepfake-solutions.html> (accessed 3 February 2026).

⁴ V. Melara, «The "Fake Drake" Fix: Why Each State Should Adopt Tennessee's Elvis Act in the Age of AI-Deepfakes», *Wake Forest Journal of Business & Intellectual Property Law*, vol. 25, n. 1, Fall 2024, pp. 102-103.

⁵ L. Snapes, «AI song featuring fake Drake and Weeknd vocals pulled from streaming services», *The Guardian*, 18 aprile 2023, available on: <https://www.theguardian.com/music/2023/apr/18/ai-song-featuring-fake-drake-and-weeknd-vocals-pulled-from-streaming-services> (accessed 21 January 2026)

⁶ V. Melara, «The "Fake Drake" Fix...», *cit.*, p. 116.

artist's vocal identity without their consent, doing so in a manner that is both scalable and difficult to detect.

Moreover, the legal ambiguity of such works is emphasized by the subsequent removal of the song from all major streaming platforms. It is still uncertain whether the track actually infringed copyright law, largely due to the lack of clarity as to whether any protected recordings were used in the voice-generation process. However, the mere fact that the song was successfully removed indicates that alternative legal channels were probably used. Furthermore, neither Drake nor The Weeknd did actually take part in performing or writing the song, raising questions as to whether traditional copyright protection could apply at all. Yet despite these challenges, Universal Music Group (UMG), the label for both artists, succeeded in removing the song from all streaming sites, although the exact rationale for this decision is somewhat unclear.⁷

This ambiguity is not accidental but reflects a deeper limitation of the current copyright system. Traditional legal categories – authorship, originality, fixation – as developed within the United States copyright system were formulated in an environment that assumed human creation and thus cannot be readily applied to works that lie at the border between human and machine-generated content. As a result, AI-generated music and synthetic voices underline the weaknesses of the current legal frameworks, and thus the focus of the issue is not the lack of legal tools, but instead the inability of their means to remain efficient in dealing with new technological issues.

The United States Copyright Office is a part of the Library of Congress⁸, which registers copyright claims, keeps track of copyright ownership details, disseminates information to the public, and supports Congress and other government agencies on a variety of copyright-related matters.⁹ The Copyright Office is dedicated to promoting creativity and free expression for the general welfare. According to the United States Copyright Office, protection is granted to “Original works of authorship fixed in any tangible medium of expression [...] a voice is not copyrightable because the sounds are not “fixed””.¹⁰ This implies that the removal of *Heart on my Sleeve* was not founded on the creation of artists' synthetic voices. Nonetheless, in accordance with the Digital Millennium Copyright Act (DMCA), right-holders can notify third party actors, such as Spotify or Youtube, if

⁷ V. Melara, «The "Fake Drake" Fix...», *cit.*, p. 117

⁸ U.S. Copyright Office, *Library of Congress*, Federal Register, “Copyright Office, Library of Congress,” available at: <https://www.federalregister.gov/agencies/copyright-office-library-of-congress> (last accessed 16 April 2026). The U.S. Copyright Office is the official government body responsible for administering copyright registration and maintaining public records of copyright ownership in the United States.

⁹ U.S. Copyright Office, *Overview and History*, Library of Congress, available at: <https://www.copyright.gov/about/> (last accessed 16 April 2026).

¹⁰ U.S. Copyright Office, *Compendium of U.S. Copyright Office Practices*, Chapter 300: «Copyrightable Authorship: What Can Be Registered», 3a ed., 2021, p. 4, available on: <https://www.copyright.gov/comp3/chap300/ch300-copyrightable-authorship.pdf> (accessed 12 March 2026).

they believe that content distributed on these platforms violate their rights. Legal expert Louis Tompros suggested that UMG likely used this procedure, referred to as “DMCA takedown”, to ask for the removal of the track.¹¹ The legal justification for this takedown was reinforced by the presence of Metro Boomin’s producer tag at the beginning of the song, providing additional legal grounds for the takedown.¹²

Ultimately, the Fake Drake case emphasizes the rising tension between technological innovation and the current legal frameworks. It accentuates the challenges that exist in trying to apply traditional notions of the law – such as authorship, consent, and ownership – to new and evolving forms of technology. Beyond the technical aspects of the case, the “Drake” case is also a reminder of the broader cultural and economic implications that already exist between technology and the law. The ability to reproduce an artist’s voice without their consent jeopardizes not only the integrity of the product they have created, but also the artist itself in their capacity to administer their own identity as a performer and a creator of art. As Generative AI becomes widely available and easier to use, artists are facing an increased risk of exploitation due to the apparent lack of any clear legal framework around this growing technology. Policymakers will face an equally significant challenge in finding a balance between technological capabilities and previously established, traditional rules of intellectual property.

1.2 Technological background: voice cloning and generative AI

Understanding the legal implications of the “Drake” case – and of musical deepfakes more broadly – requires a closer look at the technology that makes them possible. Machine Learning marked a paradigm shift in the development of AI systems: rather than running on explicitly programmed rules, these systems learn from the exposure to large volumes of sample “training” data, from which they recognize patterns, correlations, and structures. This allows the systems not only to perform within the realm of the examples provided to them but also to generalize from these examples. These capabilities underpin most modern AI systems, including synthetic voice generation systems.¹³

¹¹ R. Reed, «AI created a song mimicking the work of Drake and The Weeknd. What does that mean for copyright law?», *Harvard Law Today*, 2 May 2023, available on: <https://hls.harvard.edu/today/ai-created-a-song-mimicking-the-work-of-drake-and-the-weeknd-what-does-that-mean-for-copyright-law/> (accessed 21 January 2026)

¹² V. Melara, «The "Fake Drake" Fix...», *cit.*, p. 117.

¹³ Ritika Lath, Renuka Patwari, Amit Aylani, and Deepak Hajoary, “Introduction to Generative AI,” July 2025, pp. 1–27, available at: <https://www.oreilly.com/library/view/generative-ai/9781394302901/c01.xhtml#sec1-1>

In this regard, voice cloning has been recognized as one of the most important technological advancements within such framework. In essence, voice cloning involves the utilization of Machine Learning models based on audio recordings of a target speaker, wherein the model extracts and clones the acoustic characteristics used by the speaker to produce their voice – for example, tone, pitch, cadence, and timbre. These characteristics are then combined and reproduced in order to create new audio sequences that were never performed by the original speaker. However, the key factor that makes voice cloning so impactful is not merely the technological sophistication involved in the process, but rather the ability of voice cloning models to produce outputs which are not only believable but almost indistinguishable from the real ones – hence the technical underpinnings of what are referred to as audio deepfakes.

These technologies have developed at an astonishing rate. Initial systems required a vast supply of recordings of the artist's voice to generate sounds that had an obvious artificial nature. Nowadays, however, modern systems need just few seconds clips to create very realistic speech synthesis.¹⁴ This technological advancement has reduced barriers to the production of synthetic voices at a rate that was unbelievable even less than ten years ago.

This technological advancement has not happened in a vacuum: it has been accompanied by the growing availability of Generative AI tools on accessible and – often – low-cost platforms. This has brought capabilities that were previously limited to well-endowed research settings at the reach of a significantly larger user base. This aspect is particularly relevant as the music industry is rapidly evolving in terms of the use of AI technology.

The effects of this developments on the music industry can already be estimated. According to a survey done in the United States in 2025, it is stated that about 28% of adults are involved in some sort of musical creative activity and, of these, another group of 10% confirmed that they use Artificial Intelligence tools as a part of their creative processes.¹⁵ Although these statistics might not seem impressive in absolute terms, are still substantial, as they show that the production of music with the help of AI is not some experimental activity anymore, but instead it begins to be incorporated into the normal process of creative activity.

However, it is evident that the current rates at which this technological advancement is taking place are not currently supported by the legal and regulatory frameworks. The music industry is now facing a challenge of comparable, if not greater, complexity to that posed by earlier technological

¹⁴ J. Crawford, «Tackling the problem of deepfakes», *cit.*

¹⁵ Statista, «Artificial intelligence (AI) usage for creative activities by adults in the United States», April 2025, available on: <https://www.statista.com/statistics/1620042/ai-usage-creative-activities/> (accessed 15 April 2026)

disruptions, such as digital file sharing in the early 2000s. The key difference, however, is that prior technological changes did not, as a matter of course, interrupt the actual creative process.

This change poses a series of complex legal and conceptual issues. With the growing availability and popularity of AI-generated music, even the concept of authorship and originality is under serious threat. The process of assigning creative responsibility is becoming more ambiguous, and whether the resulting work can be said to derive out of a human author is becoming less obvious as well. Simultaneously, ownership issues are becoming more challenging to address, especially when there are several inputs – human prompts, training data, algorithmic processes, and technological aids – that contribute to the final work.

On top of purely legal concerns, it is important to consider the economic or cultural consequences of these developments. The potential to reproduce voices and create music in large quantities could create a new form of competition, and the value of human performance and work could be influenced. It might undermine our established ideas of the authenticity of music, questioning the definition of what it would mean to make a performance “real”.

For these reasons, the necessity for a regulatory clarification is becoming increasingly evident. Artists, producers, and rights-holders are already operating in an environment where artificial, human, and machine generated creativity is being pushed to its limits on a daily basis, yet the legal instruments currently available were created based on the assumption that Generative AI simply did not exist. As the production of AI-generated music becomes easier and the tools that enable it to become more accessible, the question of the challenges of authorship, originality, and ownership of the work created by the artist becomes increasingly difficult to reconcile within the framework of existing copyright law. The interests of artists, as well as the larger sense of cultural worth in the creative authenticity, is at risk. A regulatory framework that is capable of dealing with this tension is no longer an issue of anticipation, but rather a necessity.

1.3 Legal background: voice protection before AI (Midler v. Ford Motor Co.; Waites v. Frito-Lay, Inc.)

Musical deepfakes and synthetic voices can be wrongly perceived as a relatively new phenomenon that has emerged along Artificial Intelligence. It is clear, however, that courts have already faced a multitude of situations in which an artist’s voice was stolen, especially in the context of advertising and commercial endorsement, long before the advent of AI technologies. The legal principles developed in that period continue to shape the way in which similar issues are approached today.

The Right of Publicity was particularly relevant for these early disputes, because it safeguards individuals against the unlicensed commercialization of their name, image, and likeness (NIL). It basically serves as a legal protection of the economic value that the identity of an individual can hold, and it is especially pertinent for public figures.¹⁶

Midler v. Ford Motor Co. (1988) is one of the most important cases in this field, which remains a foundational precedent in discussions of vocal identity. In 1985, Ford Motor Company wanted to use in an advertisement campaign for their new vehicle, the song *Do You Want to Dance*, which was previously performed and popularized by Bette Midler, a famous American singer. When Midler declined to license her recording, the advertising agency hired by Ford Motor, Young & Rubicam, adopted an alternative strategy. Rather than abandoning the idea altogether, they hired one of Midler's former backup singers and instructed her to perform the song in a manner that closely imitated Midler's distinctive voice. At the same time, the agency secured the rights to the underlying musical composition, which were not held by Midler, thereby attempting to avoid any issues related to copyright infringement.¹⁷

This case was then brought before the U.S. District Court, where Midler filed a case alleging common law misappropriation of her voice. Initially, The District Court stated that there was no established legal principle that would prevent Young & Rubicam from using a vocal imitation of Midler's voice. This position, however, was reversed on appeal by the U.S. Court of Appeals for the Ninth Circuit, which made a crucial distinction between the protection inferred by copyright and the one over personal identity, by extending it to the unauthorized use of a recognizable voice. While acknowledging that a voice, as such, is not protected under copyright law – since it is neither “fixed” nor a work of authorship – the Court nonetheless held that a distinctive voice may constitute a legally protected attribute of identity. This ruling marked a fundamental extension of the Right of Publicity, as the court determined that a voice can be as distinctive and personal as a face, and thus a systematic attempt to imitate it for commercial purposes could be a form of misappropriation. This became a widely cited formulation, showing that one's vocal identity could be a protectable interest in its own right.¹⁸

The decision of the *Midler* case was fundamental in the subsequent case of *Waits v. Frito-Lay, Inc.* (1992). Tom Waits, an American country singer known for his highly distinctive and idiosyncratic vocal style, found himself in a similar situation when Frito-Lay produced a commercial which

¹⁶ Cornell Law School, «Publicity», *Legal Information Institute*, available on: <https://www.law.cornell.edu/wex/publicity> (accessed 31 March 2026).

¹⁷ V. Melara, «The "Fake Drake" Fix...», *cit.*, pp. 107-108

¹⁸ V. Melara, «The "Fake Drake" Fix...», *cit.*, pp. 108-110

broadcasted a soundalike singer who was impersonating his voice. As in *Midler*, Waits had not given his permission to the exploitation of his vocal identity and had, in fact, previously declined commercial endorsement on principle. The Court, using the same rationale established in *Midler*, ruled in Waits' favor, stating once again that the unauthorized imitation of a recognizable voice for commercial purposes constitutes a violation of the Right of Publicity. This additionally reinforces the argument that a voice is not just a mere attribute of a personality but an integral part of it.¹⁹

It is worth emphasizing that neither of these cases involved Artificial Intelligence. To create the imitations in question, the technology was not available yet in the form that would be applicable to voice synthesis and, therefore, had to be done by human actors, who had to rely on their capacity to imitate the vocal traits of another artist.²⁰ Yet, these proceedings hold considerable importance for the current discussion. In both cases, the issue at hand was not the method through which the imitation was conducted, but rather the misappropriation of the voice of an artist for commercial use. Regardless of the method through which the aforementioned imitation occurs, whether through a human actor or Artificial Intelligence, the underlying harm, as well as the doctrine invoked to address it, remains substantially the same. The technological means of conducting the misappropriation has changed, though the juridical frameworks have not.

However, the nature of the legal issue remains unchanged. The difference lies in the magnitude and ease with which it can now take place. In the past, cases were limited to isolated acts of imitation in a commercial environment; today's technologies allow for mass reproduction of a voice, often done by individuals who are not associated in any way with the performer.²¹

Thus, it can be argued that the cases of *Midler* and *Waits* serve to understand that the issue of voice imitation in the case of AI-generated voices is not emerging from a position of complete uncertainty. It is instead the most recent incarnation of an old legal paradox, the trade-off between technological capability and the right of performers to control the commercial use of their identity. The difficulty is found in the adaptation of such tools to a technological environment that operates on a vastly different scale. In this regard, AI-generated voice replication is not necessarily a new legal issue, but merely another evolution of it, as a phenomenon that tests the boundaries of existing legal principles without making them obsolete.

¹⁹ V. Melara, «The "Fake Drake" Fix...», *cit.*, pp. 110-112

²⁰ V. Melara, «The "Fake Drake" Fix...», *cit.*, pp. 111

²¹ H. Kahlert, «Another Fake Drake? AI is decoupling artists and their voices (and there's no coming back)», *MIDiA Research*, 12 June 2024, available on: <https://www.midiaresearch.com/blog/another-fake-drake-ai-is-decoupling-artists-and-their-voices-and-theres-no-coming-back> (accessed 3 February 2026).

1.4 The Right of Publicity and vocal identity

The Right of Publicity is a state-law tort²² that prohibits the commercial use of another's identity, typically expressed in terms of name, image, and likeness (NIL), as briefly mentioned above. It shields individuals – especially artists and public figures – from third parties seeking to exploit elements of their persona for commercial gain without the artist's consent. In doing so, the Right of Publicity goes beyond mere privacy protection – it also operates as a form of property right over the identity one has built.²³

The conceptual foundations of the Right of Publicity are deeply embedded to the broader notion of the Right of Privacy. In the United States, in fact, despite the Right of Publicity being largely protected by statutory law, it is not widely recognized as a distinct legal right, but instead as part of the Right of Privacy²⁴. The latter has historically been described as an elusive and multifaced notion, as there is a deep difficulty in finding a universally accepted definition. Thomas Cooley provided one of the earliest and most influential definitions of the Right of Privacy, describing it as “the right to be let alone”. Nevertheless, this definition has been criticized by other scholars as overly simplistic, particularly in light of the technological advancements and the increasing relevance of personal data.²⁵

In the beginning, interpretations focused on protection from external authority or intrusion; in recent formulations of privacy, however, this concept is increasingly understood to encompass an individual's capacity to control access to their own intimate physical sphere and aspects of their identity and personal data as well as parts of a person's social life (Warren & Brandeis 1890).

In the beginning, interpretations focused on protection from external authority or intrusion; in recent formulations of privacy, however, this concept is increasingly understood to encompass an individual's capacity to control access to their own intimate physical sphere and aspects of their identity, personal information, and of a person's social life. This evolution is particularly evident in the digital age, where technological developments have significantly expanded the way in which personal information can be collected, used, and disseminated, posing tremendous challenges to

²² R.C. Post, J.E. Rothman, «The First Amendment and the Right(s) of Publicity», *The Yale Law Journal*, 1 November 2020, available on: <https://yalelawjournal.org/article/the-first-amendment-and-the-rights-of-publicity> (accessed 1 April 2026).

²³ Cornell Law School, «Publicity», *cit.*

²⁴ Cornell Law School, «Publicity», *cit.*

²⁵ M.T. Islam, «A Brief Introduction to the Right to Privacy – An International Legal Perspective», *GlobaLex, NYU School of Law*, 2022, available on: https://www.nyulawglobal.org/globalex/right_to_privacy_international_perspective.html (accessed 1 April 2026).

privacy.²⁶ Notably, the Right of Privacy is also recognized at the international level, as it is enshrined in Article 12 of the Universal Declaration of Human Rights, which states that “*No one shall be subjected to arbitrary interference with his privacy, family, home or correspondence, nor to attacks upon his honour and reputation. Everyone has the right to the protection of the law against such interference or attacks.*”²⁷

Building on this foundation, the Right of Publicity can be understood as an extension of privacy principles into the economic domain. It is often thought of as a property right in one’s personality,²⁸ protecting not only personal dignity but also the commercial value associated with identity. For instance, it is explicitly addressed by the California Civil Code section 3344²⁹, which states that “*Any person who knowingly uses another’s name, voice, signature, photograph, or likeness, in any manner, on or in products, merchandise, or goods, or for purposes of advertising or selling, or soliciting purchases of, products, merchandise, goods, or services, without that person’s prior consent, [...] shall be liable for any damages sustained by the person or persons injured as a result thereof.*” Moreover, the person – or entity – who violates this section is liable to pay the injured party a minimum of \$750 of statutory damages, or the actual damages suffered by them.³⁰

However, one of the main difficulties with this doctrine lies in its lack of conceptual precision: it prohibits certain conduct without clearly defining the specific harm it seeks to address. This ambiguity has contributed to its expansion, leading some commentators to describe it as resembling a “Wild West.”³¹ However, the increasing development of new technologies – particularly in the fields of AI and digital media – has made it more difficult to apply traditional legal framework effectively. While the Right of Privacy has long been recognized as a fundamental right, its doctrinal structure, as originally developed, may not be fully adequate to address the challenges posed by modern forms of exploitation, especially in industries such as advertising, motion picture, television, and radio industries.³²

²⁶ M.T. Islam, «A Brief Introduction to the Right to Privacy», *cit.*

²⁷ *Universal Declaration of Human Rights*, adopted by the UN General Assembly, Resolution 217 A (III), 10 December 1948, available on: <https://www.un.org/en/about-us/universal-declaration-of-human-rights>.

²⁸ J.E. Rothman, *The Right of Publicity: Privacy Reimagined for a Public World* (Cambridge, MA: Harvard University Press, 2018). Introduction available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3188507, accessed 1 April 2026).

²⁹ California Civil Code § 3344, available on: https://leginfo.ca.gov/faces/codes_displaySection.xhtml?lawCode=CIV§ionNum=3344 (accessed 1 April 2026).

³⁰ California Civil Code § 3344, *cit.*

³¹ R.C. Post, J.E. Rothman, «The First Amendment and the Right(s) of Publicity», *cit.*

³² M.B. Nimmer, «The Right of Publicity», *Law and Contemporary Problems*, vol. 19, n. 2, Spring 1954, pp. 203-223, available on: <https://www.jstor.org/stable/1190488> (accessed 1 April 2026).

This tension is evident in cases such as those involving Bette Midler and Tom Waits, as well as in more recent controversies like the “Drake” case. In such situations, the unauthorized use of a performer’s voice for commercial purposes constitutes a clear violation of both privacy-related interests and publicity rights. For instance, in *Midler v. Ford Motor Co.*, the court recognized the unlawful appropriation of Midler’s voice, awarding her with \$400,000 of damages.³³

These cases illustrate the growing need for legal frameworks that can keep pace with technological advancement, particularly in contexts where identity – such as the human voice – can be artificially replicated and commercially exploited. Within this context, the danger of unauthorized imitation of distinctive voices for advertising purposes is gaining traction. These cases illustrate how the legal protection of identity extends beyond visual likeness to include vocal identity, reinforcing the idea that a person’s voice can function as a recognizable and commercially valuable attribute.

Against this background, contemporary cases involving AI-generated music – such as the so-called “Drake” case – raise analogous concerns, as they rely on technologies capable of replicating an artist’s voice without authorization. These developments highlight the growing tension between technological innovation and existing legal frameworks, emphasizing the need to reassess whether current doctrines are adequately equipped to address the challenges posed by Artificial Intelligence.

1.5 *Authorized vs. unauthorized uses of AI: the Randy Travis case*

The cases analyzed so far have been centered on the illegal utilization of Artificial Intelligence to replicate an artist’s voice, typically with the purpose of financial gain and without the knowledge or the consent of the concerned person. It is worth pausing, however, to consider a fundamentally different scenario – whereby AI is not used as a form of appropriation, but as an aid in the creative process, used with the full consent of the artist and all relative parties. This distinction is not incidental; it is central to the question of regulation that this work is aimed at answering.

Randy Travis is considered to be one of the most significant representatives of country music in America. An artist who has achieved success in a multi-decade career in the country music genre, a Grammy Award winner, and a Country Music Hall of Fame inductee, his voice has turned into an inseparable part of his artistic image. In 2013, however, Travis suffered a severe stroke that left him

³³ J.E. Rothman, *The Right of Publicity*, *cit.*

with aphasia, a neurological condition that causes serious language production and processing impairment, impacting also his ability to sing. In practical terms, Randy Travis was unable to sing or perform, and as such, his audience and fellow artists were left with a sense that his voice, so integral to his image, was gone.

It was in this context that Warner Music Nashville, in association with Mary Travis – Randy Travis’s wife – and the artist's producer Kyle Lehning – who had been working with Randy Travis for many years - began exploring whether Artificial Intelligence might provide them a way of recreating Travis’s vocal elements. Lehning spent several months evaluating different tools before finally being able to come up with a viable option. The project ultimately resulted in the publication of *Where That Came From*, a song that was created by using both human performance and AI-assisted voice modelling. The creation of the track involved engaging another artist to sing it, and then altering his vocals with the use of an AI system designed to mimic the voice of Randy Travis. The result was, by all accounts, remarkably convincing, to the point that the listeners did not initially notice that the voice was synthetic. The song has since attained a considerable commercial success, gained millions of streams and provided feasibility of such methods in the modern music production.

For Mary Travis, for Lehning, and for the many fans who had been waiting for years to hear Travis’s voice again, the song’s release carried considerable emotional value. The song has accumulated more than thirteen million streams on Spotify, and Lehning has indicated that there is a possibility for a full-length album using this same technology.

The most remarkable thing about this case is not merely the result of it, but the method by which this was achieved. The reconstruction of Travis’s voice did not come out of an automated system running in isolation, but as a result of an iterative process of the use of technological tools and human skills. Lehning supposedly experimented with two different AI models, one trained on twelve vocal samples of Travis³⁴, and one trained on forty-two, and compared their results and improved them over time. Casey Wood, an audio engineer who has had first-hand experience in working with Travis was also significant in this process. His knowledge of the vocal habits of the artist, such as phrasing, tonal leanings, and style influences, were critical to ultimate the product. Human oversight, in its way of making the final product both technically and artistically coherent, plays a crucial role in the development of the project itself.

³⁴ D. Friedell, «Country Singer Randy Travis Releases AI Song after Stroke», *VOA Learning English*, 10 May 2024, available on: <https://learningenglish.voanews.com/a/country-singer-randy-travis-releases-ai-song-after-stroke/7603388.html> (accessed 31 May 2026).

The contrast between this case and the “Fake Drake” episode discussed above is notably relevant. In both instances, Artificial Intelligence is used to generate a vocal performance that the artist did not physically record. From a purely technical point of view, the two cases are similar. However, beyond that, the differences between the two cases are significant in that the “Drake” case involves the reproduction of a living artist’s voice without his consent and outside his professional circle. The Randy Travis project, on the other hand, was created with the consent of all the parties involved in the artist’s interest and was presented as an attempt to extend a pre-existing artistic legacy, rather than a shortcut to artistic creation. Where one can be viewed as a form of artistic appropriation, the other can more accurately be described as artistic continuation and an attempt to extend a creative legacy rather than exploit it. Yet, the application of AI even in cases of complete consent, creates unanswered questions concerning authenticity, authorship, and potential posthumous misuse of artistic identity.

This distinction points to a broader issue: namely, that the use of AI in music production cannot be considered in isolation from the technology itself, but rather in terms of the context in which the technology is being applied. The question here is, of course, one of consent and control: who grants permission for the use of a voice? In what context can such permission be granted? And to what extent can the performance be seen as an expression of the artist’s own intentions?

The fact that copyright law, as currently constituted, does not extend protection to works generated by machines or computers in the absence of human authorship, makes these questions even more complicated. The use of AI, even in situation where the presence of consent is obvious, poses other questions that remain open to discussion. Authorship and originality are problematic areas to navigate, especially when the final product is a combination of many overlapping contributions – human and algorithmic. Simultaneously, the authenticity and the possible consequences of reproducing the voice of an artist beyond the frames of his or her physical circumstances may become a matter of concern. What seems to be a preservation instrument in one situation can in other circumstances be a danger of perpetual reproduction.

Finally, as shown by the Randy Travis case, artificial intelligence can be both a tool of legitimate artistic creation, as well as a means of an unauthorized exploitation, thus, making it a potential area of legal and ethical concerns. Its value lies precisely in this duality, demonstrating that the use of AI is not the focal point of the problem, but the lack of a clear and coherent framework that can help to identify the cases where AI could be used and when it turns problematic. In an environment where these technologies are still under development, the need for regulatory clarity becomes even more

pressing, not only to prevent abuse, but also to facilitate a kind of innovation that does not compromise artistic identity or integrity.³⁵

1.6 *Emerging legal issues*

The cases examined throughout this chapter illustrate that the increasing use of artificial intelligence in music production gives rise to a series of complex and interrelated legal issues. It is fundamental to note that the ability of AI tools to recreate or imitate the voice of an artist is a major challenge to the conventional notions of law including authorship, consent, and ownership. These are the traditional concepts of law in the music industry that are currently being questioned in a manner that was never thought before.

The increasing legal issues related to the AI-generated content are not purely theoretical. According to a study conducted by Statista in 2024, cases of identity fraud involving deepfakes have increased exponentially all over the world, with the United States recording a growth in the cases by 3,000% between 2022 and 2023. This increase, though not necessarily specific to the music industry, is especially pertinent to a sector where the vocal and artistic identity is the main economic asset of its participants. This dataset examined over 2 million identity fraud attempts across 224 countries and territories, revealing the increasing threat posed by the unauthorized imitation and use of personal identity in the AI era.³⁶

Artificial Intelligence, when analyzed within a legal framework, represents a structural shift in how fundamental legal concepts are being applied. The technological advancement that had happened in the last decade is the testimony of the systemic transformation that is affecting the music industry, rather than isolated cases of misappropriation. Legal issues such as authorship, consent, and ownership are deeply interrelated, as changes in one aspect inevitably affect the others.

1.6.1 *Authorship, consent, and ownership*

³⁵ IFPI, *Global Music Report 2025*, available on: https://www.ifpi.org/wp-content/uploads/2024/03/GMR2025_SOTI.pdf (accessed 3 February 2026).

³⁶ F. Zandt, «How Dangerous are Deepfakes and Other AI-Powered Fraud?», *Statista*, 13 March 2024, available on: <https://www.statista.com/chart/31901/countries-per-region-with-biggest-increases-in-deepfake-specific-fraud-cases/> (accessed 3 February 2026).

As determined above, the protection of copyright by U.S. law assumes the presence of a human author, which created a fundamental paradox: even in case of a decision to protect AI-generated content, the current legal frameworks would have no clear reference of who should become the author. A crucial distinction underlies this paradox: where AI is used merely as an instrument that assists and complements human creativity, existing law may provide workable solutions. However, when AI plays a more independent role by replacing the human creative input, as is in the generation of vocal performances, the authorship issue becomes much more intractable. This difference between assistance and substitution is the key point as even though the application of AI as a tool does not preclude copyright protection, its application as a substitute for human authorship gives rise to major legal challenges that the current framework is ill-equipped to resolve.

The actors that may be considered candidates for authorship are at least four. The first is the prompter, which has to write the “prompt”, a very descriptive input that communicates the desired features of the output. However, prompts can be automatically optimized by a generative AI system, or the output could differ significantly from the prompt given, by either including or excluding content that was not specified. This degree of unpredictability undermines any claim that the prompter exercises sufficient creative control over the expressive elements of the output to qualify as its author under existing copyright doctrine.³⁷

A second candidate for authorship is the model developer – the entity responsible for building and training the AI system. On the one hand, this appears to be the most obvious option: the developer made the tool that enabled the output to be created, and this is, in fact, the rationale behind cases as the lawsuit against Anthropic by Universal Music Group, ABKCO, and Concord in 2023, where the AI company was considered liable of the music produced by its system. However, on closer examination this attribution fails to hold. The developer controls the creation of the AI software, but not the specific output that the system generates – and it is the output, not the software, that raises the question of authorship. The distance between the developer’s contribution and the final creative product is therefore too significant to sustain a claim of authorship in the traditional sense. Moreover, granting a copyright in AI-generated works to the developer would create the so-called “double dipping” issue: developers receive protection of intellectual property rights in software per se, and in

³⁷ U.S. Copyright Office, *Copyright and Artificial Intelligence, Part 2: Copyrightability*, Report of the Register of Copyrights, January 2025, pp. 6-7, available on: <https://www.copyright.gov/ai/Copyright-and-Artificial-Intelligence-Part-2-Copyrightability-Report.pdf> (accessed 13 April 2026).

the case of a developer being granted a similar right on the output of the software, it would be like getting a second time protection over the same underlying creative act.³⁸

A further candidate that might intuitively be considered for authorship is the imitated artist – that is, the performer whose voice and style have been reproduced by the AI system. This claim, however, finds no support under current U.S. copyright law. As the Copyright Office has explicitly stated, when an AI system retains complete authority over the expressive components of its output, the work thus produced is not the product of human authorship, and thus not subject to copyright. This conclusion bears a paradoxical connotation: not only does the imitated artist have no claim over the AI-generated work, but neither does anyone else. The most affected party, as well as the one with the least legal standing to claim ownership over the work, is the performer whose voice has been imitated without consent. This exclusion is particularly significant in the context of musical deepfakes, where the entire commercial value of the AI-generated output derives precisely from its resemblance to the imitated artist – yet that artist remains outside the scope of copyright protection entirely.³⁹

A fourth potential candidate is the platform or agency through which the AI system is accessed and the output is distributed, but this is probably the most distant actor from the notion of authorship. The platform offers the technical architecture that makes it possible to create and distribute AI-generated works but does not have any creative control over the expressive aspects of the output. Its role is purely intermediary – comparable to that of a publisher or distributor in traditional copyright law, neither of whom is considered an author of the works they make available. On this basis, the platform is unable to maintain a claim of authorship by any legal doctrine in place.

The “Drake” case provides a concrete example of this issue: @ghostwriter977 acted as the prompter, although the degree of any artistic input on his part is highly questionable. The expressive elements of the song were generated by the AI system, not by the person who triggered it. Universal Music Group, which represents both Drake and The Weeknd, might claim the rights of the imitated artists, but neither of them created, performed, or otherwise participated to the track in any way. The case thereby reveals the authorship vacuum at the heart of AI-generated music: all possible claimants can be found but none of them meets the traditional criteria that copyright law has traditionally placed on authors.

³⁸ William Tan, «Defining Authorship for the Copyright of AI-Generated Music», *Harvard Undergraduate Law Review*, Fall 2024, available on: <https://hulr.org/fall-2024/defining-authorship-for-the-copyright-of-ai-generated-music> (accessed 13 April 2026).

³⁹ See William Tan, «Defining Authorship for the Copyright of AI-Generated Music», *Harvard Undergraduate Law Review*, Fall 2024, available at: <https://hulr.org/fall-2024/defining-authorship-for-the-copyright-of-ai-generated-music> (accessed 13 April 2026); as well as U.S. Copyright Office, *Statement of Policy: Copyright Registration Guidance: Works Containing Material Generated by Artificial Intelligence*, 88 Fed. Reg. 16190, 16192 (16 March 2023).

This tension becomes particularly evident when comparing the “Drake” case with the Randy Travis project. Superficially, the two cases appear to be opposites – one unauthorized, the other carried out with the full consent of all parties involved. However, in terms of authorship, the underlying process remains largely similar: in both cases an AI system was employed to create a vocal performance which was not physically recorded by the artist, and in neither scenario does the current copyright law offer a more definitive guide to who ought to be regarded as the author of the resulting work. Either the presence or absence of consent, though ethically and legally important in other aspects, does not solve the authorship problem – it simply alters the moral framing of it. This means that the issue of AI-generated music is not determined only by the misappropriation, but it is rather structural: it occurs whenever AI is placed in a generative position in the creative process, no matter what the context of its application is.

The implications of this authorship vacuum are directly related to the issues of consent and ownership. In intellectual property law, consent assumes that there is an identifiable rights-owner who can either give or refuse permission to use a work, while ownership presupposes a specific author to whom economic rights may be assigned. In cases in which authorship cannot be identified, consent and ownership cannot be established either, leaving the legal framework unable to attribute responsibility, apportion revenues, or provide remedies for those whose identity has been exploited without authorization. As previous judicial decisions such as *Midler v. Ford Motor Co.* and *Waits v. Frito-Lay, Inc.* had already established, the imitation of a performer’s voice in the absence of consent constitutes a form of misappropriation of identity. The novelty of the context of AI is not the right itself, but the magnitude and ease of its violation – the structural inability to find a party to hold accountable by the current authorship regulations.

1.6.2 *Unfair competition and market impact*

A second legal issue that has been identified as an area of concern is unfair competition and the overall market effect of AI-generated music. Although the problem of authorship examined above is considered to be more applicable on the realm of rights allocation, the challenges posed by the competitive dynamics unleashed by AI-generated content create a different yet equally pressing set of problems – ones that don’t relate to the question of rights ownership, but to what happens to the market when such works can be created at almost no cost and at unlimited scale.

The economic impacts of this change can already be quantified. A global study commissioned by CISAC and carried out by PMP Strategy in 2024 revealed that the revenues of Generative AI

providers in the music industry will increase to between € 0.1 billion in 2023 to €4 billion in 2028 – revenues generated directly from the reproduction of creators’ works, often without authorization or compensation. During the same timeframe, artists will lose an estimated €12.7 billion in cumulative revenues, as AI-generated music is projected to take up about 20% of the traditional streaming platform revenues and about 60% of the music library revenues by 2028. This dynamic, as CISAC Director General Gadi Oron noted, is a core weakness opening up in the market, whereby the works of creators are used to increase the revenues of AI companies while the creators themselves are excluded from such growth.⁴⁰

This economic asymmetry has a direct competitive dimension, as a track created by Artificial Intelligence that sounds and looks like a famous artist can directly challenge the official releases of that artist on streaming sites as Spotify or YouTube. This implicates that the AI-generated recording would receive streams and earnings without any kind of compensation to the original performer. This is a form of parasitism competition: the commercial value of the AI-generated work depends only on the fact that it is similar to the artist who is being imitated, whose name and creative work is used without his/her permission, and without remuneration. Such a scenario has a structural similarity to the disruption brought by Napster in the early 2000s, but with one critical difference: unlike the case of digital file sharing which redistributed an already existing work without obtaining authorization, Generative AI generates outputs that directly compete with the human-created works. Therefore, the competitive harm is more diffuse and harder to resolve under the current legal framework.⁴¹

In this dynamic, the role of digital platforms deserves particular attention. The streaming platforms such as Spotify, YouTube, and Tik Tok are inherently placed in a grey area: on the one hand, they can benefit from the engagement generated by viral AI content, but on the other hand, they are also the main platforms on which the competitive harm to human artists is implemented. The absence of uniform technical standards for AI-generated audio detection implies that platforms do not have effective ways of differentiating between synthetic and human-performed content, leaving artists with little to no option when it comes to dealing directly with content that negatively impacts their image in the market. The scale of production and distribution of AI-generated music, as well as this structural gap, imply that the competitive risk of Generative AI cannot be appropriately addressed through individual takedown requests, as even the case of Drake itself has proven, but needs a more

⁴⁰ CISAC/PMP Strategy, *The Impact of Generative AI on the Music and Audiovisual Sectors*, December 2024, available on: <https://www.cisac.org/Newsroom/news-releases/global-economic-study-shows-human-creators-future-risk-generative-ai> (accessed 13 April 2026).

⁴¹ WIPO Magazine, «Could AI Music be the Industry's Next Napster Moment?», *WIPO Magazine*, 2025, available on: <https://www.wipo.int/en/web/wipo-magazine/articles/could-ai-music-be-the-industrys-next-napster-moment-75538> (accessed 13 April 2026).

systemized approach to regulation.⁴² The result is a market dynamic in which the most economically vulnerable creators are also the most exposed to the harms of unregulated AI.

1.6.3 *Economic implications and future challenges*

The issues examined in the preceding sections – the authorship vacuum, the erosion of consent mechanisms, and the emergence of parasitic competitive dynamics – do not operate in isolation. Combined, they point to a broader structural transformation of the music industry ecosystem, the economic consequences of which go far beyond the instances and scandals discussed in this chapter.

A first and often overlooked dimension of this transformation concerns its distributional impact: the competitive threat posed by AI-generated music does not fall equally across the industry. Artists with well-established legal representation and major label support, are in a better position to make takedown and litigation requests than independent artists, session performers, and emerging artists, who may not have the means or the recognition to defend themselves against the AI systems that may be copying their voice or style without their permission.⁴³ According to Gendron, current intellectual property law places the majority of music rights owners in a legal predicament that does not allow them to protect their creative work against a new technology that literally steals their work, a disadvantage that falls disproportionately on those who are not supported by institutions.⁴⁴ The result is a market dynamic in which the most economically vulnerable creators are also the most exposed to the harms of unregulated AI.

The second dimension is related to the emergence of new contractual and licensing models as partial responses to the regulatory vacuum. There are already some players in the industry who are considering other options. Examples include Universal Music Group, which has signed strategic alliances with AI firms like Endel and BandLab Technologies and has reportedly negotiated with Google on the use of artist voices and tunes to create AI-generated music — arrangements through which copyright owners would retain the right to opt in or out and receive compensation. On the same note, UMG removed its catalogue on TikTok at the end of their licensing agreement, citing the

⁴² J. Strémy, «Unfair Commercial Practices in Digital Age», *Bratislava Law Forum*, 2025, p. 314, doi: 10.46282/bpf.2025.19.

⁴³ See Gendron, *A New Frontier: The Music Industry's Struggle Against Generative AI*, *University of Miami Business Law Review*, vol. 33, no. 1, Fall 2024, esp. on structural differences among rights holders.

⁴⁴ See Gendron, *A New Frontier: The Music Industry's Struggle Against Generative AI*, *University of Miami Business Law Review*, vol. 33, no. 1, Fall 2024, at 161–162.

service's inability to properly respond to the influx of AI-generated recordings and the fact that it will severely water down the royalty base of human artists.⁴⁵ These are some of the developments that indicate that the market is starting to generate its own adaptive responses. Nonetheless, they also provoke new questions: with whom, and on behalf of whom, are these deals negotiated and what are the guarantees to artists who do not belong to major labels — who collectively control approximately 80% of the global record label market, leaving independent artists with significantly less leverage.⁴⁶

A third and more systemic dimension concerns the long-term sustainability of the creative ecosystem itself. As AI-generated content continues to increase its share of streaming revenues with no proper regulatory system to ensure attribution and compensation, the economic incentives for human artists to create original work are gradually eroded. The CISAC/PMP Strategy study reveals that, by 2028, musicians will lose out on an estimated \$12.7 billion in cumulative revenues to AI-generated music, which is projected to account for approximately 20% of traditional streaming platform revenues.⁴⁷ The fewer resources flowing to human creators translates to a reduction in investments made by the labels into new talent, narrowing the range of voices and styles that the market offers, and, ultimately, a decline in the creative output that Generative AI models are trained on. This circularity is not merely theoretical: it represents a genuine systemic risk that policymakers have yet to adequately confront.

It is due to these reasons that the necessity of a more comprehensive and better-defined regulatory framework is growing more pressing. This shouldn't be intended as a way of impeding technological innovation, but rather as a way of establishing a precondition for ensuring that this innovation will not harm artistic identity, the proper distribution of rights, and the sustainability of the creative ecosystem in the long term. As the cases reviewed in this chapter show, the repercussions of AI in music are much more than mere isolated cases. They represent an indication of structural change that will necessitate structural reactions, which will involve recourse to both the economic aspects and the legal frameworks that will be discussed more in depth in the following chapters.

2 Chapter II: The Economic Impact of Generative AI on the Music Industry

⁴⁵ V. Gendron, «A New Frontier...», *cit.*, pp. 185-188.

⁴⁶ V. Gendron, «A New Frontier...», *cit.*, pp. 185-188.

⁴⁷ CISAC/PMP Strategy, *The Impact of Generative AI on the Music and Audiovisual Sectors*, December 2024, available on: <https://www.cisac.org/Newsroom/news-releases/global-economic-study-shows-human-creators-future-risk-generative-ai> (accessed 14 April 2026).

2.1 The structure and recent performance of the U.S. music market

Music is among the very few forms of entertainment that have preserved their cultural and economic significance over the generations. It is not just an art form; it is an industry that encompasses production, distribution, publishing, performance, and digital streaming.⁴⁸ The consumption of music spawned a multibillion-dollar industry and grew alongside new technology from vinyl and cassette tapes to CD and, most recently, to digital streaming services.⁴⁹

The emergence of digital streaming has led to a major structural change in the music industry over the last twenty years. Physical sales were the primary source of revenue until digital formats emerged: in 2024, the number of physical record sales in the United States had plummeted by 940 million to just \$33 million in the early 2000s.⁵⁰ Streaming not only bridged this gap, but it exceeded it: as of 2024, streaming comprised 84% of music revenue in the U.S., compared to 65% in 2017, a 19 percentage point increase in 8 years.⁵¹ The shift is also evident at the global level, as music streaming revenues reached \$22 billion in 2025, its highest figure to date, which is over eight times larger than the figure for 2015, now representing more than 69% of all recorded music revenues worldwide.⁵²

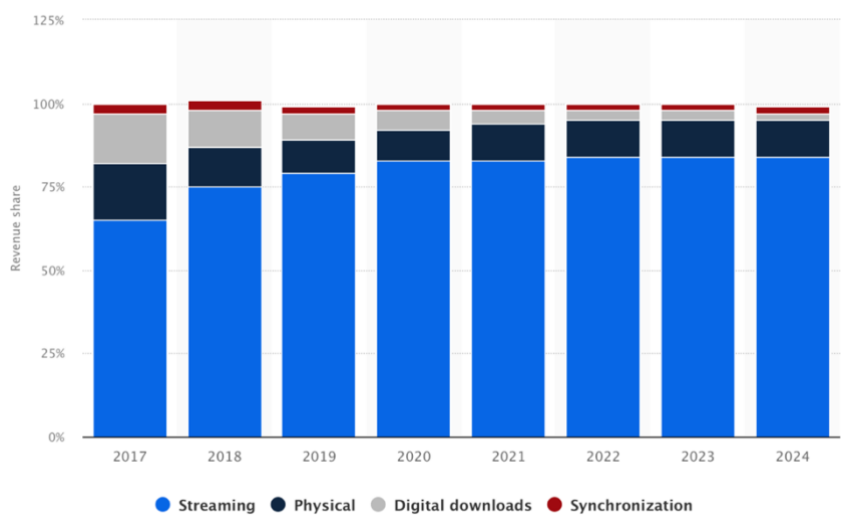
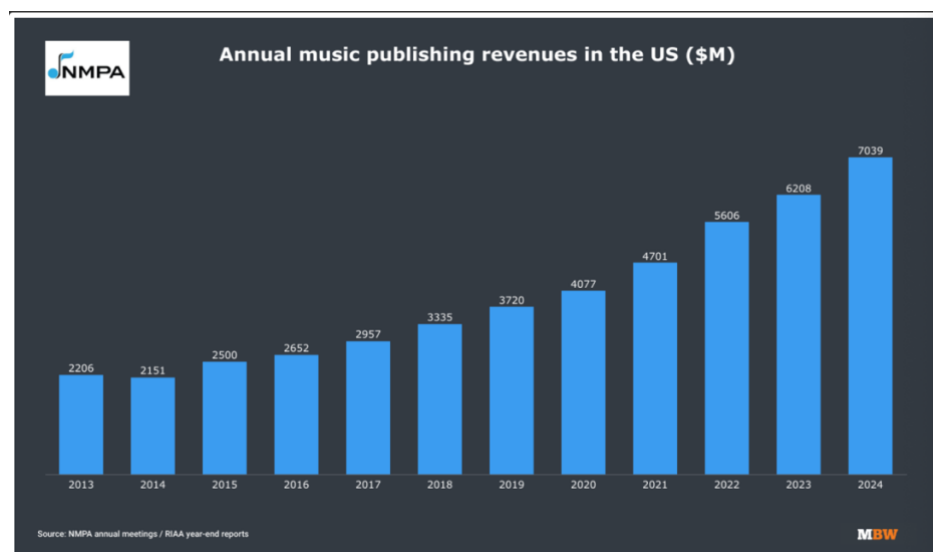


Figure I — Revenue distribution of the U.S. music industry (2017–2024)
Based on RIAA data (2024). Streaming has become the dominant revenue source, increasing from 65% in 2017 to 84% in 2024, while digital downloads have significantly declined over the same period. Source: Statista, *U.S. music industry – revenue distribution 2017–2024, by source*.

⁴⁸ J. Stoll, «U.S. Music Industry — Statistics & Facts», *Statista*, 17 December 2025, available on: <https://www.statista.com/topics/4948/music-industry/#editorsPicks> (accessed 16 April 2026).
⁴⁹ J. Stoll, «Music industry in Europe — statistics & facts», *Statista*, 17 December 2025, available on: <https://www.statista.com/topics/3903/music-industry-in-europe/#topicOverview> (accessed 16 April 2026).
⁵⁰ IFPI, «Music streaming revenue worldwide from 2005 to 2025 (in billion U.S. dollars)», *Statista*, 2026, disponible su: <https://www.statista.com/statistics/587216/music-streaming-revenue/> (accessed 16 April 2026).
⁵¹ RIAA, «Distribution of music industry revenue in the United States from 2017 to 2024, by source», *Statista*, 2025, Statista Inc., available on: <https://www.statista.com/statistics/186304/revenue-distribution-in-the-us-music-industry/> (accessed 16 April 2026).
⁵² IFPI, «Music streaming revenue worldwide from 2005 to 2025 (in billion U.S. dollars)», *Statista*, cit., <https://www.statista.com/statistics/587216/music-streaming-revenue/> (accessed 16 April 2026).

The U.S. recorded music market as a whole has mirrored this trend. Following a period of fluctuation between 4.6 and 4.9 billion dollars during the early 2010s, the revenues increased significantly over the next decade, making streaming the sole driver of growth. In 2023, streaming revenue in the United States alone amounted to 14.4 billion dollars, while only 37 million physical albums were sold – a clear indicator of how comprehensively the consumption model has changed.⁵³ The Recording Industry Association of America (RIAA) estimates that in 2024, the wholesale revenues of recorded music increased further by 2.7 percent annually and reached 11.3 billion dollars.⁵⁴

The music publishing sector has followed the same trajectory and, more recently, has exceeded that of recorded music. The National Music Publishers Association (NMPA), a trade association for the American music publishing industry⁵⁵, has revealed that in 2024, the music publishing revenue grew 13.41%, rising to \$7.039 billion, a growth rate that is five times that of recorded music in the same year. As NMPA President David Israelite noted, a decade ago the recorded music industry was 220% stronger than the music publishing industry, whereas today the difference has been reduced to a mere 60%.⁵⁶ This move towards a convergence of music publishing and recorded music reflects the increasing importance of synchronization rights, licensing, and the increasing value of the underlying compositions as streaming normalizes music consumption at scale.



⁵³ J. Stoll, «U.S. Music Industry — Statistics & Facts», *Statista*, cit., <https://www.statista.com/topics/4948/music-industry/#editorsPicks> (accessed 16 April 2026).

⁵⁴ J. Tencer, «US Music Publishing Revenue Jumped 13.4% To \$7bn In 2024, Outpacing The Growth Rate Of Recorded Music», *Music Business Worldwide*, 12 June 2025, available on: <https://www.musicbusinessworldwide.com/us-music-publishing-revenue-jumped-13-4-to-7bn-in-2024-outpacing-the-growth-of-rate-of-recorded-music/> (accessed 16 April 2026).

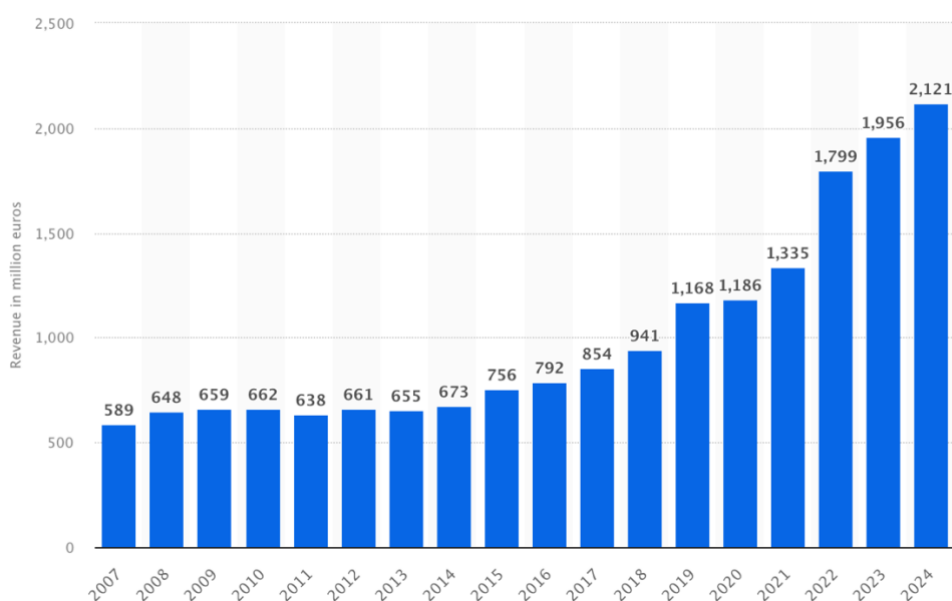
⁵⁵ National Music Publishers' Association (NMPA), *Homepage*, available on: <https://www.nmpa.org> (accessed 16 April 2026).

⁵⁶ D. Tencer, «US Music Publishing Revenue Jumped 13.4% To \$7bn In 2024, Outpacing The Growth Rate Of Recorded Music», *Music Business Worldwide*, 12 June 2025, disponible su: <https://www.musicbusinessworldwide.com/us-music-publishing-revenue-jumped-13-4-to-7bn-in-2024-outpacing-the-growth-of-rate-of-recorded-music/> (accessed 16 April 2026).

Figure II — Comparison of recorded music and publishing revenue growth in the U.S. (2024)

In 2024, recorded music wholesale revenues increased by 2.7% year-on-year to \$11.3 billion, a growth rate below inflation (2.9%), partly due to declining advertising revenues. In contrast, music publishing revenues grew at a significantly faster pace, approximately five times higher than recorded music growth. Source: Music Business Worldwide, *US Music Publishing Revenue Jumped 13.4% To \$7bn In 2024.*

Market power concentration is one of the most significant issues in the market. This includes the three largest companies – Universal Music Group, Sony Music Entertainment, and Warner Music Group – which account for around 80% of the global record label market. Their music publishing arms – namely Universal Music Publishing Group, Sony Music Publishing, and Warner Chappell – are responsible for around 60% of the global music publishing revenues.⁵⁷ The consolidation between 2007 and 2024 resulted in the music publishing revenues of Universal Music Group alone rising to EUR 2.121 billion by 2024, as compared to EUR 589 million in 2007.⁵⁸ The market share of independent record labels and publishers remains limited at approximately 5% despite the growing exposure through streaming platforms. This represents a structural imbalance that could significantly impact the capacity of independent artists to adapt to transformative new technologies like Generative AI.⁵⁹

**Figure III — Universal Music Group publishing revenue (2007–2024)**

Universal Music Group's publishing revenue surpassed \$2 billion for the first time in 2024, reaching approximately \$2.12 billion. The publishing segment remains one of the company's most significant sources of revenue growth. Source: Statista, *Universal Music Group: music publishing revenue 2007–2024.*

⁵⁷ J. Stoll, «U.S. Music Industry — Statistics & Facts», *Statista*, cit., <https://www.statista.com/topics/4948/music-industry/#editorsPicks> (accessed 16 April 2026).

⁵⁸ Universal Music, «Music publishing revenue of the Universal Music Group from 2007 to 2024 (in million euros)», *Statista*, 6 March 2025, available on: <https://www.statista.com/statistics/314363/universal-music-group-music-publishing-revenue/> (accessed 16 April 2026).

⁵⁹ J. Stoll, «U.S. Music Industry — Statistics & Facts», *Statista*, cit., <https://www.statista.com/topics/4948/music-industry/#editorsPicks> (accessed 16 April 2026).

At the platform level, the leader in music streaming is still Spotify, a digital music, podcast, and video service that provides access to songs and other content⁶⁰ online, with an estimated share of one-third of global subscribers and over 800 million monthly active users worldwide.⁶¹ Apple Music comes in second at about 12% market share, followed by Amazon Music with 10%. The other 60% is composed of services such as YouTube Music, Deezer, SoundCloud, and Tidal.⁶² The revenue generated from major music production labels in the United States reached approximately 13.5 billion dollars in 2024, more than double the 6.3 billion recorded in 2014, when the market was at its lowest point following the decline of physical sales and before streaming had fully taken hold.⁶³

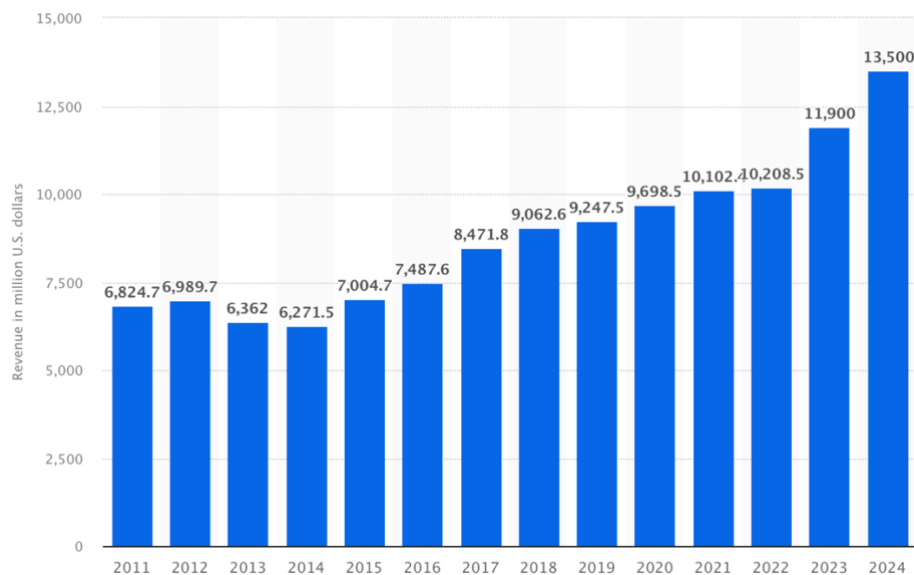


Figure IV — Market size of major music production labels in the United States (2011–2024)

Revenue generated by major music production labels in the United States reached approximately \$13.5 billion in 2024, continuing a steady growth trend since 2014, when the market size was at its lowest point of \$6.3 billion. Source: Statista, *Market size of major music production labels in the U.S. 2011–2024*

⁶⁰ Spotify, «What is Spotify», *Spotify Support*, available on: <https://support.spotify.com/us/article/what-is-spotify/> (accessed 16 April 2026).

⁶¹ IFPI, «Music streaming revenue worldwide from 2005 to 2025 (in billion U.S. dollars)», *Statista*, 2026, available on: <https://www.statista.com/statistics/587216/music-streaming-revenue/> (accessed 16 April 2026).

⁶² J. Stoll, «Streaming in the United States — statistics & facts», *Statista*, 17 April 2026, available on: <https://www.statista.com/topics/1594/streaming/#topicOverview> (accessed 16 April 2026).

⁶³ IBISWorld, «Revenue of major music production labels in the United States from 2011 to 2024 (in million U.S. dollars)», *Statista*, 15 May 2025, available on: <https://www.statista.com/statistics/1277752/market-size-music-production-labels-united-states/> (accessed 16 April 2026).

These data suggest a fundamental structural change in the market, which has emerged from it in a position of sustained growth, where, in addition to physical forms, streaming has fundamentally changed the manner in which the music is distributed, monetized, and consumed. This context is critical to understanding the scale of the disruption that Generative AI is currently causing. After two decades of technological turbulence, the music industry has now been disrupted by another technology of roughly the same, or even larger, scale. Unlike streaming, which simply transformed the delivery channels, generative AI may disrupt the artistic process in the near future and undermine the economic value of a music industry based on creative human labor.

2.2 *The growth of the generative AI market*

The impact of generative AI in the music industry is not happening in isolation; it is part of a wider technological shift that is reshaping industries worldwide. To understand the impact of AI-based tools in particular, it is important to first understand the scale and trajectory of the general generative AI market, as these trends shape how quickly AI-based music tools become available, accessible, and widespread.

The generative AI industry is currently experiencing a period of growth at a level never seen before. Statista forecasts that the market will be worth an estimated \$86.70 billion globally in 2026 and continue to grow at a compound annual growth rate (CAGR) of 24.83% to reach \$327.99 billion in 2032.⁶⁴ The majority of this growth will be led by North America and the U.S. in particular; the U.S. Generative AI market alone is projected to be worth \$47.65 billion in 2026 and grow at a CAGR of 26.41% to reach \$194.46 billion in 2032.⁶⁵ The European market will grow at a more gradual rate, reaching a value of \$12.21 billion in 2026 and \$40.23 billion in 2032 at a CAGR of 21.98%.⁶⁶ The user base of this market also matters, as global adoption of generative AI is expected to expand from about 115.91 million users in 2020 to more than 1.17 billion in 2031.⁶⁷

⁶⁴ Statista, «Generative AI — Worldwide», *Statista*, 2026, Statista Inc., available on: <https://www.statista.com/outlook/tmo/artificial-intelligence/generative-ai/worldwide> (accessed 20 April 2026).

⁶⁵ Statista, «Generative AI — United States», *Statista*, 2026, Statista Inc., disponibile su: <https://www.statista.com/outlook/tmo/artificial-intelligence/generative-ai/united-states> (accessed 17 April 2026).

⁶⁶ Statista, «Generative AI — Europe», *Statista*, 2026, Statista Inc., available on: <https://www.statista.com/outlook/tmo/artificial-intelligence/generative-ai/europe> (accessed 18 April 2026).

⁶⁷ Statista, «Number of AI tool users worldwide from 2020 to 2031 (in millions)», *Statista*, 1 July 2025, available on: <https://www.statista.com/forecasts/1449844/ai-tool-users-worldwide/> (accessed 17 April 2026).

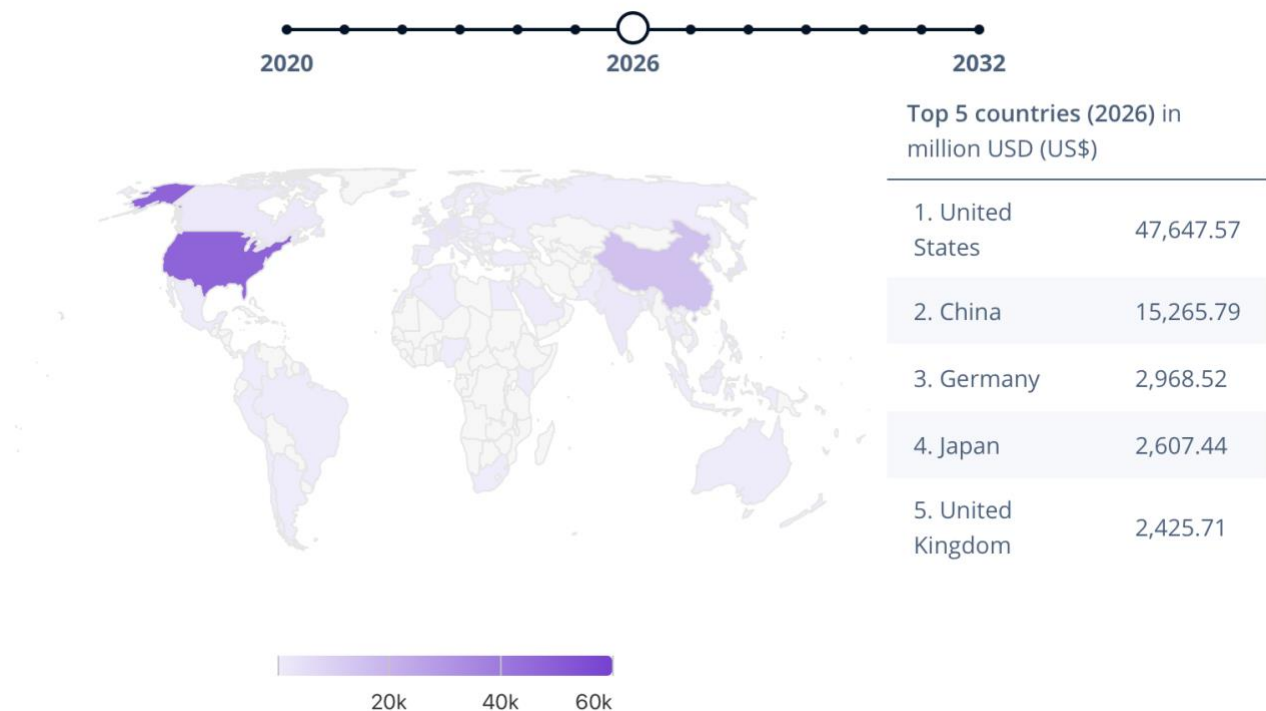


Figure V — Global comparison of generative AI market size

The chart compares the estimated market size of generative AI across leading global economies. Market size values are calculated using funding data rather than direct market revenues, highlighting differences in investment intensity between countries. Source: Statista Market Insights, *Market Size Global Comparison*

Within this broader expansion, the music sector has emerged as one of the most dynamic areas of generative AI adoption: in 2023, the market value of generative AI for music amounted to \$440 million, and it is estimated to reach a value of \$2.794 billion in 2030 with a CAGR of 30.4%. This growth rate, which is higher than the average annual growth of the generative AI industry overall, speaks to how receptive the music industry is to AI applications in the field. The highest regional concentration is in North America, which holds 38.6% of the market share, driven by the concentration of large tech companies and the highly digital U.S. music industry infrastructure. In terms of application, the largest market segment is automated music composition, and in terms of type, software takes the biggest share, amounting to 65.25% of total revenue in the global music market. This means that the value of AI music largely comes from the program and algorithm used to create it, and not from any form of hardware.⁶⁸

⁶⁸ GVR Next Generation Technologies Research Team, «Generative AI in Music Market (2024–2030): Size, Share & Trends Analysis Report», *Grand View Research*, August 2024, available on: <https://www.grandviewresearch.com/industry-analysis/generative-ai-in-music-market-report> (accessed 18 April 2026).

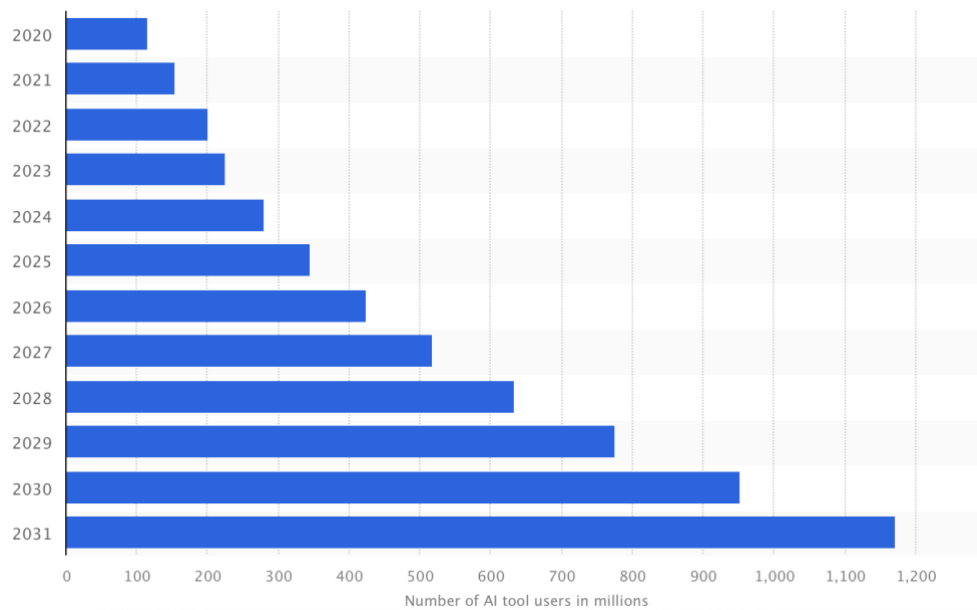


Figure VI — Number of AI tool users worldwide (2020–2031)

The global number of AI tool users reached approximately 281 million in 2024 and is projected to continue growing steadily, surpassing one billion users by 2031. The data highlights the rapid expansion and widespread adoption of AI technologies worldwide. Source: Statista, *Number of AI tool users worldwide 2020–2031*.

Both supply-side and demand-side factors are leading this rapid growth in the market. Supply-side factors include better machine learning designs that are producing generative AI outputs with such accuracy that they are often indistinguishable from human content. Meanwhile, the on-demand music segment has been growing, and consumers are increasingly asking for more personalized content, putting pressure on streaming services like Spotify, YouTube Music, and Apple Music to adopt generative AI for content curation and creation. The scalability of AI – which allows AI tools to generate vast amounts of unique content for only marginal cost – makes it ideal for the streaming model, in which volume and customization serve to differentiate market players.⁶⁹

However, the expansion of the market for generative AI music is not occurring in isolation. According to a recent U.S. survey, there is a significant gap between the pace of technological adoption and public sentiment toward its implications. As of March 2025, 58% of American adults reported being very concerned about the spread of AI-generated audio and video deepfakes. This also applies to the professional sphere: 77% of media and entertainment workers agree that digitally recreating another

⁶⁹ GVR Next Generation Technologies Research Team, «Generative AI in Music Market (2024–2030): Size, Share & Trends Analysis Report», *Grand View Research*, cit., <https://www.grandviewresearch.com/industry-analysis/generative-ai-in-music-market-report> (accessed 18 April 2026).

person's voice for use in audio or video should require that person's consent.⁷⁰ Simultaneously, 63% of U.S. consumers as of November 2024 believe that humans are better than AI at music creation – a number that reflects an enduring value difference between human and machine music despite the increasing resemblance between music produced by generative AI and that created by human beings.⁷¹

These data suggest a very fast-growing market that is also giving rise to widespread social unease. The gap between these two realities – the rapid evolution of new technologies and a general trend towards improving the legal and regulatory framework for consent and authorship – is what the legal and regulatory analysis of this thesis seeks to resolve. Considering that the market for generative AI music is expected to increase nearly 7 times in the next decade and that many in this industry are asking for stronger explicit consent laws, there is a pressing need to evaluate the potential harm being caused by the proliferation of generative AI in the music industry to the economic interests of musicians, record labels, and digital streaming companies.

2.3 *Economic risks for artists, record labels, and digital platforms*

According to a study commissioned by the International Confederation of Societies of Authors and Composers (CISAC) and conducted by PMP Strategy, generative AI will benefit tech companies, with more than 5 million creators represented over the next five years, but the income of human authors will be significantly threatened. Artists might lose an important portion of their existing revenues as AI has an enormous influence on human-generated art. Furthermore, music and audiovisual artists will be exposed to the risk of losing 24% and 21% of their revenues by 2028, respectively, resulting in a cumulative loss of € 22 billion over the 5-year period.⁷²

⁷⁰ Duke University, «Share of media and entertainment workers who think selected uses of GenAI in the industry should require consent in the United States as of May 2024», *Statista*, 16 October 2024, available on: <https://www.statista.com/statistics/1610411/genai-use-cases-media-and-entertainment-consent-us/> (accessed 18 April 2026).

⁷¹ Hub Entertainment Research, «Share of consumers who think humans are better than artificial intelligence (AI) at creating selected aspects of entertainment in the United States as of November 2024», *Statista*, 30 January 2025, available on: <https://www.statista.com/statistics/1558249/ai-vs-human-entertainment-task-creation-opinion-us/> (accessed 18 April 2026).

⁷² CISAC, «Global economic study shows human creators' future at risk from generative AI», *CISAC Newsroom*, 2 December 2024, available on: <https://www.cisac.org/Newsroom/news-releases/global-economic-study-shows-human-creators-future-risk-generative-ai> (accessed 20 April 2026).

2.3.1 *Market dilution and oversupply of content*

With the rise of generative AI and the popularity of synthetic voices and deepfakes, AI-generated music has expanded at an exponential rate. Here, UMG, in a recent multi-plaintiff copyright infringement lawsuit against the Generative AI developer Suno, has advanced a novel legal theory referred to as “dilution”. The capacity of AI systems to generate huge amounts of new works raises the question of whether this could reduce the value of existing works, thereby harming the entire category of creative output. This is a matter that has been debated by Suno – an AI music generator platform – which claims that the misuse of a vast collection of copyrighted works for training purposes does not inflict damage to any specific individual work.⁷³ This legal dispute reveals the inherent tension in the relationship between rights holders and generative AI itself, with its economic aspects being at the core of this thesis.

The relationship between AI and the music industry is closely linked to the evolution of music streaming platforms. AI has always played an important role in the distribution and personalization aspects of these platforms, and it is continuing to shape the music industry. The introduction of these technologies benefits user experience and facilitates better content management, but also represents a more general shift from a creativity-centric model to a technology-centric model, which is increasingly putting at risk its economic structure.⁷⁴

A primary consequence of generative AI has been an exponential expansion of the volume of music released. The widespread adoption of AI-generated music has led to a significant growth in the volume of music available on platforms, adding to the challenge of content discoverability and competition among creators. The logic underpinning this is also conditioned by the structural features of the streaming business model, which must accommodate a growing supply of content with limited economic means. Empirical evidence underscores the magnitude of this phenomenon: although global revenues of the recorded music industry reached U.S. \$29.6 billion in 2024, streaming services

⁷³ A. Arenal, J. M. Aguado, C. Armuña, S. Ramos, C. Feijoo, «Artificial intelligence in the music streaming value chain: Exploring artists' and users' perceptions on content creation and algorithmic consumption», *Telecommunications Policy*, vol. 50, n. 2, 2026, art. 103129, available on: <https://doi.org/10.1016/j.telpol.2025.103129>

⁷⁴ A. Arenal, J. M. Aguado, C. Armuña, S. Ramos, C. Feijoo, «Artificial intelligence in the music streaming value chain: Exploring artists' and users' perceptions on content creation and algorithmic consumption», *Telecommunications Policy*, cit., <https://doi.org/10.1016/j.telpol.2025.103129> (accessed 22 April 2026).

such as Deezer report that a massive share of daily uploads⁷⁵ – which initially stood at 18% and then increased to almost 39%⁷⁶ – consists of AI-generated music.

The most immediate consequence of this expansion is financial, as streaming platforms operate on a finite revenue pool, from which royalties are distributed among rights holders. Therefore, the mean value which can be attributed to each particular piece of work is likely to decrease, as the number of tracks that compete in the same direction increases. This is further aggravated by fraudulent practices, such as the mass uploading of AI-generated tracks to generate illegitimate streaming revenues. In this case, the revenue that can be achieved by a legitimate artist, label, or publisher is diminished by each of the fraudulent streams, further reinforcing the issue of revenue dilution.⁷⁷

In a broader sense, Generative AI has a relevant role in the structural change that is affecting the music market. On the supply side, it lowers the production costs and the market entry barriers, increasing the number of actors producing content. On the demand side, it enhances personalization and user engagement, leading to short-term gains in efficiency and consumer surplus. These developments also bring up long-term issues regarding market concentration, quality dilution, and sustainability, all of which are addressed in the following sections in terms of their competitive and distributive aspects.⁷⁸

The focus here is not only about the improvement of the content, but it is a deeper concern that addresses the transformation of the music industry, in which the visibility, value creation, and income distribution are mediated by technological infrastructures. Such developments highlight the need to reassess existing economic and regulatory frameworks in order to ensure that innovation remains compatible with the sustainability of the creative ecosystem.⁷⁹

⁷⁵ C. McEvoy, «How AI-generated songs are fueling the rise of streaming farms», *WIPO Magazine*, 27 May 2025, available on: <https://www.wipo.int/en/web/wipo-magazine/articles/how-ai-generated-songs-are-fueling-the-rise-of-streaming-farms-74310> (accessed 23 April 2026).

⁷⁶ Deezer, «Deezer confirms demonetization of up to 85% of AI-music streams due to fraud and moves to sell AI-detection tech», *Deezer Press Release / WebDisclosure*, 29 January 2026, available on: <https://www.finanzwire.com/press-release/deezer-deezer-confirms-demonetization-of-up-to-85-of-ai-music-streams-due-to-fraud-and-moves-to-sell-ai-detection-tech-WBzKWarJSrF> (accessed 22 April 2026).

⁷⁷ C. McEvoy, «How AI-generated songs are fueling the rise of streaming farms», *WIPO Magazine*, cit., <https://www.wipo.int/en/web/wipo-magazine/articles/how-ai-generated-songs-are-fueling-the-rise-of-streaming-farms-74310> (accessed 23 April 2026).

⁷⁸ Y. Zhang, T. Zhang, «The Impact of Generative AI on Content Platforms: A Two-Sided Market Analysis with Multi-Dimensional Quality Heterogeneity», *arXiv*, 2024, available on: <https://arxiv.org/pdf/2410.13101> (accessed 21 April 2026).

⁷⁹ Y. Zhang, T. Zhang, «The Impact of Generative AI on Content Platforms: A Two-Sided Market Analysis with Multi-Dimensional Quality Heterogeneity», *arXiv*, 2024, available on: <https://arxiv.org/pdf/2410.13101> (accessed 21 April 2026).

2.3.2 Revenue displacement and loss of income

Algorithmic recommendation systems are now one of the main sources of competitive distortion in the music market. They serve a valuable purpose in allowing content to be discovered and enriching user experience, but clearly play a major role in the reach and visibility of the content and therefore in value distribution.⁸⁰

The primary issue is whether the suggestions given by algorithms are based on popularity trends. Algorithms, in fact, usually take into account users' engagement metrics when defining their suggestions,⁸¹ and this may imply a focus on content that already enjoys a certain degree of visibility.⁸² This situation creates a self-reinforcing cycle in which visibility depends on prior visibility, and the resulting focus inevitably centers on a limited number of already famous artists and works.⁸³ This is the so-called “superstar effect,” a term coined in 1981 by economist Sherwin Rosen, which explains how small marginal differences in talent and exposure can translate into massive disparities in financial rewards.⁸⁴

In the case of music streaming platforms, this is exacerbated by the importance of algorithmic curation. Playlists and recommendation lists, which are curated algorithmically, are the primary entry points for audiences to listen to music, and hence determine, on a large scale, which songs listeners get a chance to hear and which they don't. As such, traditional “gatekeepers” in the music industry (e.g., record label executives, intermediaries) have come to rely on the infrastructures that these

⁸⁰ A. Henry, V. Wiratama, A. Afilipoaie, H. Ranaivoson, E. Arrivé, «Impacts of AI on Music Consumption and Fairness», *Emerging Media*, vol. 2, n. 3, September 2024, pp. 382–396, available on: <https://doi.org/10.1177/27523543241269047> (accessed 22 April 2026).

⁸¹ A. Henry, V. Wiratama, A. Afilipoaie, H. Ranaivoson, E. Arrivé, «Impacts of AI on Music Consumption and Fairness», *Emerging Media*, vol. 2, n. 3, September 2024, pp. 382–396, available on: <https://doi.org/10.1177/27523543241269047> (accessed 22 April 2026).

⁸² H. Abdollahpouri, R. Burke, M. Mansoury, «Unfair Exposure of Artists in Music Recommendation», in *Proceedings of CHI '20*, ACM, 25–30 April 2020, Honolulu (HI), USA, available on: <https://arxiv.org/pdf/2003.11634> (accessed 22 April 2026).

⁸³ H. Abdollahpouri, R. Burke, M. Mansoury, «Unfair Exposure of Artists in Music Recommendation», in *Proceedings of CHI '20*, ACM, 25–30 April 2020, Honolulu (HI), USA, available on: <https://arxiv.org/pdf/2003.11634> (accessed 22 April 2026).

⁸⁴ A. Ferraro, X. Serra, C. Bauer, «What is fair? Exploring the artists' perspective on the fairness of music streaming platforms», in *Proceedings of the 18th IFIP International Conference on Human-Computer Interaction (INTERACT 2021)*, Bari, 2021, available on: <https://arxiv.org/pdf/2106.02415> (accessed 22 April 2026).

algorithms represent.⁸⁵ These platforms are known as “new hit makers” because of the influence they wield over the consumption and, ultimately, the success of musical works.⁸⁶

These implications are particularly significant when analyzed from a fairness perspective. Music streaming ecosystems involve multiple stakeholders – users, artists, and platforms – whose interests are not always aligned. Artists in particular are structurally disadvantaged because their visibility – and therefore the amount of remuneration – largely relies on algorithmic exposure, which they have little to no control over. This disparity is further compounded by the fact that large rights-holders and well-known artists may have an advantage in benefiting from the algorithmic dynamics, either through pre-existing popularity or through better access to promotional and optimization strategies.⁸⁷

Moreover, algorithmic systems are not neutral. Their outcomes depend on the training data provided to the systems in the learning phase, and on the design decisions made during development. This can lead to reproducing or perpetuating biases, such as preferring a specific genre, language, or type of artist over others. In addition, the lack of transparency of algorithms is also relevant, as it generates considerable information asymmetries among platforms, rights holders, and creators. In fact, lesser-known artists cannot know, and therefore cannot act against, the factors that determine their visibility.

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All major streaming platforms are still using the pro-rata remuneration model, which further adds to this complexity. In this model, the entire revenue earned by the platform is distributed proportionally to the market share of each track across all users. Therefore, the length of the song and the listener’s identity are irrelevant to the calculation of royalties for each stream. This leads to a concentration of value, with top artists being over-represented and smaller artists receiving only marginal compensation, to the extent that the model has been heavily criticized by those involved in the music industry as unsustainable and unfair.⁸⁹

As a possible alternative, the user-centric model, as proposed by Deezer, could better reflect the interests of artists. In this case, each platform user’s payment would be distributed only among the

⁸⁵ A. Henry, V. Wiratama, A. Afilipoaie, H. Ranaivoson, E. Arrivé, «Impacts of AI on Music Consumption and Fairness», *Emerging Media*, vol. 2, n. 3, September 2024, pp. 382–396, available on: <https://doi.org/10.1177/27523543241269047> (accessed 22 April 2026).

⁸⁶ A. Henry, V. Wiratama, A. Afilipoaie, H. Ranaivoson, E. Arrivé, «Impacts of AI on Music Consumption and Fairness», *Emerging Media*, vol. 2, n. 3, September 2024, pp. 382–396, available on: <https://doi.org/10.1177/27523543241269047> (accessed 22 April 2026).

⁸⁷ A. Henry, V. Wiratama, A. Afilipoaie, H. Ranaivoson, E. Arrivé, «Impacts of AI on Music Consumption and Fairness», *Emerging Media*, vol. 2, n. 3, September 2024, pp. 382–396, available on: <https://doi.org/10.1177/27523543241269047> (accessed 22 April 2026).

⁸⁸ A. Henry et al., «Impacts of AI on Music Consumption and Fairness», *Emerging Media*, cit.

⁸⁹ A. Henry et al., «Impacts of AI on Music Consumption and Fairness», *Emerging Media*, cit.

creators they streamed during a particular period. This would remove the cross-subsidization effect of the pro-rata system and would reduce the structural advantages of already dominant content.⁹⁰

The aforementioned dynamics have considerable economic implications for the sector as a whole. Access to audiences is, once again, mediated by recommendation systems, meaning that, in a certain sense, differences in exposure translate into inequalities in the revenue of the various subjects.⁹¹ While digital platforms were initially believed to help level the playing field for access to and distribution of cultural productions and works, the increasing importance of algorithms in these activities suggests that structural advantages may be reinforced rather than reduced.⁹²

These factors are even further aggravated by the possibility that generative AI may increase the distortive impact of the dynamics described above. AI-driven production could further amplify “concentration effects” and further widen the divide among categories of creators by expanding the content available and shaping the dynamics of competition for it. These trends have larger implications for the ability of existing platform systems to create fair competition and a viable value-sharing model for the music industry.⁹³

2.3.3 *Increased risk of fraud and market manipulation*

*As discussed in the previous section, the pro-rata remuneration model induces structural inequity in revenue distribution, as well as structural susceptibility to manipulation, vulnerabilities that have been amplified by the advent of generative AI.*⁹⁴

Now, with the advent of generative AI music, the scale and nature of music streaming fraud have completely changed. Traditional streaming fraud required significant manual effort to produce and circulate content, while now AI enables the mass production of tracks at negligible costs. In February 2025, the Director of Global Content Protection and Enforcement at the International Federation of the Phonographic Industry (IFPI) pointed out in his comments to WIPO’s Advisory Committee on

⁹⁰ A. Henry et al., «Impacts of AI on Music Consumption and Fairness», *Emerging Media*, cit.

⁹¹ A. Henry et al., «Impacts of AI on Music Consumption and Fairness», *Emerging Media*, cit.

⁹² A. Arenal, J. M. Aguado, C. Armuña, S. Ramos, C. Feijoo, «Artificial intelligence in the music streaming value chain: Exploring artists’ and users’ perceptions on content creation and algorithmic consumption», *Telecommunications Policy*, vol. 50, n. 2, 2026, art. 103129, available on: <https://doi.org/10.1016/j.telpol.2025.103129> (accessed 22 April 2026).

⁹³ A. Arenal, J. M. Aguado, C. Armuña, S. Ramos, C. Feijoo, «Artificial intelligence in the music streaming value chain: Exploring artists’ and users’ perceptions on content creation and algorithmic consumption», *Telecommunications Policy*, vol. 50, n. 2, 2026, art. 103129, available on: <https://doi.org/10.1016/j.telpol.2025.103129> (accessed 22 April 2026).

⁹⁴ J. Meyn, M. Kandziora, S. Albers et al., «Consequences of platforms' remuneration models for digital content: initial evidence and a research agenda for streaming services», *Journal of the Academy of Marketing Science*, vol. 51, 2023, pp. 114–131, available on: <https://doi.org/10.1007/s11747-022-00875-6> (accessed 23 April 2026).

Enforcement that AI has become “the ultimate enabler” of streaming fraud, allowing bad actors to “stay under the radar but still operate at a sufficient scale that their activities are lucrative”. The process is straightforward: fraudsters post hundreds of thousands of music tracks made with AI-generated content and play them enough times to collect royalties, but not enough to trigger automated music track detection systems.⁹⁵

The most emblematic case is that of North Carolina musician Michael Smith, who allegedly earned more than \$10 million from the fraudulent payment of royalties between 2017 and 2024, uploading hundreds of thousands of AI-generated songs and running networks of automated bots to stream them a billion times. The scheme shows how AI has changed the logic of streaming fraud: instead of focusing artificial streams on a few tracks, which is relatively easy to detect, it enables a “low and slow” approach in which fraudulent activity is distributed across an enormous volume of content to evade scrutiny. The case triggered federal charges for wire fraud, conspiracy, and money laundering and marked the first criminal prosecution of AI-powered streaming fraud in the United States.⁹⁶

The economic consequences of this phenomenon extend well beyond individual fraudulent actors. According to Morgan Hayduk, co-CEO of Beatdapp – a service specializing in streaming fraud detection – every point of market share in the streaming economy is worth several hundred million dollars annually. This means that the diversion of even a small percentage of streams into fraudulent channels is worth at least one billion dollars per year, being stolen from the limited streaming royalties fund. The losses are not distributed equally along the value chain: independent and emerging artists are the most dependent on streaming revenues and the least able to contest fraudulent activity.⁹⁷ Further, platform recommendation algorithms are distorted by each manipulated stream, making it more difficult for the majority of users to find the content they seek and further deepening the competitive disadvantage small creators already experience.

This data reported by individual platforms confirms the scale of the problem. As of January 2026, Deezer was receiving over 60,000 fully AI-generated tracks per day, or approximately 39% of the total daily uploads. Of the streams generated by these tracks, up to 85% were identified as fraudulent and demonetized. For comparison, streaming fraud across Deezer’s entire catalog accounted for 8%

⁹⁵ C. McEvoy, «How AI-generated songs are fueling the rise of streaming farms», *WIPO Magazine*, cit., <https://www.wipo.int/en/web/wipo-magazine/articles/how-ai-generated-songs-are-fueling-the-rise-of-streaming-farms-74310> (accessed 23 April 2026).

⁹⁶ C. McEvoy, «How AI-generated songs are fueling the rise of streaming farms», *WIPO Magazine*, cit., <https://www.wipo.int/en/web/wipo-magazine/articles/how-ai-generated-songs-are-fueling-the-rise-of-streaming-farms-74310> (accessed 23 April 2026); United States v. Michael Smith, District Court, Eastern District of North Carolina, September 2024.

⁹⁷ C. McEvoy, «How AI-generated songs are fueling the rise of streaming farms», *WIPO Magazine*, cit., <https://www.wipo.int/en/web/wipo-magazine/articles/how-ai-generated-songs-are-fueling-the-rise-of-streaming-farms-74310> (accessed 23 April 2026).

of streams in the same period, highlighting the disproportionate focus of fraudulent activity on AI-generated content.⁹⁸

At a systemic level, the implications are significant. If unregulated, the unlicensed use of generative AI could steal up to 25% of creators' royalties, representing around 8.5 billion euros per year, according to CISAC's Global Collections Report 2025. The same organization's study on the economic impact of Generative AI estimates that AI-generated outputs are expected to total 40 billion euros by 2028, while creator revenue is expected to decline by 24% – or around 4 billion euros in 2028 alone – with the rise of generative AI expected to take one-fifth of streaming revenue and 60% of music library revenues. When combined with research by Goldman Sachs, which revealed that per-stream revenue has declined by 20% since 2017, while the total number of streams has risen by almost 2.5 times since then, this shows a market where economic support for human creativity is being systematically eroded.⁹⁹¹⁰⁰

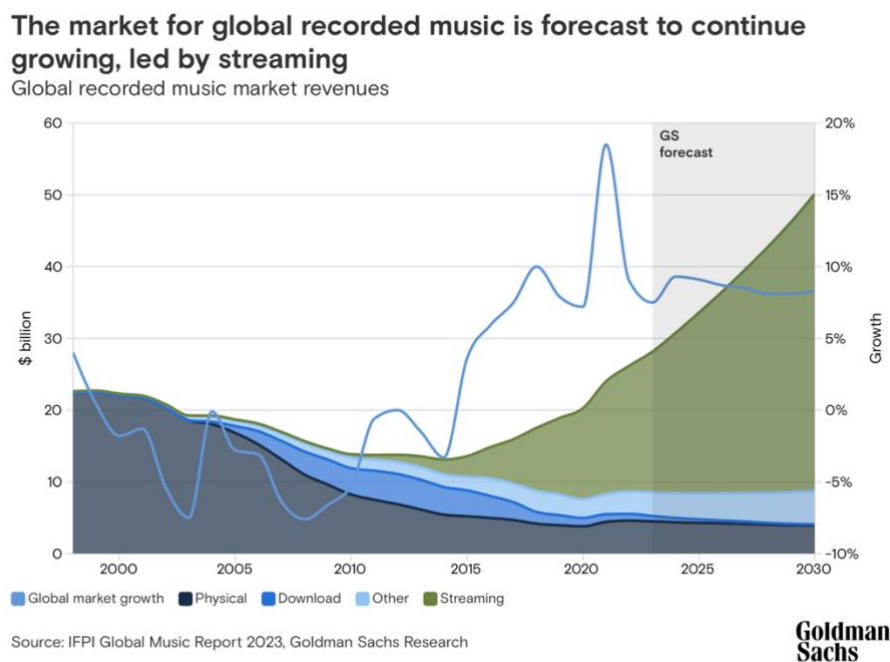


Figure VII — Streaming growth vs. revenue per stream

Music streaming consumption has increased 2.5 times since 2017, while revenue per stream has fallen by around 20%, indicating higher consumption but lower monetization per unit. Source: Goldman Sachs

⁹⁸ J. Meyn, M. Kandziora, S. Albers et al., «Consequences of platforms' remuneration models for digital content: initial evidence and a research agenda for streaming services», *Journal of the Academy of Marketing Science*, vol. 51, 2023, pp. 114–131, available on: <https://doi.org/10.1007/s11747-022-00875-6> (accessed 23 April 2026).

⁹⁹ A. Arenal, J. M. Aguado, C. Armuña, S. Ramos, C. Feijoo, «Artificial intelligence in the music streaming value chain: Exploring artists' and users' perceptions on content creation and algorithmic consumption», *Telecommunications Policy*, vol. 50, n. 2, 2026, art. 103129, available on: <https://doi.org/10.1016/j.telpol.2025.103129> (accessed 20 April 2026).

¹⁰⁰ Goldman Sachs, «Music streaming services are on the cusp of major structural change», *Goldman Sachs Insights*, 31 July 2023, available on: <https://www.goldmansachs.com/insights/articles/music-streaming-services-are-on-the-cusp-of-major-structural-change> (accessed 23 April 2026).

So far, industry reactions have been fragmented. In 2024, Spotify introduced a minimum 1,000-stream rule for royalty eligibility, which shifted \$50 million in royalties away from low-traffic tracks. Deezer, too, adopted an artist-centric royalty distribution system that caps each user's streams to 1,000, while also partnering with Universal Music Group in 2023 to launch the industry's first comprehensive artist-centric streaming platform. While these initiatives are positive developments towards fairer and more fraud-proof streaming, there are trade-offs, such as the 1,000-stream cap for royalty calculations, which has been criticized as unfairly penalizing emerging and independent artists, who are the ones most likely to be targeted by AI-generated music.¹⁰¹

2.4 *Economic opportunities and new licensing models*

The economic challenges posed by Generative AI to the music industry – market dilution, revenue displacement, and streaming fraud – do not exhaust the picture. These developments present their own economic opportunities, especially in the domain of licensing and rights management. It's no longer a question of whether AI will become part of the music economy, but of under what conditions its integration can be made compatible with fair remuneration for human creators.

The first immediate prospect is licensing catalogs for AI training, leveraging the value that has already been created. Previously, record labels and publishers earned small amounts of incremental revenue from their extensive collections of recorded music, but now they have an asset that AI developers are seeking: a large, high-quality set of musical content. Rather than seeing their musical content used as training data without permission – a widespread phenomenon during generative AI's early phases – many rights holders are negotiating licensing agreements that allow AI developers access to their musical libraries for some form of payment, usually recurring and usage-based. Both Universal Music Group and Warner Music Group are reportedly in the process of signing licensing agreements with major AI service providers, making a shift from the confrontational stance of 2023-2024 toward a more collaborative economic model.

Germany's collecting society, GEMA, has taken a lead position on licensing terms for the generative AI era. The German entity does not merely license music for training purposes; it has proposed a framework in which authors receive adequate remuneration for the use of their work as training data and for works generated by AI based on their creative output. Critically, GEMA has explicitly rejected

¹⁰¹ C. McEvoy, «How AI-generated songs are fueling the rise of streaming farms», *WIPO Magazine*, cit., <https://www.wipo.int/en/web/wipo-magazine/articles/how-ai-generated-songs-are-fueling-the-rise-of-streaming-farms-74310> (accessed 23 April 2026).

the “buyout” model – whereby rights holders receive a one-time lump sum for their training data – as insufficient to reflect the ongoing revenues that AI companies derive from the creative work of human artists. Instead, the model proposes a dynamic, recurring compensation mechanism, based on the economic value that these AI systems deliver over time.¹⁰²

Another important development comes from the field of music rights management. Several proposals are emerging for systems that can facilitate attribution at scale, thereby making royalty distribution viable. The Generative Content ID framework, inspired by YouTube’s Content ID system, proposes a way to credit the individual training tracks that contributed to the creation of AI-generated music. The framework was designed to tackle a core issue in the AI royalty debate: unlike classic streaming, which is based on rights holders receiving revenues from the streams of a specific song, generative AI rather involves generating original content based on patterns observed over thousands of training samples, making it impossible to identify a direct correspondence between output and input. Generative Content ID addresses this through causal attribution – estimating how removing a specific training sample would have changed the model’s output and using this measure as the basis for proportional royalty distribution.¹⁰³ Although challenging, this solution is a major stride forward in addressing the attribution issue that has so far prevented the development of equitable licensing frameworks for Generative AI.

From an economic perspective, the difference between one-time licensing and a royalty-based model is critical. One-time licensing, which involves a fixed payment by AI companies to access a dataset, is a simpler approach but doesn’t necessarily serve the interests of creators or the long-term viability of AI platforms. In contrast, royalty-based models ensure that creators share the value generated by AI systems as they grow and generate revenue. This principle, which underlies the current streaming economy, is also emerging as the proper basis for AI licensing. As noted in a study by CISAC, the generative AI music market will grow from an estimated 3 billion euros in 2023 to 64 billion euros in 2028, making the issue of designing equitable royalties of great economic importance.¹⁰⁴

New platform-level models are also beginning to emerge. In 2023, Deezer, in collaboration with Universal Music Group, introduced the first fully artist-centric streaming model, which aims to

¹⁰² GEMA, «AI and music: GEMA calls for music creators to share in AI providers’ revenues and presents first licensing model», *CISAC / GEMA Newsroom*, 2024, available on: <https://www.cisac.org/fr/node/1390> (accessed 23 April 2026).

¹⁰³ J. Deng, X. Jiang, S. Zhang, S. Zhang, H. Lakkaraju, R. Gao, C. Donahue, J. W. Ma, «Computational Copyright: Towards a Royalty Model for Music Generative AI», *arXiv*, 2023, available on: <https://arxiv.org/abs/2312.06646> (accessed 24 April 2026).

¹⁰⁴ J. Deng, X. Jiang, S. Zhang, S. Zhang, H. Lakkaraju, R. Gao, C. Donahue, J. W. Ma, «Computational Copyright: Towards a Royalty Model for Music Generative AI», *arXiv*, 2023, available on: <https://arxiv.org/abs/2312.06646> (accessed 24 April 2026).

achieve a more balanced distribution of royalties and places greater value on the engagement of loyal users over passive streams. More generally, the shift from pro-rata to hybrid models that account for qualitative factors – including track length, engagement, and attribution to specific training data – signals a new awareness that the existing remuneration structure is insufficient to keep pace with the growing presence of AI-generated content in a changing market. The risk, as explicitly stated in the CISAC projections, is that without structural reform, the share of total streaming revenue going to human creators would drop from 8% in 2023 to 6% by 2028, resulting in a net loss of 2.3 billion euros over 5 years.¹⁰⁵ The adequacy of these new models in safeguarding the economic interests of human creators will depend largely on the extent of regulatory action required.

2.5 *Systemic implications for the sustainability of the music ecosystem*

All of the economic risks examined in the preceding sections — market dilution, revenue displacement, streaming fraud, and the structural inadequacy of existing licensing frameworks — are interrelated. Taken together, they point to a deeper systemic challenge: the long-term sustainability of a creative ecosystem whose economic foundations are being progressively eroded by the unregulated expansion of generative AI. This final section brings all of this together to evaluate the impact of these factors on the music industry as a whole.

What emerges from this discussion is a fundamental economic paradox: generative AI models depend on human creativity as their raw material, in the sense that they are built on recordings, compositions, and musical styles that only human artists would create. Yet, at the same time, generative AI models stand to undermine that same human creativity, as they can replace human creation at virtually zero marginal cost, with content that will directly compete with the already existing human-created content. As the academic literature has noted, over the long term, this situation may lead to cognitive atrophy, as AI systems increasingly assume the role of composer and performer, reducing the motivation and opportunities for human musical growth.¹⁰⁶ This is not simply a question of ethics — it is a concern with important economic implications. If the economic benefits associated with human music creation continue to erode as AI replaces existing musical works, the incentive structures that

¹⁰⁵ CISAC – PMP Strategy, «PMP Strategy/CISAC study on the economic impact of AI in music and audiovisual industries», CISAC, 2024, available on: <https://www.cisac.org/services/reports-and-research/cisacpmp-strategy-ai-study> (accessed 23 April 2026).

¹⁰⁶ Morreale et al., «Towards Responsible AI Music: an Investigation of Trustworthy Features for Creative Systems», *arXiv preprint*, 2025, available on: <https://arxiv.org/pdf/2503.18814> (accessed 24 April 2026).

motivate the industry to support artistic talent, catalog expansion, and cultural variety in the first place may cease to function effectively.

The quantitative dimension of this risk is significant. In terms of quantifiable impact, CISAC estimates that up to 24% of music creators' revenues will be lost by 2028 due to the substitutive effects of generative AI on human-generated works. This implies billions of euros in lost income for the music industry value chain and creators around the world, particularly affecting independent, developing artists who lack institutional resources to adapt to these economic realities.¹⁰⁷ The Music Industry 5.0 framework has suggested that a more effective way to tackle these challenges is to base the industry's approach to AI on three fundamental principles: human-centricity, sustainability, and resilience.¹⁰⁸

The regulatory landscape is beginning to respond, even though the reactions are uneven. The Copyright Office in the United States has consistently maintained that a human author is a prerequisite for the registration of a copyrighted work, and it will refuse registration of a work that is generated entirely by an AI system. The Office also requires an applicant to disclaim any presence of AI-generated content when registering an otherwise copyrightable work. The Office has also highlighted an important difference between uses of AI as an assistive tool, which do not affect copyright protection, and uses of AI as a replacement for human creativity, which introduces a root question about how to allocate copyright protection and incentives.¹⁰⁹ At the legislative level, Congressional hearings have signaled a need for compensation and licensing requirements for creators whose content is being used for AI training. Senators have called for the implementation of compulsory licensing and content labeling requirements. Before the Senate Judiciary Subcommittee, OpenAI's CEO Sam Altman admitted that content creators deserve to be consulted on how their voices, image, likeness, and copyrighted content are used for training AI – but the legislative solutions have yet to materialize.¹¹⁰

At the industry level, the response has been similarly fragmented, with Sony Music announcing that it will opt out of any unlicensed training on its content. In 2023, a group of over 150 organizations, including IFPI, RIAA, and major artist representative groups, launched the Human Artistry Campaign. They came up with seven main principles for using AI responsibly, which include:

¹⁰⁷ CISAC/PMP Strategy, *The Impact of Generative AI on the Music and Audiovisual Sectors*, December 2024, *cit.*

¹⁰⁸ Hockman et al., «Towards Music Industry 5.0: Perspectives on Artificial Intelligence», *ResearchGate*, March 2025, available on: <https://www.researchgate.net/publication/388274224> (accessed 24 April 2026).

¹⁰⁹ U.S. Copyright Office, *Copyright and Artificial Intelligence, Part 2: Copyrightability*, January 2025, *cit.*, pp. 6-7.

¹¹⁰ Copyright Alliance, "AI and Copyright: Federal Government Activities," available at: <https://copyrightalliance.org/ai-copyright-federal-government-activities/> (accessed 24 April 2026); Hockman, J., et al., "Towards Music Industry 5.0: Perspectives on Artificial Intelligence," *ResearchGate* (March 2025), available at: <https://www.researchgate.net/publication/388274224> (accessed 24 April 2026).

asserting that AI should function as a tool to support human creativity without replacing it; that copyrighted works require proper authorization before being used for AI training; and that copyrighted works must be actively involved in shaping AI policy.¹¹¹ These principles reflect a growing consensus within the creative community that the sustainability of the music ecosystem depends not on resisting technological change, but on ensuring that its benefits are equitably shared.

There are also cultural implications of this change that extend beyond economic considerations. Academic research has raised concerns that the vast majority of existing AI datasets used to train these algorithms are predominantly based on Western music, potentially leading to reduced cultural diversity in the musical landscape and the marginalization of non-Western music traditions over time.¹¹² The centralization of AI development power among a handful of big tech firms – the only ones with the resources to create and implement large-scale AI systems – creates a structural imbalance that may exacerbate existing power dynamics in the music industry, potentially to the detriment of independent musicians, smaller labels, and non-mainstream genres.

Addressing these systemic implications requires responses that go beyond the individual licensing agreements and platform-level measures examined in the preceding section. The effectiveness of current laws – copyright law, right of publicity, and competition law – should be evaluated within this broader economic context to assess whether the current regulatory framework will meet the creative ecosystem's long-term sustainability needs, or whether a more fundamental change is needed.

3 Chapter III: The Legal Framework and the Question of Authorship

3.1 *The Copyright Act and the requirement of human creativity*

The Copyright Act of 1976 is currently the main statutory source for copyright in the United States.¹¹³ The Act grants authors certain exclusive rights to reproduce, distribute, publicly display¹¹⁴, and publicly perform their work, and to make derivative works, as well as the digital transmission of

¹¹¹ Morreale et al., «Towards Responsible AI Music: an Investigation of Trustworthy Features for Creative Systems», *arXiv preprint*, 2025, available on: <https://arxiv.org/pdf/2503.18814> (accessed 24 April 2026).

¹¹² Morreale et al., «Towards Responsible AI Music: an Investigation of Trustworthy Features for Creative Systems», *arXiv preprint*, 2025, available on: <https://arxiv.org/pdf/2503.18814> (accessed 24 April 2026).

¹¹³ See Copyright Act of 1976, Pub. L. No. 94-553, 90 Stat. 2541 (1976), codified as amended at 17 U.S.C. §§ 101 et seq. https://en.wikipedia.org/wiki/Copyright_Act_of_1976

¹¹⁴ Nagar, Aditya, Copyright Act: Its Use and Relevance in Digital Libraries (April 08, 2025). Available at SSRN: <https://ssrn.com/abstract=5209033> or <http://dx.doi.org/10.2139/ssrn.5209033>

sound recordings.¹¹⁵ The subject matter of copyright protection is defined in § 102(a), which states that "copyright protection subsists [...] in original works of authorship fixed in any tangible medium of expression."¹¹⁶ A copyrightable work, then, must be original, a work of authorship, and fixed in a tangible medium of expression.

For the purposes of the fixation requirement of the Act, set forth in § 101, a work is embodied in a medium when it is "sufficiently permanent or stable to permit it to be perceived, reproduced, or otherwise communicated for a period more than a transitory duration."¹¹⁷ In relation to AI-generated works, the fixation requirement does not seem to be problematic; for example, a computer-generated work stored on a digital file meets the requirement in the same way as a human-generated work. Rather, the crucial question seems to be whether the fixing was done by "human authors" as defined by the law.

The originality requirement also assumes the necessity for human authorship. For instance, the U.S. Copyright Office only registers works that are "founded in the creative powers of the mind", meaning works constituting the product of human intellectual labor.¹¹⁸ According to the Compendium of U.S. Copyright Office Practices § 306, an original work of authorship requires being independently created by a human author and possessing at least a minimal degree of creativity.¹¹⁹

This requirement is part of a larger constitutional framework of copyright law: the Copyright Clause of the U.S. Constitution grants Congress the authority to "promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries."¹²⁰ The Supreme Court has consistently ruled that this clause is applicable only to human authors and inventors, and has grounded the incentive rationale for copyright protection on the uniquely human ability to create and participate in cultural activity.

The judicial history of the human authorship requirement goes back to *Burrow-Giles Lithographic Co. v. Sarony* (1884), the first case in which the Supreme Court defined the constitutional and

¹¹⁵ See U.S. Copyright Office, *Copyright Law of the United States and Related Laws Contained in Title 17 of the United States Code*, ch. 1, available at <https://www.copyright.gov/title17/92chap1.pdf> (accessed 7 May 2026).

¹¹⁶ *Id.* at 5.

¹¹⁷ See Mackenzie Caldwell, *What Is an "Author"? — Copyright Authorship of AI Art Through a Philosophical Lens*, 61 Hous. L. Rev. 411 (2023), available at <https://houstonlawreview.org/article/92132-what-is-an-author-copyright-authorship-of-ai-art-through-a-philosophical-lens>.

¹¹⁸ See Sofia Karttunen, *Copyright of AI-generated Works: Approaches in the EU and Beyond*, Eur. Parl. Rsch. Serv. [EPRS], PE 782.585 (2025), available at [European Parliament Think Tank](https://www.europarl.europa.eu/think-tank/en/2025/04/08/copyright-ai-generated-works).

¹¹⁹ See Christian E. Mammen et al., *Creativity, Artificial Intelligence, and the Requirement of Human Authors and Inventors in Copyright and Patent Law* (Univ. of Oxford, Working Paper, July 2024), available at Oxford University Research Archive.

¹²⁰ Matt Blaszczyk, *Thaler v. Perlmutter: Human Authors at the Center of Copyright?*, KLUWER COPYRIGHT BLOG (Apr. 8, 2025), available on: <https://copyrightblog.kluweriplaw.com/2025/04/08/thaler-v-perlmutter-human-authors-at-the-center-of-copyright>.

statutory meaning of author. The Court held that a photograph could be a copyrightable work if it conveyed "the original intellectual conceptions of the author", relying heavily on the notion that the work has to be a product of the author's intellectual creativity, not just the use of a mechanical artifact.¹²¹ This argument has since been used to deny copyright protection to non-human entities. The most recent, and explicit, statement is that of the D.C. Circuit in *Thaler v. Perlmutter*, which held that "the Copyright Act of 1976 requires all eligible work to be authored in the first instance by a human being", and that an AI system named as the sole author of a work may not be registered for copyright.¹²²

The *Thaler* litigation also considered whether the work-for-hire doctrine could be used as an alternative form of protection. Stephen Thaler, the owner of the AI system called the Creativity Machine, claimed that he should be recognized as the owner and author of the work he produced using the machine, citing the work-for-hire clause in the Copyright Act. Such a clause grants copyright to an employer for a work created by an employee within the scope of their employment. The court dismissed this reasoning, as the work-for-hire provision "presupposes that an interest exists to be claimed" — and since the AI-generated image was never eligible for copyright protection, the Creativity Machine had no copyright to transfer to Thaler regardless of their ownership relationship.¹²³ This logic is not unique to *Thaler*; it establishes that the work-for-hire doctrine cannot be used for attributing copyright in AI-generated works to developers, operators, or users of AI systems, as it presupposes the existence of a human creative act whose rights are subsequently allocated, not the creation of protectable rights ex nihilo.¹²⁴

The question raised by AI-generated works goes beyond whether the technology's output meets current copyright standards; it regards the broader concept of whether copyright law should continue to be based on the protection of human creative activity. This debate explores the interplay between authorship, intellectual agency, and the cultural role of creativity under today's copyright system.

The constitutional aspect of the human authorship requirement poses an interesting question for the future of AI regulation: would Congress be able to amend the Copyright Act to provide protection for AI-generated works? In the district court decision in *Thaler*, Judge Howell noted that such an

¹²¹ *Burrow-Giles Lithographic Co. v. Sarony*, 111 U.S. 53 (1884), available on: <https://supreme.justia.com/cases/federal/us/111/53/>

¹²² *Thaler v. Perlmutter*, No. 23-5233 (D.C. Cir. March 18, 2025), available on: <https://media.cadc.uscourts.gov/opinions/docs/2025/03/23-5233.pdf>; S. Al-Sharieh, «Copyright Denied for Generative AI: Remarks on Thaler v Perlmutter», *Utrecht Journal of International and European Law*, 2025, disponibile su SSRN: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5695222

¹²³ See *Thaler v. Perlmutter*, No. 23-5233, slip op. (D.C. Cir. Mar. 18, 2025), available at [United States Court of Appeals for the D.C. Circuit](https://www.ca9-dc.uscourts.gov/opinions/authors/thaler).

¹²⁴ «Copyright and Artificial Intelligence», SSRN 2023, available on: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4448459

amendment would present the constitutional issue of whether extending copyright to AI-generated works aligns with or undermines the purpose of the Copyright Clause, whose congressional power is "limited to that which accomplishes the stated purpose of promoting the Progress of Science and useful Arts".¹²⁵ As the judge noted, the "incentivization" rationale of the Copyright Clause does not extend to non-human "authors" who do not need or benefit from economic incentives. To extend copyright to their work, then, would be in the private interests instead of the public ones, and it might go beyond the powers of Congress.¹²⁶

These doctrinal positions reflect a normative commitment to the intrinsic value of human creative activity, extending beyond the boundaries of economic incentive theory. Professor Craig contends that copyright is not only a means of ensuring authorship but also supports the dialogic process of meaning-making intrinsic to the social and relational nature of authorship and essential to human flourishing. Recent empirical work in cognitive neuroscience confirms this: EEG mapping studies indicate that sustained interaction with AI-generated content can reduce the brain's effective field of focus and diminish alpha-wave activity associated with deeper thought and imagination. The implication from this evidence is that replacing human creativity with AI might entail cognitive costs that outweigh economic benefits. These results would have consequences beyond intellectual property rights that could severely limit an individual's ability to participate in the creative activity that copyright law is supposed to promote and protect.¹²⁷

The requirement for creativity imposed by U.S. copyright law is deliberately low, satisfied by making "non-obvious choices" from "among more than a few options." However, this is still an author-centric standard, as case law and Copyright Office policies both explicitly tie the required creativity to "intellectual labor" and to the subjective and psychological nature of creative expression. Goldberg (2018) states that any single creative act is only seen and understood within its cultural context, and that the value of a creative artifact partly depends on the community's appreciation of the human agency behind it. However, existing AI systems produce outputs based on statistical pattern recognition and do not embody this subjective dimension. As a result, their outputs do not meet the originality requirement not only because of the legal formalism, but also because of a deeper conceptual difference between human creativity and computational generation.¹²⁸

¹²⁵ *Thaler v. Perlmutter*, 687 F. Supp. 3d 140 (D.D.C. 2023)

¹²⁶ *Thaler v. Perlmutter*, 687 F. Supp. 3d 140 (D.D.C. 2023)

¹²⁷ See Christian E. Mammen et al., *Creativity, Artificial Intelligence, and the Requirement of Human Authors and Inventors in Copyright and Patent Law* (Univ. of Oxford, Working Paper, July 2024), available at Oxford University Research Archive.

¹²⁸ See Christian E. Mammen et al., *Creativity, Artificial Intelligence, and the Requirement of Human Authors and Inventors in Copyright and Patent Law* (Univ. of Oxford, Working Paper, July 2024), available at Oxford University Research Archive.

The European response to this question is rooted in the anthropocentric basis of U.S. law but it differs in its doctrinal formulation. The Court of Justice of the European Union (CJEU) has ruled that copyright protection can only be invoked for works which are the “expression of the intellectual creation of their author”, meaning that they must somehow express the ideas of that person and reflect his or her free and creative choices, as well as their personality. There is no EU-wide unitary copyright and protection applies to the laws of each Member State, but this standard has been applied consistently across the European jurisdictions to preclude the protection of purely AI-generated works. The comparative analysis of the U.S. and EU frameworks, and their respective implications for the treatment of AI-generated music, is developed in detail in §3.4.¹²⁹

3.2 *The U.S. approach to AI-generated works*

There is no current legislation specifically covering the copyright of AI-generated works in the United States.¹³⁰ The Copyright Act of 1976 continues to be the primary source of law in the absence of a specific statutory framework. This Act was drafted without consideration for the creative capabilities that generative AI systems would later develop. As discussed in the preceding section, the Act conditions copyright protection on the existence of a human author. While Congress has never directly overruled this provision, it has been interpreted and refined by administrative decisions and judicial rulings as AI content has spread across creative industries.¹³¹

The response of the U.S. to the legal challenges brought by generative AI has been, for the most part, along two lines. First, the U.S. Copyright Office has provided administrative guidance that progressively clarifies the circumstances under which works that include AI-generated content can be eligible for registration. Second, the courts have addressed disputes arising from the unauthorized use of copyrighted works in the training of AI models and from the outputs those models generate.¹³² Furthermore, the Digital Millennium Copyright Act (DMCA) has emerged as a pertinent, though imperfect, tool to combat the dissemination of AI-generated content on digital platforms, notably through its notice-and-takedown framework and safe harbor provisions.¹³³

¹²⁹ See Christian E. Mammen et al., *Creativity, Artificial Intelligence, and the Requirement of Human Authors and Inventors in Copyright and Patent Law* (Univ. of Oxford, Working Paper, July 2024), available at Oxford University Research Archive.

¹³⁰ T. Davtyan, «The U.S. Approach to AI Regulation: Federal Laws, Policies, and Strategies Explained», *Case Western Reserve Journal of Law, Technology & the Internet*, vol. 16, n. 2, 2025, p. 223, available on: <https://scholarlycommons.law.case.edu/jolti/vol16/iss2/2> (accessed 8 May 2026).

¹³¹ A. Zhuk, «Navigating the Legal Landscape of AI Copyright: A Comparative Analysis of EU, US, and Chinese Approaches», *AI and Ethics*, vol. 4, 2024, pp. 1299–1306, <https://doi.org/10.1007/s43681-023-00299-0>.

¹³² A. Zhuk, *op. cit.*, pp. 1299-1306.

¹³³ A. Zhuk, *op. cit.*, pp. 1299-1306.

The following sections address each of these three dimensions, respectively: the Copyright Office's guidance and reports on AI-generated works, the role of the DMCA in regulating the distribution of AI-generated content, and the larger doctrinal issue of who may qualify as the author of an AI-generated work under existing U.S. law.¹³⁴

3.2.1 *U.S. Copyright Office guidance and reports*

The U.S. Copyright Office occupies a central institutional role in shaping the legal treatment of AI-generated works in the United States. As the federal agency in charge of administering the copyright laws, registering copyright claims, and advising both Congress and the general public, the Office has been in a position to tackle the questions raised by the advent of generative AI. These duties are not performed through legislation (which would be up to Congress to do), but rather through administrative guidance, registration policy, and a series of comprehensive reports that have progressively defined the boundaries of copyright protection in the AI era.¹³⁵

The Office's involvement in AI-created works started in earnest with the *Zarya of the Dawn* case in 2023, which presented the first clear chance to apply existing doctrine to a work created in part by generative AI. The work — a graphic novel by artist Kris Kashtanova — combined human-authored text and visual arrangement with images generated by the Midjourney AI system. The Office initially registered the work without awareness of the AI's involvement. Later, when Kashtanova announced to the public that the pictures had been created with the help of Midjourney, the Office began cancellation proceedings. Kashtanova, in turn, maintained that her creative process consisted of numerous rounds of composition, selection, arrangement, and editing, and that the AI tool was used as an “assisting instrument” in her vision and not as a replacement for her authorship. After this exchange, the Office determined that Kashtanova had authored the text and selection, coordination, and arrangement of the visual and written elements in the work, but that the individual images created by Midjourney were not the fruit of human authorship and thus not subject to copyright selection. The Office accordingly canceled the original registration certificate and issued a new one for the human-authored expressive material alone.¹³⁶ The *Zarya of the Dawn* decision set a precedent that

¹³⁴ T. Davtyan, «The U.S. Approach to AI Regulation: Federal Laws, Policies, and Strategies Explained», *Case Western Reserve Journal of Law, Technology & the Internet*, vol. 16, n. 2, 2025, p. 223, available on: <https://scholarlycommons.law.case.edu/jolti/vol16/iss2/2> (accessed 8 May 2026).

¹³⁵ U.S. Copyright Office, *Mission and History*, available on: <https://www.copyright.gov/about/> (accessed 10 May 2026).

¹³⁶ U.S. Copyright Office, *Zarya of the Dawn*, Registration Decision, VAu001480196, February 2023; see also S. Karttunen, *Copyright of AI-generated works: Approaches in the EU and beyond*, EPRS, PE 782.585, December 2025,

has significant practical implications, as it was the first time the court ruled that a work produced by a combination of human and AI inputs could be eligible for copyright protection, but the specific portions of the work that were actually created by the AI system would not be protected by copyright.

This principle was formalized and generalized in the Copyright Office's *Statement of Policy* of March 2023, published in the Federal Register. The Statement reiterated that works generated solely by AI, with insufficient human creativity, are not registrable in the United States and that human authorship is required for copyright protection.¹³⁷ Importantly, the Office added a disclosure requirement: if a work includes more than a “de minimis” portion of AI-generated content, the applicant will be required to disclose it, and a brief description of the contribution of the human author is required. The Office acknowledges that the line between creativity assisted by a human and creativity substituted by an AI is fact-specific and cannot be made without sufficient information regarding the circumstances of the work’s creation.

The Office's most sustained and detailed examination of the implications of generative AI for copyright law is contained in its multi-part *Copyright and Artificial Intelligence* study, initiated in 2023 and continuing through 2025. The first part of the study, published in July 2024, focused specifically on digital replicas — which are defined as video, image, or audio recordings digitally created or manipulated to realistically but falsely depict an individual.¹³⁸ The report referenced directly the cases examined in Chapter I of this thesis: it cited the Randy Travis project as an example of a positive, authorized use of AI voice technology, and the rise of unauthorized deepfakes, of which the Drake case is emblematic, as a harm that needs to be addressed through legislation. The Office determined that existing legal frameworks do not offer sufficient protection against the unauthorized use of digital replicas, as they provide a patchwork of protections that are only available in certain states and in specific circumstances, and that there is no federal policy that covers all types of harms — commercial and non-commercial — that digital replicas can cause.¹³⁹ The Office recommended the enactment of new federal legislation to create a uniform standard of protection for individuals against the unauthorized creation and dissemination of digital replicas of their voice and likeness.

available on: [https://www.europarl.europa.eu/RegData/etudes/BRIE/2025/782585/EPRS_BRI\(2025\)782585_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2025/782585/EPRS_BRI(2025)782585_EN.pdf) (accessed 10 May 2026).

¹³⁷ U.S. Copyright Office, *Copyright Registration Guidance: Works Containing Material Generated by Artificial Intelligence*, 88 Fed. Reg. 16190, 16 March 2023, available on: <https://www.federalregister.gov/documents/2023/03/16/2023-05321/copyright-registration-guidance-works-containing-material-generated-by-artificial-intelligence> (accessed 10 May 2026).

¹³⁸ U.S. Copyright Office, *Copyright and Artificial Intelligence, Part 1: Digital Replicas*, July 2024, available on: <https://www.copyright.gov/ai/> (accessed 10 May 2026).

¹³⁹ U.S. Copyright Office, *Copyright and Artificial Intelligence, Part 1: Digital Replicas*, July 2024, available on: <https://www.copyright.gov/ai/> (accessed 10 May 2026).

In the second part of the study, published in January 2025, the Office addressed the broader issue of the copyrightability of AI-generated works, again clarifying and codifying the principles developed in the *Zarya of the Dawn* case and the 2023 Statement of Policy. The Office has clarified that the copyrightability of AI-generated works is not a categorical determination, but rather a contextual inquiry as to whether the traditional elements of authorship were conceived and executed by a human being or by a machine. When AI simply helps an author in the creative process, the copyrightability of the work is not affected. When, however, the expressive decisions are made by the AI system, such as when the user enters a prompt and lets the AI do the rest of the work without meaningful creative influence over its components, it is not considered a human work of authorship and thus cannot be protected. The Office also pointed out that no court has ever declared copyright ownership over a non-human subject's work, and that those courts that have considered the matter have uniformly ruled against it.¹⁴⁰

Taken together, the Copyright Office's guidance and reports represent the most authoritative administrative articulation of the U.S. position on AI-generated works. They set out a clear blueprint, based on human authorship, measure of human creative control, and sensitivity to the unique harms that digital replicas can cause, from which the judicial and legislative developments discussed in the following sections will be drawn. Meanwhile, they have not fully addressed a larger structural question that has emerged as a central issue: if there is no discernible human author with enough creative control over an AI output, then the work is not protected by copyright at all — leaving a regulatory vacuum that neither administrative guidance nor existing statute has yet filled.

3.2.2 *The DMCA, safe harbor, and AI-generated content*

The Digital Millennium Copyright Act (DMCA) of 1998 is the main U.S. legislation on the liability of online intermediaries for copyright infringement. By adding §512 to Title 17, Congress established a system of “safe harbor” immunities designed to shield Online Service Providers (OSPs) from monetary liability for infringing content uploaded or transmitted by their users, on the condition that they comply with a set of procedural and substantive requirements – most notably, the notice-and-takedown mechanisms, which requires OSPs to expeditiously remove or disable access to infringing

¹⁴⁰ U.S. Copyright Office, *Copyright and Artificial Intelligence, Part 2: Copyrightability*, Report of the Register of Copyrights, January 2025, pp. 6-7, available on: <https://www.copyright.gov/ai/Copyright-and-Artificial-Intelligence-Part-2-Copyrightability-Report.pdf> (accessed 10 May 2026).

material upon receiving a qualifying notice from a right holder.¹⁴¹ The model has been the basis of other platforms like YouTube, Spotify, and social media services, which allow them to distribute large volumes of user-generated content without being directly liable for infringement. It is this mechanism that Universal Music Group claimed to justify its decision to take down Heart on My Sleeve from major streaming services after the Drake case. Not because the unauthorized duplication of Drake and The Weeknd's voices was copyrightable, but because Metro Boomin's producer tag was copyrightable under §512.¹⁴²

The safe harbor framework of §512 is organized around four categories of service provider activity: mere conduit (§512(a)), caching (§512(b)), hosting (§512(c)), and linking (§512(d)). There are different conditions for each category, but all share a similar structural starting point: the infringing content is provided by users, and the OSP is a passive intermediary who does not play an active role in the production or selection of the content.¹⁴³ The current passive-conduit model reflects the reality of 1998, when the statute was drafted, and focuses on Internet service providers and web hosting services. It's this underlying premise that is being called into question by the advent of generative AI systems.

Generative AI poses three significant challenges to the DMCA's safe harbor framework. The first is the fragmentation of liability across the AI supply chain. In the original paradigm of the DMCA, a single identifiable OSP could typically be identified as the locus of the infringement problem. In contrast, generative AI involves a combination of actors performing different roles: data suppliers compose training datasets, which may include copyrighted materials without explicit authorization, as in the case of the Books3 dataset used to train models such as Meta's LLaMA and BloombergGPT, model developers design and train the AI systems, and model deployers make those systems available to end users.¹⁴⁴ In principle, each of these parties may be held liable for infringement of copyright: the end user who asked the AI to generate the material may be a direct infringer; the deployer may be contributorily liable if it had knowledge of the AI's infringing outputs and materially contributed to them, or vicariously liable if it gained financial advantage and had the means to police the misconduct; the developer may be liable if it willfully overlooked clear indications of infringement; and the data supplier may be liable for secondary liability if it materially contributed to the subsequent misconduct.

¹⁴¹ 17 U.S.C. § 512, available on: <https://www.copyright.gov/512/>; U.S. Copyright Office, *Section 512 of Title 17: Resources on Online Service Provider Safe Harbors and Notice-and-Takedown System* (accessed 12 May 2026).

¹⁴² V. Gendron, «A New Frontier: The Music Industry's Struggle Against Generative AI», *University of Miami Business Law Review*, vol. 33, n. 1, Fall 2024, pp. 169-170, *cit.*

¹⁴³ U.S. Copyright Office, *Section 512 of Title 17: Resources on Online Service Provider Safe Harbors and Notice-and-Takedown System*, available on: <https://www.copyright.gov/512/>

¹⁴⁴ «From safe harbours to AI harbours: reimagining DMCA immunity for the generative AI era», *Journal of Intellectual Property Law & Practice*, Oxford Academic, vol. 20, n. 9, September 2025, pp. 605 ss., available on: <https://academic.oup.com/jiplp/article/20/9/605/8221820> (accessed 12 May 2026).

This spreading of responsibility makes it harder to pinpoint the source of accountability: each party can claim that it added only one piece and that the infringement became possible only because of the collaboration of the other parties.¹⁴⁵

The second challenge concerns the collapse of the passive intermediary model. The immunity in section 512(c) is limited to material stored “at the direction of a user”, a term that assumes it is possible to separate the platform (which is merely a host) from the user (who actively contributes material to it). However, this is not the case with generative AI services. The expressive nature of the content produced by an AI system is not provided by the user who feeds a prompt into the system, but it is generated by the algorithm used by the AI system, which is trained on a large dataset created and managed by the service provider. The provider is thus a platform and content generator – a role that is not even remotely analogous to the passive-conduit framework that Congress had envisioned in 1998. The traditional “neutral conduit” rationales and the protection of traditional safe harbors fail to square with the situation where the service is active in creating potentially infringing expression, but no single user is consciously responsible for the final outcome.¹⁴⁶

The third challenge involves the obsolescence of the notice-and-takedown mechanism itself. The traditional §512 process relies on the assumption that infringing content is fixed in a specific, identifiable place that can be found and taken down. A takedown notice must include an “identification of the material that is claimed to be infringing” and information sufficient to permit the OSP to locate it.¹⁴⁷ This requirement presupposes a static repository of content – a file hosted on a server that can be deleted. However, AI-generated outputs are generated dynamically in response to prompts from the user: there is no fixed file to point to, no repository to search, and no single item to remove. Each output is produced independently of the previous one, so if they do manage to hack one instance, it would not stop the same content from being generated again in response to a subsequent prompt. As scholars have noted, “there is no simple analog for takedown in Generative AI models” – the mechanism that constitutes the backbone of the DMCA’s cooperative enforcement framework struggles to find footing in the Generative AI context.¹⁴⁸

More importantly, the DMCA was conceived around a reactive enforcement approach, whereby infringing content could be detected and deleted following its publication. By contrast, generative AI

¹⁴⁵ «From safe harbours to AI harbours: reimagining DMCA immunity for the generative AI era», *Journal of Intellectual Property Law & Practice*, Oxford Academic, vol. 20, n. 9, September 2025, pp. 605 ss., available on: <https://academic.oup.com/jiplp/article/20/9/605/8221820> (accessed 12 May 2026).

¹⁴⁶ «From safe harbours to AI harbours: reimagining DMCA immunity for the generative AI era», *Journal of Intellectual Property Law & Practice*, Oxford Academic, vol. 20, n. 9, September 2025, pp. 605 ss., available on: <https://academic.oup.com/jiplp/article/20/9/605/8221820> (accessed 12 May 2026).

¹⁴⁷ 17 U.S.C. § 512, available on: <https://www.copyright.gov/512/> (accessed 12 May 2026).

¹⁴⁸ «From safe harbours to AI harbours», *JIPLP*, vol. 20, n. 9, 2025, p. 605 ff.

systems raise preventative concerns, not just reactive ones, as the same infringing output can be generated repeatedly with the same prompts, even after it has been deleted.

These three structural mismatches reveal a fundamental incompatibility between the DMCA's static safe harbor framework and the realities of AI-driven content creation. The literature has offered an alternative to the current framework, namely, an "AI harbor" that would reframe the liability scheme around a role-based standard, distributing responsibilities among the three major actors of the AI pipeline based on their roles.¹⁴⁹ Though no legislative body has yet enacted an "AI harbor", the concept underscores a growing realization: neither the legislature, the courts, nor rights holders can continue using a framework designed for static uploaded content on systems that continuously produce expressive material. Whether the DMCA's safe harbor provisions can be adapted to accommodate Generative AI through judicial interpretation or statutory reform – and what standard of liability should apply to each actor in the AI supply chain – remains one of the most pressing unresolved questions in U.S. copyright law.

3.2.3 *Who qualifies as an author? Why AI cannot be considered an author under U.S. law*

The notion of copyright protection for AI-generated works depends largely on the legal definition of "author", which is a complex and dynamic concept. Article I, Section 8, Clause 8 of the U.S. Constitution – the Intellectual Property Clause – empowers Congress to "secure for limited times to authors [...] the exclusive right to their [...] writings". On this constitutional basis, the Copyright Act affords protection to "original works of authorship". Neither the Constitution nor the Copyright Act explicitly defines who or what may qualify as an "author". However, U.S. courts have consistently rejected copyright protection for works not authored by a human, and the Copyright Office has long held that copyright can only be attached to "works created by a human being", and not those "produced by a machine or mere mechanical process that operates randomly or automatically without any creative input or intervention from a human author".¹⁵⁰

To grasp how the authorship requirement works today, it is crucial to first understand the judicial evolution of the requirement. The first case to define authorship in the context of a technologically novel medium was *Burrow-Giles Lithographic Co. v. Sarony* (1884), in which the Supreme Court

¹⁴⁹ «From safe harbours to AI harbours», *JIPLP*, vol. 20, n. 9, 2025, p. 605 ff.

¹⁵⁰ Congressional Research Service, *Generative Artificial Intelligence and Copyright Law*, LSB10922, May 2025, available on: <https://www.congress.gov/crs-product/LSB10922> (accessed 13 May 2026).

established that an author is “he to whom anything owes its origin; originator; maker; one who completes a work of science or literature”.¹⁵¹ In that case, the Court ruled that a photograph could be copyrightable because it reflected the photographer's intentional and creative decisions (such as lighting, composition, and the placement of the subject) and thus was based on the exercise of intellectual judgment. The Ninth Circuit further developed this logic in *Naruto v. Slater*, a case in which it ruled that a monkey that took a “selfie” was not able to own the copyright of that image, and, most importantly, that the work always needs to be credited to a human person as an “intellectual contributor”.¹⁵²

*As established in the preceding section, the D.C. Circuit's ruling in Thaler v. Perlmutter (March 2025) constitutes the most authoritative judicial confirmation of this principle, holding that the Copyright Act "requires all eligible work to be authored in the first instance by a human being" — a holding that was consolidated as binding precedent when the court denied rehearing en banc on May 12, 2025.*¹⁵³

The principles that underlie excluding an AI system from authorship go beyond statutory interpretation. AI systems, as they are currently constructed, are static: they have no consciousness, autonomous decision-making ability, or knowledge of what triggered them to be activated in the first place.¹⁵⁴ The concept of the human creative agency has always been the basis of copyright law, and the case law of the Supreme Court has long held that authorship must be based on intellectual effort and originality that can be attributed to an identifiable human originator, and that is not wholly derivative or mechanically produced, but rather reflects the personality of the author.¹⁵⁵ Philosophically, authorship is defined by the expression an individual communicates through the choices they make in the creation of a work – the labor, personality, and communication aspects of it – but the volitional, and thus the subjectively personal, aspects of it is one AI systems are unable to express.¹⁵⁶ The fact that AI lacks a conscious mind means that it cannot willfully act, and – as

¹⁵¹ *Burrow-Giles Lithographic Co. v. Sarony*, 111 U.S. 53 (1884), available on:

<https://supreme.justia.com/cases/federal/us/111/53/>

¹⁵² *Naruto v. Slater*, 888 F.3d 418 (9th Cir. 2018).

¹⁵³ Congressional Research Service, *Generative Artificial Intelligence and Copyright Law*, LSB10922, maggio 2025, available on: <https://www.congress.gov/crs-product/LSB10922> (accessed 13 May 2026).

¹⁵⁴ «Copyright Protection for AI-Generated Works: Exploring Originality and Ownership in a Digital Landscape», *Asian Journal of International Law*, Cambridge University Press, vol. 15, n. 1, January 2025, pp. 23-46, doi: 10.1017/S2044251323000735.

¹⁵⁵ «What Is an "Author"? Copyright Authorship of AI Art Through a Philosophical Lens», *Houston Law Review*, 2024, available on: <https://houstonlawreview.org/article/92132-what-is-an-author-copyright-authorship-of-ai-art-through-a-philosophical-lens> (accessed 13 May 2026).

¹⁵⁶ «The Algorithmic Muse and the Public Domain: Why Copyright's Legal Philosophy Precludes Protection for Generative AI Outputs», *arXiv preprint*, December 2024, available on: <https://arxiv.org/pdf/2512.13750> (accessed 13 May 2026).

explained by Professor Lemley – this is a fundamental requirement for authorship. This stance further reinforces the fact that Artificial Intelligence cannot be considered a legal author.¹⁵⁷

The Copyright Office’s guidance applies these principles to Generative AI. The 2023 AI Guidance clarifies that “what matters is the extent to which the human had creative control over the work’s expression”: where AI “determines the expressive elements of its output, the generated material is not the product of human authorship”.¹⁵⁸ Some applicants have argued that AI tools are analogous to cameras – instruments through which human authors express their creativity. The Copyright Office has not accepted this comparison, however, arguing that AI users do not have enough control over the results to be considered true authors. Instead, the Office has analogized the AI user to “a client who hires an artist” and gives that artist only “general directions” – a relationship in which the client cannot claim authorship over the resulting work.¹⁵⁹

In January 2025, the Copyrightability Report on prompt authorship further clarified this assessment. It held that, “given current generally available technology, prompts alone do not provide sufficient human control to make users of an AI system the authors of the output”. It reasoned further that “prompts essentially function as instructions that convey unprotectible ideas” and “do not control how the AI system processes them in generating the output”. The report also unequivocally dispelled the notion that humans and AI can be co-authors of any work. Under U.S. copyright law, joint authorship is only possible when authors work together in an intentional effort to create a unified work. Since AI cannot be considered a joint author, the two cannot be co-authors of the work in question.¹⁶⁰

That said, this does not mean that works including AI-generated material are necessarily ineligible for copyright protection; instead, they can be protected if the human author has made “sufficiently creative” modifications to the material. Otherwise, protection could be granted if there is a sufficient combination of AI-generated and human-generated material that expresses the creative choices of the human author.¹⁶¹ In such cases, copyright protection extends only to the human creative elements, and when seeking registration, applicants should clearly disclose which portions of their work were generated by AI. Another limitation on AI prompt authorship arises from the idea-expression

¹⁵⁷ M. Lemley, «How Generative AI Turns Copyright Upside Down», *Columbia Science & Technology Law Review*, vol. 26, 2024, available on: https://law.stanford.edu/wp-content/uploads/2024/09/2024-09-30_How-Generative-AI-Turns-Copyright-Upside-Down.pdf (accessed 13 May 2026).

¹⁵⁸ U.S. Copyright Office, *Copyright Registration Guidance: Works Containing Material Generated by Artificial Intelligence*, 88 Fed. Reg. 16190, 16 May 2023, *cit.*

¹⁵⁹ U.S. Copyright Office, *Copyright Registration Guidance: Works Containing Material Generated by Artificial Intelligence*, 88 Fed. Reg. 16190, 16 March 2023, *cit.*

¹⁶¹ U.S. Copyright Office, *Copyright Registration Guidance: Works Containing Material Generated by Artificial Intelligence*, 88 Fed. Reg. 16190, 16 March 2023, *cit.*

dichotomy: if a specific prompt is sufficiently creative to meet the authorship standards for copyright protection, then copyright only covers the elements of the prompt that are original and expressive. It will not extend to the ideas themselves or the manner in which AI expresses those ideas.¹⁶² However, if copyright is based on the authorship of the prompt, it will be “extremely narrow” and will not cover the core expressive elements that make AI-generated outputs commercially successful. Copyright, therefore, will likely not capture the very elements that make AI-generated works marketable.¹⁶³

These concepts are especially relevant in the context of AI-generated musical deepfakes. In the Drake case, @ghostwriter977 reportedly recorded an original vocal performance of Heart on My Sleeve before processing it through an AI voice-cloning system trained to imitate Drake and The Weeknd.¹⁶⁴ This would suggest that some creative input from the human author was present, but the commercially and culturally relevant components of the final song – such as the synthetic voice and the style mimicry of the featured artists – were produced by the AI software rather than by an identifiable human artist.¹⁶⁵ Under the Copyright Office’s current approach, if an AI system determines the expressive elements of the output, the resulting material cannot qualify as the product of human authorship.¹⁶⁶ The result is a structural paradox that this thesis seeks to analyze: the works that can cause the greatest economic and reputational damage to human artists are those that are least likely to be protected by copyright, as they lack legally sufficient human authorship.¹⁶⁷

The result is a structural gap of considerable practical significance. Where it isn’t possible to identify a human author who exercised sufficient creative control over the expressive elements of the AI-generated work, then the output does not fall within copyright protection and will automatically enter the public domain. As argued throughout this thesis, this is not just a formal legal consequence, but it also has direct economic implications. On the one hand, the human creative works are used for free to train AI systems, while on the other, the AI systems produce works that are not protectable. Hence, the economic value of human creativity is being appropriated without the corresponding protections that copyright law was meant to afford it. Now the analysis turns to whether the current legal system is sufficient to address this dynamic and whether more radical reform is necessary.

¹⁶² M. Lemley, «How Generative AI Turns Copyright Upside Down», *Columbia Science & Technology Law Review*, vol. 26, 2024, available on: https://law.stanford.edu/wp-content/uploads/2024/09/2024-09-30_How-Generative-AI-Turns-Copyright-Upside-Down.pdf (accessed 13 May 2026).

¹⁶³ M. Lemley, «How Generative AI Turns Copyright Upside Down».

¹⁶⁴ V. Gendron, «A New Frontier: The Music Industry's Struggle Against Generative AI», *University of Miami Business Law Review*, vol. 33, n. 1, Fall 2024, pp. 169-170, *cit.*; W. Tan, «Defining Authorship for the Copyright of AI-Generated Music», *Harvard Undergraduate Law Review*, Fall 2024, *cit.*

¹⁶⁵ V. Gendron, «A New Frontier: The Music Industry's Struggle Against Generative AI».

¹⁶⁶ U.S. Copyright Office, *Copyright Registration Guidance: Works Containing Material Generated by Artificial Intelligence*, 88 Fed. Reg. 16190, 16 March 2023, *cit.*

¹⁶⁷ See Section 1.6.1 above for an analysis of the authorship paradox in the context of the *Fake Drake* case and the *Randy Travis* project.

The Drake case exposes not just a loophole in the current legal structure, but a general conceptual issue that runs deeper than the question of attribution. Most of the academic literature and policy debate has been on who should own the copyright for AI-generated output, that is, whether the person who provided the prompt, the creator of the AI, the platform, or the original artist. This thesis contends that this question cannot be answered without first resolving a prior and more fundamental one: who is an author in the legally relevant sense? The answer that emerges from the analysis of U.S. copyright law – and, as will be demonstrated in §3.4, from the European framework as well – is that authorship, as legally constructed, presupposes a set of attributes that are specifically and irreducibly human: consciousness, personal expression, volitional creative agency, and the capacity to stamp a work with one's own intellectual personality. No entity involved in the generation of *Heart on My Sleeve* – not @ghostwriter977, not the developer of the voice-cloning model, not the platform, and not Drake or The Weeknd – satisfies these criteria with respect to the expressive elements that make the work what it is. In other words, the lack of an identified author in the Drake case is not simply a temporary gap waiting to be plugged by legislative reform; it is a systemic by-product of attempting to apply our current understanding of authorship, which was made for humans, to a process that is not, in any meaningful sense, human.

3.3 *The Right of Publicity as an alternative protection mechanism in the AI era*

As demonstrated in the preceding sections, copyright law provides only a partial and structurally inadequate response to the harms caused by AI-generated musical deepfakes. The Copyright Act does not protect a performer's voice as such — it protects only the specific sounds fixed in a particular recording — meaning that a deepfake which replicates the vocal identity of an artist without reproducing a specific copyrighted recording falls outside the scope of copyright infringement entirely. This gap has directed attention toward an alternative legal instrument: the right of publicity, which protects an individual's ability to control the commercial exploitation of their name, image, and likeness — and, in a growing number of jurisdictions, their voice.¹⁶⁸

The right of publicity evolved from the common law tort of invasion of privacy by appropriation, and a majority of U.S. states now recognize it by statute, common law, or both. Because it addresses the unauthorized commercial use of an individual's persona rather than the unauthorized reproduction of

¹⁶⁸ M. Fenwick et al., «Voice Cloning in an Age of Generative AI: Mapping the Limits of the Law & Principles for a New Social Contract with Technology», SSRN, June 2024, available on: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4850866 (accessed 15 May 2026).

a specific expressive work, it is conceptually better suited than copyright to address the harms caused by AI voice cloning.¹⁶⁹ Two landmark cases have established the contours of this protection in the context of voice imitation. In *Midler v. Ford Motor Co.* (1988), the Ninth Circuit held that the deliberate imitation of Bette Midler's distinctive and widely known singing voice for commercial purposes constituted a violation of her right of publicity under California law, establishing that a voice, while not copyrightable in itself, may nonetheless be legally protected as a component of personal identity. This holding was confirmed and refined in *Waits v. Frito-Lay, Inc.* (1992), where the same court affirmed a three-part test for sound-alike liability, requiring that the voice be: (a) distinctive, (b) widely known, and (c) deliberately imitated for commercial use. The jury awarded Tom Waits \$375,000 in compensatory damages and \$2 million in punitive damages — signaling that courts were willing to impose substantial liability for the commercial appropriation of vocal identity even in the absence of copyright infringement.¹⁷⁰

These precedents, while significant, were established in the context of human impersonation — a fundamentally different phenomenon from AI voice cloning. As the U.S. Copyright Office observed in its Part 1 report on digital replicas, AI systems present a challenge exponentially greater than human imitation, given the speed and scale at which synthetic vocal content can now be produced and disseminated.¹⁷¹ The *Midler* and *Waits* framework, designed to address deliberate human imitation in commercial advertising, was not conceived with the possibility of a single algorithm generating thousands of tracks replicating an artist's voice in mind. Moreover, the right of publicity as currently constituted suffers from structural limitations that significantly reduce its effectiveness as a remedy for AI-generated deepfakes: many state laws protect only commercial uses, require a showing that the individual's identity has commercial value, and limit voice protection to voices that are "distinct and well-known." Not all states' laws cover voice at all, and those that do may not extend protection to digital replicas as opposed to actual voice recordings. The result, as the Copyright Office has documented, is a patchwork of protections whose availability depends entirely on where the affected individual lives or where the unauthorized use occurred.¹⁷²

It is in this context of structural inadequacy that a series of legislative initiatives — at both the state and federal levels — have emerged as the most significant recent attempts to fill the regulatory gap left by copyright law and the fragmented right of publicity framework.

¹⁶⁹ M.D. Murray, «Deceptive Exploitation: Deepfakes, the Rights of Publicity and Privacy, and Trademark Law», *IDEA: The Law Review of the Franklin Pierce Center for Intellectual Property*, vol. 65, 2025, available on SSRN: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4981531 (accessed 15 May 2026).

¹⁷⁰ *Midler v. Ford Motor Co.*, 849 F.2d 460 (9th Cir. 1988); *Waits v. Frito-Lay, Inc.*, 978 F.2d 1093 (9th Cir. 1992); see also V. Gendron, «A New Frontier...», *cit.*, pp. 170-172.

¹⁷¹ U.S. Copyright Office, *Copyright and Artificial Intelligence, Part 1: Digital Replicas*, July 2024, *cit.*

¹⁷² U.S. Copyright Office, *Copyright and Artificial Intelligence, Part 1: Digital Replicas*, July 2024, *cit.*

The first and most notable state-level response is the *Ensuring Likeness, Voice, and Image Security Act* (ELVIS Act), enacted in Tennessee on March 21, 2024. Proposed in direct response to the proliferation of AI-generated music throughout 2023, the ELVIS Act is the first state law to extend right of publicity protections explicitly to AI-generated voice simulations — distinguishing itself from all prior legislation by protecting not only actual voice recordings but also simulated and algorithmic reproductions readily identifiable as a particular individual.¹⁷³ Under the Act, "voice" is defined as "a sound in a medium that is readily identifiable and attributable to a particular individual, regardless of whether the sound contains the actual voice or a simulation of the voice of the individual" — a definition that directly addresses the Drake scenario, where no actual recording of Drake's voice was reproduced but an AI-generated simulation of it was used commercially without consent. Unauthorized use under the ELVIS Act constitutes a Class A misdemeanor, providing both civil and criminal remedies. The Act also extends postmortem rights to the estates of deceased individuals — a provision of particular relevance in cases such as the Randy Travis project, where AI was used to generate new music in the voice of a living but incapacitated artist. As Melara has argued, the ELVIS Act would have provided a far more direct and legally sound basis for addressing the Drake case than the DMCA takedown ultimately relied upon by UMG: had the Act been applicable, @ghostwriter977 could have faced civil and criminal liability rather than merely a copyright claim grounded in the incidental presence of a producer tag.¹⁷⁴ However, multiple practical obstacles limit the Act's effectiveness: plaintiffs must establish personal jurisdiction over the defendant — a significant challenge where the infringer is anonymous and potentially located outside Tennessee — and the costs of complex litigation may exceed the remedies available to independent artists with limited resources.

At the federal level, two legislative proposals represent the most ambitious attempts to establish a uniform national standard of protection against unauthorized digital replicas. The *No Artificial Intelligence Fake Replicas And Unauthorized Duplications Act* (No AI FRAUD Act), introduced in January 2024, would establish intellectual property rights in voice and likeness at the federal level, impose direct liability for the dissemination of unauthorized digital voice replicas, and prohibit trafficking in "personalized cloning services" designed to produce digital replicas of specific individuals. Any authorization to use a digital depiction or voice replica would be required to be in writing, with the individual represented by counsel. Potential remedies include statutory or actual damages, lost profits, punitive damages, and attorney's fees.¹⁷⁵ The *Nurture Originals, Foster Art*,

¹⁷³ V. Melara, «The "Fake Drake" Fix: Why Each State Should Adopt Tennessee's Elvis Act in the Age of AI-Deepfakes», *Wake Forest Journal of Business & Intellectual Property Law*, vol. 25, n. 1, Fall 2024, pp. 102-117, *cit.*

¹⁷⁴ *Ibid.*, pp. 116-117.

¹⁷⁵ U.S. Copyright Office, *Copyright and Artificial Intelligence, Part 1: Digital Replicas*, July 2024, *cit.*

and *Keep Entertainment Safe Act* (NO FAKES Act), first introduced as a discussion draft in 2023 and formally reintroduced in both the Senate and House in 2024 and 2025, goes further: it would establish the first-ever federal right of publicity in the United States, providing a right to "authorize the use of the image, voice, or visual likeness of the individual in a digital replica" and imposing liability for producing and disseminating a digital replica without consent, conditioned on knowledge of the unauthorized nature of the replica. The bill has garnered broad bipartisan support and, in its revised 2025 version, has secured endorsements from the major record labels, SAG-AFTRA, Google, and OpenAI.¹⁷⁶

Despite this momentum, both proposals have attracted significant criticism. The NO FAKES Act in particular has been characterized as insufficiently protective of individual rights: as Rothman has observed, the revised bill does not include a full federal right of publicity and risks adding yet another layer of conflicting entitlements rather than establishing a coherent national framework. The bill's expansion to accommodate the demands of major technology companies has raised concerns that it may legitimize certain deceptive uses of digital replicas rather than prohibit them, working at odds with its stated objective of protecting performers' livelihoods.¹⁷⁷ First Amendment concerns present a further structural challenge: to the extent that federal digital replica legislation restricts expressive uses of an individual's voice or likeness, it must navigate the tension between personality rights and freedom of speech — a balance that neither the No AI FRAUD Act nor the NO FAKES Act has resolved to the satisfaction of digital rights organizations.¹⁷⁸

Taken together, these legislative developments reflect a growing recognition within the U.S. legal system that copyright law and the fragmented state right of publicity framework are insufficient to address the harms caused by AI-generated deepfakes at scale. At the same time, they underscore the structural difficulty of the problem: the very features that make AI voice cloning legally intractable under copyright — the absence of a specific copyrightable work being reproduced, the fragmentation of authorship across the AI supply chain, and the scale of production — also complicate the design of effective alternative protection mechanisms. The authorship vacuum identified in §3.2.3 is thus not merely a copyright problem but a systemic one, whose resolution requires a coordinated

¹⁷⁶ «A New Age of Publicity: The NO FAKES Act and Federal Regulation on AI Replicas», *Columbia Undergraduate Law Review*, 2025, available on: <https://www.culawreview.org/journal/a-new-age-of-publicity-the-no-fakes-act-and-federal-regulation-on-ai-replicas> (accessed 15 May 2026); National Law Review, «Congress Reintroduces the NO FAKES Act», April 2025, available on: <https://natlawreview.com/article/congress-reintroduces-no-fakes-act-broader-industry-support> (accessed 15 May 2026).

¹⁷⁷ J.E. Rothman, «Reintroduced No FAKES Act Still Needs Revision», *The Regulatory Review*, 18 August 2025, available on: <https://www.theregreview.org/2025/08/18/rothman-reintroduced-no-fakes-act-still-needs-revision/> (accessed 15 May 2026).

¹⁷⁸ Recording Academy, «NO FAKES Act Introduced in the Senate», available on: <https://www.recordingacademy.com/advocacy/news/no-fakes-act-introduced-in-the-senate> (accessed 15 May 2026).

legislative response that has yet to fully materialize. It is against this backdrop that the European approach to AI regulation — which proceeds from different normative premises — must be assessed.

3.4 *The European Copyright and Regulatory Framework for AI-generated Music*

The European Union's approach to the copyright of AI-generated works differs from the U.S. framework in its structural architecture, though it converges on substantially the same conclusion: purely AI-generated works without meaningful human creative involvement cannot receive copyright protection. Unlike the United States, where the human authorship requirement has been articulated primarily through administrative practice and judicial decisions, the EU framework derives this conclusion from a combination of international treaty obligations, harmonized directives, and an extensive body of CJEU case law that has progressively defined the concept of originality in human-centric terms.¹⁷⁹

The point of departure is the Berne Convention, which — as incorporated into the EU legal order through the TRIPS Agreement and the WIPO Copyright Treaty — provides the foundational reference for copyright subject matter in the EU. Although the Berne Convention does not explicitly define the term "author," its text and historical context strongly suggest that authorship refers to the natural person who created the work. This is confirmed by the Convention's pervasive references to the "author" as the originator of works and the primary beneficiary of protection, and by Article 6bis on moral rights, which are expressly granted to "authors" and presuppose acts of human creation. As Professor Ricketson has observed, the Convention did not explicitly define the author as a human being because this was considered a self-evident truth among its members — an implicit assumption whose consequences for AI-generated works are now being actively contested.¹⁸⁰

At the EU level, the current copyright framework lacks a general, unified definition of authorship. No single directive harmonizes the concept of the work of authorship in general terms, and the acquis expressly harmonizes only specific categories of protected subject matter — computer programs, databases, photographs, and works of visual art — each of which qualifies for protection if it is "original in the sense that it is the author's own intellectual creation."¹⁸¹ In its landmark 2009 *Infopaq*

¹⁷⁹ S. Karttunen, *Copyright of AI-generated works: Approaches in the EU and beyond*, EPRS, PE 782.585, December 2025, *cit.*

¹⁸⁰ P.B. Hugenholtz, J.P. Quintais, «Does EU Copyright Law Protect AI-Assisted Output?», *IIC — International Review of Intellectual Property and Competition Law*, Springer, 2021, available on: <https://www.ivir.nl/publicaties/download/AI-Copyright.pdf> (accessed 16 May 2026).

¹⁸¹ Direttiva 2009/24/CE (Software); Direttiva 96/9/CE (Database); Direttiva 2006/116/CE (Term Directive), art. 1.

judgment, the CJEU extrapolated from this piecemeal harmonization a general, autonomous concept of the "work" as the "author's own intellectual creation" — a standard subsequently confirmed in *Levola Hengelo*, *Funke Medien*, *Cofemel*, and *Brompton Bicycle*.¹⁸² This case law established that, to qualify as an original work, the subject matter must reflect the author's personality as an expression of their free and creative choices — a criterion that is inherently anthropocentric, presupposing a human being capable of subjective judgment and personal expression.

The human-centric focus of EU copyright law was further clarified in *Painer* (C-145/10), where the CJEU held that an author stamps a work with their "personal touch" by making free and creative choices in the production process — and that this principle applies even where a technical instrument, such as a camera, is used as an assisting tool.¹⁸³ The corollary of this reasoning, explicitly drawn by Advocate General Trstenjak in her opinion in *Painer* and endorsed by the Court, is that "only human creations are therefore protected, which can also include those for which the person employs a technical aid." In *Football Dataco* (C-604/10), the CJEU further confirmed that "significant skill and labour" on the part of the creator is insufficient to satisfy the originality requirement — what is needed is the exercise of free and creative choices, not merely technical effort or investment.¹⁸⁴ And in *Cofemel* (C-683/17), the Court held that a subject matter cannot be considered original where its realization has been dictated by technical considerations, rules, or other constraints that leave no room for creative freedom.¹⁸⁵

Applied to AI-generated music, these principles yield clear — if practically complex — conclusions. An AI system cannot itself be an author, as it does not exercise subjective judgment, cannot stamp a work with a "personal touch," and does not possess the personality or free creative agency that EU copyright law requires. Works generated entirely by AI systems without meaningful human creative involvement are excluded from copyright protection under the EU framework, just as they are under U.S. law. However, the EU framework is arguably more flexible than its American counterpart in accommodating AI-assisted works: where a human creator exercises genuine creative control over the use of an AI system — making free and creative choices in the composition, selection, or arrangement of the output — the resulting work may qualify for protection, provided that the human's

¹⁸² *Infopaq International A/S v. Danske Dagblades Forening*, C-5/08 (CGUE 2009); *Levola Hengelo BV v. Smilde Foods BV*, C-310/17 (CGUE 2018); *Cofemel — Sociedade de Vestuário SA v. G-Star Raw CV*, C-683/17 (CGUE 2019).

¹⁸³ *Eva-Maria Painer v. Standard VerlagsGmbH and Others*, C-145/10 (CGUE 2011); *Football Dataco Ltd and Others v. Yahoo! UK Ltd and Others*, C-604/10 (CGUE 2012); «Understanding Authorship in Artificial Intelligence-Assisted Works», *Journal of Intellectual Property Law & Practice*, Oxford Academic, vol. 20, n. 5, May 2025, available on: <https://academic.oup.com/jiplp/article/20/5/354/7965768> (accessed 16 May 2026).

¹⁸⁴ *Eva-Maria Painer v. Standard VerlagsGmbH and Others*, C-145/10 (CJEU, 2011).

¹⁸⁵ *Infopaq International A/S v. Danske Dagblades Forening*, C-5/08 (CGUE 2009); *Levola Hengelo BV v. Smilde Foods BV*, C-310/17 (CGUE 2018); *Cofemel — Sociedade de Vestuário SA v. G-Star Raw CV*, C-683/17 (CGUE 2019).

creative freedom is perceptible in the final expression.¹⁸⁶ The key analytical challenge, as Oxford academic commentary has noted, lies in determining the degree and nature of human creative involvement sufficient to meet this threshold — a question that has yet to be definitively resolved by the CJEU, and which remains subject to nationally divergent solutions across Member States.¹⁸⁷

The introduction of the AI Act (Regulation (EU) 2024/1689), which entered into force on 1 August 2024 and will be fully applicable from 2 August 2026, represents the EU's most direct legislative intervention in the governance of AI systems — including those capable of generating synthetic voices and deepfakes.¹⁸⁸ The AI Act does not address copyright ownership directly, but introduces transparency and disclosure obligations of direct relevance to the phenomenon of AI-generated musical deepfakes. Article 50, entitled "Transparency Obligations for Providers and Deployers of Certain AI Systems," establishes that generative AI outputs — including synthetic audio and voice content — must be clearly labelled as AI-generated, and that individuals must be informed when they are interacting with an AI system. Article 50(4) imposes specific disclosure requirements for deepfake content: entities that deploy AI systems to generate audio or video content depicting real individuals must ensure that such content is clearly identified as artificially generated or manipulated.¹⁸⁹ These requirements are supported by Recital 134, which encourages the use of technical solutions such as watermarking, metadata-based identifiers, and provenance tools to ensure that synthetic content remains detectable and attributable.

Beyond transparency, deepfakes implicate several core rights protected under the EU Charter of Fundamental Rights. The right to privacy and protection of personal data under Articles 7 and 8 of the Charter is directly engaged when biometric or voice data are used without consent to generate synthetic replicas — as in the Drake scenario, where the vocal identity of two artists was replicated without authorization. The right to human dignity and reputation under Article 1 of the Charter is threatened when AI-generated content falsely associates individuals with conduct they never engaged

¹⁸⁶ Hugenholtz, Quintais, «Does EU Copyright Law Protect AI-Assisted Output?», *cit.*; «AI-Generated Works and EU Copyright Law», Stanford-Vienna Transatlantic Technology Law Forum, Working Paper No. 96, 2024, available on: <https://law.stanford.edu/wp-content/uploads/2024/08/EU-Law-WP-96-Huwel.pdf> (accessed 16 May 2026).

¹⁸⁷ Hugenholtz, P. B., Quintais, J. P., *Does EU Copyright Law Protect AI-Assisted Output?*, *cit.*

¹⁸⁸ Regolamento (UE) 2024/1689 del Parlamento Europeo e del Consiglio (AI Act), GU L 1689, 12.7.2024, artt. 50, 99; «Deepfake, Deep Trouble: The European AI Act and the Fight Against AI-Generated Misinformation», *Columbia Journal of European Law*, 2024, available on: <https://cjel.law.columbia.edu/preliminary-reference/2024/deepfake-deep-trouble-the-european-ai-act-and-the-fight-against-ai-generated-misinformation/> (accessed 16 May 2026).

¹⁸⁹ Regolamento (UE) 2024/1689 del Parlamento Europeo e del Consiglio (AI Act), GU L 1689, 12.7.2024, artt. 50, 99; «Deepfake, Deep Trouble: The European AI Act and the Fight Against AI-Generated Misinformation», *Columbia Journal of European Law*, 2024, available on: <https://cjel.law.columbia.edu/preliminary-reference/2024/deepfake-deep-trouble-the-european-ai-act-and-the-fight-against-ai-generated-misinformation/> (accessed 16 May 2026).

in.¹⁹⁰ In this respect, the EU framework offers a more explicitly rights-based foundation for addressing the harms of musical deepfakes than the patchwork of state right of publicity laws and proposed federal legislation examined in §3.3 — though its practical limitations must be acknowledged. The full enforcement of the AI Act's transparency obligations has been delayed until August 2026; the Act does not specify which national authority should act as primary surveillance regulator, leading to potential inconsistencies in enforcement across Member States; and transparency requirements, while valuable, address only the disclosure dimension of deepfakes rather than their unauthorized creation or distribution.

The European Parliament has responded to these gaps by calling for additional legislative action. In a resolution adopted by 460 votes to 71, the Parliament recommended establishing a supplementary legal framework to clarify the licensing rules for generative AI, called on the Commission to investigate measures protecting individuals against the dissemination of AI-generated deepfakes of artists' performances without consent, and stressed the need for mandatory labelling of purely AI-generated content across platforms offering creative works.¹⁹¹ The Commission's "Apply AI Strategy" of October 2025 further underscores the EU's commitment to a human-centric approach to AI adoption in the cultural and creative sectors, though specific legislative proposals in the copyright domain remain pending.

Taken together, the EU framework converges with the U.S. approach in denying copyright protection to purely AI-generated works, while differing significantly in its regulatory architecture for managing the harms caused by deepfakes and synthetic media. Where the United States relies primarily on a fragmented combination of copyright law, state right of publicity statutes, and proposed federal legislation, the EU has moved toward a more coherent, rights-based framework grounded in the AI Act's transparency obligations and the CJEU's human-centric originality doctrine. As the comparative analysis in the following section will demonstrate, however, neither system has yet fully resolved the authorship vacuum at the core of AI-generated music — leaving the most commercially significant and legally harmful outputs in a regulatory grey area that existing frameworks are not equipped to address.

¹⁹⁰ «Deepfakes and Human Rights: Why the EU AI Act is Becoming the Global Standard for Ethical AI Regulation», MEIG Programme, December 2025, available on: <https://www.meig.ch/highlight-50-2025-deepfakes-and-human-rights-why-the-eu-ai-act-is-becoming-the-global-standard-for-ethical-ai-regulation/> (accessed 16 May 2026).

¹⁹¹ Parlamento Europeo, Risoluzione su copyright e intelligenza artificiale generativa, 2024; European Parliament, *Copyright and Generative Artificial Intelligence — Opportunities and Challenges*, 2024.

3.5 Comparative analysis and implications for authorship

The comparative analysis of the U.S. and European legal frameworks reveals a fundamental convergence that transcends the differences in their respective doctrinal architectures: in both jurisdictions, copyright protection is grounded in an anthropocentric conception of authorship that structurally excludes AI systems from recognition as authors. This convergence is not a coincidence of legislative drafting, nor a temporary gap awaiting correction — it reflects a deeper philosophical commitment, shared across legal traditions, to the idea that authorship is an irreducibly human act.

The two systems arrive at this conclusion from different philosophical starting points. The Anglo-American copyright tradition, rooted in the utilitarian logic first articulated in the British Statute of Anne (1710), conceives of copyright as an economic instrument designed to incentivize and reward human creativity for the public benefit. The U.S. Constitution's Intellectual Property Clause frames this explicitly: Congress is empowered to promote "the progress of science and useful arts" by granting "authors" exclusive rights to their "writings." The incentive rationale presupposes a human creator who responds to economic incentives — a presupposition that is inapplicable to AI systems, which neither require nor respond to the prospect of copyright protection. As U.S. courts confirmed in *Thaler v. Perlmutter*, this rationale is not merely a policy preference but a constitutional constraint: extending copyright to AI-generated works would fail to serve the purpose that justifies congressional authority under the IP Clause.¹⁹²

The European tradition of *droit d'auteur*, by contrast, places the author at the center not primarily for reasons of social utility but because of the moral and natural connection between a creator and their work. Under this tradition — rooted in the French conception of authorship as a natural right that law acknowledges rather than creates — copyright protects the author's personal connection to their creative expression, including through inalienable moral rights such as the right of paternity and the right of integrity. This framework is even more explicitly anthropocentric than its U.S. counterpart: the Berne Convention, the foundation of EU copyright law, and the CJEU's case law all presuppose a natural person whose personality is expressed through free and creative choices.¹⁹³ As Quintais and Hugenholtz have observed, although EU copyright law does not expressly state that protection

¹⁹² *Thaler v. Perlmutter*, No. 23-5233 (D.C. Cir. March 18, 2025), *cit.*; Congressional Research Service, *Generative Artificial Intelligence and Copyright Law*, LSB10922, *cit.*

¹⁹³ P.B. Hugenholtz, J.P. Quintais, «Does EU Copyright Law Protect AI-Assisted Output?», *IIC*, Springer, 2021, *cit.*; *Eva-Maria Painer v. Standard VerlagsGmbH*, C-145/10 (CGUE 2011), *cit.*

requires a human creator, its anthropocentric focus is self-evident in virtually every aspect of the acquis.¹⁹⁴

Despite these different philosophical foundations, both systems converge on the same operative conclusion when applied to AI-generated works. In the United States, the Copyright Office and the D.C. Circuit have categorically confirmed that copyright requires human authorship, that prompts alone do not provide sufficient human creative control, and that AI systems cannot be recognized as authors under any existing legal theory.¹⁹⁵ In the European Union, the CJEU's originality doctrine — requiring that a work reflect the "author's own intellectual creation" through the exercise of "free and creative choices" that stamp the work with the author's "personal touch" — yields the same result: purely AI-generated outputs, in which no human has exercised genuine creative freedom over the expressive elements, cannot qualify for copyright protection.¹⁹⁶

A crucial difference, however, lies in the nature of the human contribution required and in the degree of flexibility each system affords in evaluating it. The U.S. approach emphasizes the categorical fact of human authorship — the question is primarily whether a human being was the author, with relatively little room for gradation. The EU approach places greater weight on the intellectual quality of the human contribution — the question is whether the human exercised sufficient free and creative choices, which in principle allows for more nuanced case-by-case evaluation. This difference has practical implications: the EU framework may be more accommodating of AI-assisted works where a human author has exercised genuine creative control, while the U.S. framework applies a more rigid categorical threshold. As one comparative analysis has noted, this difference may become significant if and when the CJEU directly addresses an AI-generated work for the first time — the Court's emphasis on intellectual contribution rather than the mere fact of human involvement could in theory lead to a different assessment than the one adopted by the U.S. Copyright Office in cases like *Zarya of the Dawn*.¹⁹⁷

A second significant divergence concerns the regulation of deepfakes and synthetic media specifically. As demonstrated in §3.3 and §3.4, the EU has moved further and faster than the United States in developing a regulatory framework for AI-generated content that reproduces individual

¹⁹⁴ Hugenholtz, Quintais, *cit.*

¹⁹⁵ U.S. Copyright Office, *Copyright and Artificial Intelligence, Part 2: Copyrightability*, January 2025, *cit.*; U.S. Copyright Office, *Copyright Registration Guidance*, 88 Fed. Reg. 16190, *cit.*

¹⁹⁶ *Infopaq International A/S v. Danske Dagblades Forening*, C-5/08 (CGUE 2009), *cit.*; *Cofemel*, C-683/17 (CGUE 2019), *cit.*

¹⁹⁷ A. Zhuk, «Navigating the Legal Landscape of AI Copyright: A Comparative Analysis of EU, US, and Chinese Approaches», *AI and Ethics*, vol. 4, 2024, pp. 1299-1306, *cit.*; «Why the Obsession with Human Creativity? A Comparative Analysis on Copyright Registration of AI-Generated Works», *Harvard International Law Journal*, febbraio 2025, *cit.*

identity: the AI Act's Article 50 imposes binding transparency and disclosure obligations on deepfake content, and the Berne-grounded moral rights tradition provides a more direct basis for protecting individuals against unauthorized appropriation of their creative persona. The United States, by contrast, relies on a fragmented combination of the DMCA's notice-and-takedown mechanism, the patchwork of state right of publicity laws, and proposed federal legislation that has yet to be enacted. This regulatory asymmetry means that the same deepfake — such as *Heart on My Sleeve* — would encounter meaningfully different legal responses on either side of the Atlantic, even though neither system would recognize it as a protectable work of authorship.¹⁹⁸

What emerges most clearly from this comparative analysis — and what constitutes the central analytical contribution of this thesis — is that the authorship vacuum created by AI-generated works is not the product of legislative inadvertence or technological novelty alone. It is the structural consequence of applying a concept of authorship that was designed, across all major legal traditions, to protect and incentivize specifically human creative activity. Both the utilitarian and the natural rights traditions ground copyright in attributes — consciousness, personal expression, volitional creative agency, the capacity to form intentions and make free choices — that are inherently and irreducibly human. AI systems do not possess these attributes in any legally meaningful sense, regardless of the sophistication of their outputs or the commercial value those outputs generate.¹⁹⁹

This observation reframes the central question of the debate. The prevailing approach in academic literature and policy discussion has focused on determining *to whom* authorship of AI-generated works should be attributed — debating the respective claims of the prompter, the developer, the platform, and the imitated artist. This thesis argues that this question cannot be meaningfully resolved without first answering a prior and more fundamental one: *who can be an author* in the legally relevant sense. The answer that both the U.S. and EU frameworks provide — implicitly but consistently — is that an author must be a being capable of consciousness, personal expression, and volitional creative agency. No current AI system satisfies these criteria with respect to the expressive elements it generates. The authorship vacuum is therefore not a gap that incremental legislative reform can easily fill: it reflects a conceptual tension between a legal institution built for human creativity and a technology that produces creative-seeming outputs through fundamentally non-human processes.²⁰⁰

¹⁹⁸ Regolamento (UE) 2024/1689, art. 50, *cit.*; V. Melara, «The "Fake Drake" Fix», *cit.*

¹⁹⁹ «The Algorithmic Muse and the Public Domain», *arXiv preprint*, 2512.13750, *cit.*; «Between Puppet and Actor: Reframing Authorship in this Age of AI Agents», *arXiv preprint*, 2501.15346, January 2025, available on: <https://arxiv.org/pdf/2501.15346> (accessed 19 May 2026).

²⁰⁰ «Originality and the Future of Copyright in an Age of Generative AI», *arXiv preprint*, 2309.13055, *cit.*; Asian Journal of International Law, Cambridge University Press, *cit.*

In the musical context, this structural gap is particularly significant because the economic value of AI-generated deepfakes derives precisely from the imitation of human artistic identity — a form of creative and commercial appropriation that existing copyright frameworks were not designed to govern. Whether existing copyright legislation is the appropriate instrument for resolving this tension is itself a question that deserves careful consideration. As one comparative analysis has argued, copyright law should not necessarily adapt dynamically to technological development — its primary function is to maintain and uphold the rationales on which it is founded. If those rationales are grounded in human creativity, then the exclusion of AI-generated works from copyright protection may not merely be legally correct but normatively appropriate: a reflection of a deliberate choice to preserve the human-centered foundations of intellectual property law rather than extend them to encompass processes that share no relevant features with human authorship.²⁰¹ The normative and economic implications of this choice are examined in the final section.

3.6 *Normative and economic implications of extending copyright protection to AI-generated works*

The analysis developed throughout this chapter has established that both the U.S. and European legal frameworks exclude purely AI-generated works from copyright protection — a conclusion grounded not in legislative inadvertence but in a shared anthropocentric conception of authorship that this thesis has identified as the structural foundation of intellectual property law. This final section examines the normative and economic implications of this conclusion, and of the alternative — extending copyright protection to AI-generated works — assessing what each choice entails for the sustainability of human creativity, the functioning of creative markets, and the design of future regulatory frameworks.

The starting point for any economic analysis of copyright in the AI context is the foundational rationale of the copyright system itself. As the U.S. Copyright Office's February 2025 report on the economic implications of AI for copyright policy articulates, copyright is designed to balance the incentives to create and distribute works with the costs that exclusive rights impose on public access and future creation — a balance that is justified by the public-good characteristics of creative works, which are non-excludable and non-rival and would otherwise be subject to market failure.²⁰² The

²⁰¹ A. Zhuk, «Navigating the Legal Landscape of AI Copyright: A Comparative Analysis of EU, US, and Chinese Approaches», *AI and Ethics*, vol. 4, 2024, pp. 1299-1306, *cit.*; «Why the Obsession with Human Creativity? A Comparative Analysis on Copyright Registration of AI-Generated Works», *Harvard International Law Journal*, febbraio 2025, *cit.*

²⁰² U.S. Copyright Office, *Identifying the Economic Implications of Artificial Intelligence for Copyright Policy: Context and Direction for Economic Research*, February 2025, available on: <https://www.copyright.gov/economic->

central question the report poses is precisely the one at the heart of this thesis: how does the emergence of generative AI affect the optimal provision of copyright protection? The answer depends critically on whether AI-generated works create net positive value, and on whether that value must be weighed against the displacement of human-generated works that the technology causes.²⁰³

The economic case for extending copyright protection to AI-generated works rests on the argument that such recognition would incentivize the investment of intellectual, technical, and economic resources in AI-driven creative production. This model is already operative in jurisdictions such as China and the United Kingdom, where courts have attributed copyright to the human parties guiding AI systems. Proponents argue that AI enhances human cognition, creativity, and productivity, and that legal protection for AI outputs is necessary to sustain a functioning innovation ecosystem. However, this position faces three structural objections of considerable force.²⁰⁴

The first concerns the substitution effect. As the Copyright Office report warns, AI-generated works that substitute human-generated ones do not merely add to the stock of available creative content — they displace revenue and market share from human creators, potentially crowding them out of creative sectors entirely. The report notes that while AI may reduce production costs and increase efficiency, it also risks suppressing "more risky and costly experimental creations that sometimes lead to valuable innovation" — the kind of radical stylistic experimentation that drives cultural progress and that AI systems, trained on existing human output, cannot replicate.²⁰⁵ As Li has argued through an analogy to the Grossman-Stiglitz theorem on informationally efficient markets, if AI can provide all the content humans need at low variable cost, there is no incentive for humans to invest costly resources in content creation — a dynamic that would ultimately deprive AI systems themselves of the human-generated training data on which they depend.²⁰⁶

The second objection concerns the concentration of market power. Extending copyright protection to AI-generated works would not primarily benefit human creators — it would benefit the technology companies that develop and deploy AI systems, who would accumulate vast portfolios of protected

[research/economic-implications-of-ai/Identifying-the-Economic-Implications-of-Artificial-Intelligence-for-Copyright-Policy-FINAL.pdf](#) (accessed 21 May 2026).

²⁰³ U.S. Copyright Office, *Identifying the Economic Implications of Artificial Intelligence for Copyright Policy: Context and Direction for Economic Research*, February 2025, available on: <https://www.copyright.gov/economic-research/economic-implications-of-ai/Identifying-the-Economic-Implications-of-Artificial-Intelligence-for-Copyright-Policy-FINAL.pdf> (accessed 21 May 2026).

²⁰⁴ «AI Creativity and Legal Protection for AI-Generated Works in Posthuman Societal Scenarios», *ScienceDirect*, June 2025, available on: <https://www.sciencedirect.com/science/article/pii/S2666188825003156> (accessed 21 May 2026).

²⁰⁵ U.S. Copyright Office, *Identifying the Economic Implications of Artificial Intelligence for Copyright Policy: Context and Direction for Economic Research*, February 2025, available on: <https://www.copyright.gov/economic-research/economic-implications-of-ai/Identifying-the-Economic-Implications-of-Artificial-Intelligence-for-Copyright-Policy-FINAL.pdf> (consultato il 21 maggio 2026).

²⁰⁶ J. Li, «Is Generative AI an Existential Threat to Human Creatives? Insights from Financial Economics», *arXiv preprint*, 2407.19586, April 2024, available on: <https://arxiv.org/pdf/2407.19586> (accessed 21 May 2026).

content at negligible marginal cost. As the Copyright Office report observes, the production costs of AI-generated works are sufficiently low that the additional incentives of copyright are not necessary for reaching optimal production levels — meaning that offering copyright protection would be economically suboptimal, creating social costs through restricted access without generating the additional creative output that justifies those costs.²⁰⁷ In the music industry specifically, this dynamic would compound the economic harms already identified in Chapter II: the same platforms and AI developers that are currently appropriating the creative output of human artists without compensation would be further empowered to dominate the market through legally protected AI-generated content.²⁰⁸

The third objection concerns the practical challenges of implementation. A copyright regime for AI-generated works would require a detailed understanding of each work's creative process to determine which elements are protected and which are not — a requirement that is currently unenforceable at scale. National frameworks are reliant on artists and developers disclosing AI use, yet there is no robust technological tool capable of definitively detecting whether a work has incorporated generative AI tools, let alone determining on an element-by-element basis the extent of that incorporation. Watermarking and provenance mechanisms, mandated by the EU AI Act's Article 50, represent a step in the right direction but remain technically immature. Without reliable detection mechanisms, disclosure-based systems create perverse incentives: artists who cannot honestly declare AI use will simply deny it to preserve their copyright claims.²⁰⁹

On the licensing side, the transaction costs associated with compensating rights holders for the use of their works in AI training present a further structural obstacle. Individual licensing at the scale required by large AI models — which ingest billions of data points — is prohibitively expensive, creating strong incentives for unauthorized use. Collective licensing arrangements offer a partial solution but shift the transaction cost burden to intermediary organizations that must redistribute revenue among an enormous and heterogeneous population of rights holders. Hybrid approaches — distributing royalties where authorship can be reliably attributed, and allocating the remainder to

²⁰⁷ U.S. Copyright Office, *Identifying the Economic Implications of Artificial Intelligence for Copyright Policy: Context and Direction for Economic Research*, February 2025, available on: <https://www.copyright.gov/economic-research/economic-implications-of-ai/Identifying-the-Economic-Implications-of-Artificial-Intelligence-for-Copyright-Policy-FINAL.pdf> (accessed 21 May 2026).

²⁰⁸ «The Law and Economics of Generative AI and Copyright: A Primer to Core Challenges for Our Digital Future», *Computer Law & Security Review*, 2025, available on: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC12658474/> (consultato il 21 May 2026); CISAC/PMP Strategy, *The Impact of Generative AI on the Music and Audiovisual Sectors*, December 2024, *cit.*

²⁰⁹ «The Algorithmic Muse and the Public Domain: Why Copyright's Legal Philosophy Precludes Protection for Generative AI Outputs», *Computer Law & Security Review*, July 2025, available on: <https://www.sciencedirect.com/science/article/pii/S2212473X25000434> (accessed 21 May 2026); Regolamento (UE) 2024/1689, art. 50, *cit.*

collective funds supporting human cultural production — have been proposed as more feasible alternatives, though their implementation raises its own questions of governance and equity.²¹⁰ The AI Royalty Fund proposed by Jacques and Flynn represents one of the more developed academic proposals in this direction: a dedicated fund, financed by AI developers and distributed to human creators, designed to compensate for the displacement of human creative labor without requiring the extension of copyright to AI-generated outputs.²¹¹

The normative dimension of this debate ultimately reflects deeper value judgments about the purpose of copyright law and the kind of creative ecosystem that society wishes to sustain. If the aim is to incentivize human creativity, protect professional artistry, and preserve the cultural diversity that emerges from human creative experimentation, then the exclusion of AI-generated works from copyright protection is not merely legally correct but normatively appropriate — a deliberate choice to uphold the human-centered foundations of intellectual property law. If, by contrast, efficiency and the broad availability of creative content are prioritized, extending protection to AI-generated works might appear attractive — but at the cost of entrenching the dominance of technology companies and accelerating the displacement of human creators.²¹²

This thesis does not argue that the current legal framework provides adequate answers to the challenges posed by generative AI in the music industry. As the analysis of Chapters I, II, and III has demonstrated, the authorship vacuum created by AI-generated deepfakes harms human artists in ways that neither copyright law, nor the right of publicity, nor the DMCA's safe harbor provisions can fully address. What this thesis does argue is that the solution cannot lie in extending copyright to AI-generated outputs — which would exacerbate rather than resolve the economic harms identified in Chapter II — but must instead be grounded in a rethinking of how the law protects the economic value of human creative identity, independent of the copyright system's authorship requirements. The emerging legislative responses examined in §3.3 — the ELVIS Act, the No AI FRAUD Act, and the NO FAKES Act — represent tentative steps in this direction. Whether they, and the broader regulatory frameworks taking shape in the EU under the AI Act, will prove adequate to the scale of the challenge remains the central open question that the conclusions of this thesis address. The phenomenon of musical deepfakes, therefore, illustrates, in its most visible form, the broader

²¹⁰ «The Algorithmic Muse and the Public Domain: Why Copyright's Legal Philosophy Precludes Protection for Generative AI Outputs», *Computer Law & Security Review*, July 2025, available on: <https://www.sciencedirect.com/science/article/pii/S2212473X25000434> (accessed 21 May 2026); Regolamento (UE) 2024/1689, art. 50, *cit.*

²¹¹ S. Jacques, M. Flynn, «Protecting Human Creativity in AI-Generated Music with the Introduction of an AI-Royalty Fund», *GRUR International*, vol. 73, n. 12, December 2024, *cit.*

²¹² «AI Creativity and Legal Protection for AI-Generated Works in Posthuman Societal Scenarios», *ScienceDirect*, June 2025, available on: <https://www.sciencedirect.com/science/article/pii/S2666188825003156> (accessed 21 maggio 2026).

structural tension between generative AI and a copyright system historically designed to reward human creative labor.

4 Conclusion

4.1 *Summary of Findings*

This thesis began with the Drake case, which involved the release of *Heart on My Sleeve* in April 2023 and highlighted a decades-long challenge in the music industry. As the *Midler v. Ford Motor Co.* and *Waits v. Frito-Lay, Inc.* demonstrated, the unauthorized use of an artist's vocal identity is not a new problem born with generative AI: in the late 1980s, courts already faced issues regarding commercial appropriation of distinctive voices. What has changed is not the nature of the harm but the instrument through which it is inflicted, and the scale at which it can now occur. While Bette Midler and Tom Waits had to face human soundalikes hired for marketing and advertising purposes, Drake and The Weeknd had to deal with an AI system capable of replicating their vocal identities at very low marginal cost, able to distribute the output to millions of listeners within hours. The structural damage — the unauthorized commercial exploitation of an artist's creative identity — is the same, while the legal and economic repercussions are far more severe.

This thesis has addressed this problem from three complementary points of view, through a multidisciplinary approach. Chapter I established the factual and legal foundations by analyzing the Fake Drake case, the Randy Travis project, and the doctrinal background of voice protection under U.S. law. This chapter identified the central paradox that runs throughout the thesis: the works that pose the greatest economic and reputational threat to human artists are precisely those that the current copyright framework is least capable of addressing. This is explained by the fact that the expressive elements that make the works commercially valuable, such as the AI-generated vocal performance, cannot be considered the product of any identifiable human author.

Chapter II explored this issue from an economic standpoint. The generative AI music market, valued at approximately \$ 440 million in 2023, is expected to reach nearly \$ 2.8 billion by 2030. This trajectory is already inflicting quantifiable losses to human creators through market dilution, revenue displacement, and AI-enabled streaming fraud. The CISAC projections of a 24% revenue loss for music creators by 2028 and the documented one billion dollars diverted annually from legitimate royalty pools through fraudulent AI-generated streams illustrate that the issue presented in Chapter I is extremely urgent and is already having serious economic consequences for the music industry. The chapter also found that copyright extension would not address these harms but would instead shift

resources from human creators to tech firms and, by doing so, undermine the economic argument for copyright extension.

Chapter III delved more thoroughly into the legal implications, examining the copyright frameworks of both the United States and the European Union. This analysis revealed a fundamental convergence: although the U.S. and the E.U. are philosophically distinct in their approaches to copyright law, they both rest on the principle of anthropocentrism with regard to the concept of authorship and, as such, exclude machines from copyright protection and from recognition of authorship. Both the human authorship requirement in U.S. law, confirmed by the D.C. Circuit in *Thaler v. Perlmutter* (2025), and the CJEU's originality doctrine that requires the "author's own intellectual creation" through "free and creative choices" presume attributes — such as consciousness, personal expression, volitional creative agency — that AI systems do not possess in any legally meaningful sense. The comparative analysis suggests that this overlap is not merely a coincidence of legislative drafting but reflects a fundamental underlying normative principle, shared across legal traditions, that authorship is an inherently human act. While the emerging legislation, such as the ELVIS Act, the No AI FRAUD Act, the NO FAKES Act, and the transparency requirements in the EU AI Act, are welcome measures to address the regulatory gaps copyright law has exposed, they do not solve the authorship problem inherent in AI-generated music.

4.2 *Answer to the Research Question*

This thesis set out to answer the research question: to what extent does generative AI challenge the anthropocentric foundations of copyright law, and would extending copyright protection to AI-generated works remain consistent with the normative and economic purposes of copyright?

The response given by this thesis is twofold. Generative AI poses a profound threat to the anthropocentric basis of copyright law, not by rendering it obsolete, but by revealing its underlying principles with exceptional clarity. The human authorship requirement has always been the implicit foundation of copyright across jurisdictions, and is now made explicit and contested because AI systems can produce outputs indistinguishable from those of human authors, yet generated through fundamentally non-human processes. The issue is not fundamentally legal; it is conceptual and requires copyright law to define, again rigorously, what is legally significant about human creativity and why it deserves protection that AI-generated content does not.

The answer to the second part of the research question is unequivocal: extending copyright protection to AI-generated works would not be consistent with either the normative or the economic purposes of copyright. Normatively, copyright was designed to incentivize and reward human creative agency,

a rationale that is inapplicable to systems that neither require nor respond to economic incentives. Extending protection would not promote the progress of science and useful arts, as the U.S. Constitution requires, but would instead create legal monopolies on outputs generated at negligible cost, benefiting technology companies rather than human creators. The economic argument, as shown in Chapter II, is that the production costs of AI-generated works are not high enough to warrant additional copyright-based compensation to reach the optimal level of production. This means that such protection would impose social costs through reduced access without yielding additional output that could justify them.

4.3 *Future Developments and Policy Considerations*

The conclusions of this thesis outline a series of policy considerations that arise from the analysis without claiming to resolve them definitively. The most urgent need is not for copyright to be extended to works created by AI, but to make sure that human creative identity is better protected from AI-driven appropriation.

The right of publicity, as it currently stands, is fragmented, geographically inconsistent, and poorly suited to the speed and scale of AI-generated deepfakes. While the proposed federal legislation in the United States (the No AI FRAUD Act and the NO FAKES Act) is a first step toward a unified national standard, its enforcement will rely on the ability to design it to safeguard all individuals, not only famous performers with commercial value, and to cover both commercial and non-commercial harms.

While the EU AI Act's transparency requirements provide a clearer regulatory approach to the disclosure aspect of deepfakes, transparency is a necessary but not sufficient measure; simply marking AI-generated content as such won't stop its creation, nor will it reduce the economic damage that can be done to human creators whose voice is being replicated without their knowledge or consent. The next legislative step, whether in the United States or the European Union, should be to develop a compensation mechanism that connects the commercial exploitation of AI-generated content to the human creative efforts that enabled it, such as by implementing a mandatory licensing regime, creating royalty funds, or establishing collective remuneration systems.

More fundamentally, the policy debate surrounding AI and copyright needs to reframe its central question. The prevailing discourse has focused on *to whom* authorship of AI-generated works should be attributed. This thesis has argued that this question cannot be meaningfully answered without first resolving the prior question of *who can be an author* in the legally relevant sense. The answer, as the U.S. and EU copyright statutes and judicial decisions make clear, is that only a human being capable of consciousness, personal expression, and volitional creative agency can be considered an author.

The task for policymakers is not to revise this answer but to build a regulatory architecture sufficient to the scale of the problem posed by this new generative AI technology.

The future of human creativity does not depend on preventing technological progress. It relies on the ability of the legal and economic frameworks in which creativity operates to identify, protect, and sustain the uniquely human qualities that make creative expression valuable – and which no technological innovation can match.

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