## Artificial Intelligence is Challenging Copyright Infringement in the Music Industry

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In 2023 a song named "Heart on My Sleeve" was released on multiple streaming platforms
by an anonymous TikTok account who goes by Ghostwriter977. The song was generated using
Artificial Intelligence (AI) and featured the voices of global superstars Drake and The Weeknd.
The song generated millions of views before Universal Music Group (UMG), the artists' label,
ordered for the removal of the song from streaming platforms. "The ability to create a new work
this realistic and specific is disconcerting and could pose a range of threats and challenges to
rightsowners, musicians, and the businesses that invest in them," says Jonathan Faber (Donahue,
2023). The rapid evolution of AI technology demands a reevaluation of copyright law to
confront the challenges AI-generated music brings to the modern, digital music industry.

Before diving into the details and legality of this incident, it is important to have background information on existing copyright laws applicable to the music industry, as well as AI technology itself and how these songs are created. Copyright protection exists from the moment an original work is "fixed" in a tangible medium. "When you record a song, you may be creating two works that are protected by copyright: a musical work and a sound recording. A sound recording and the music, lyrics, words, or other content included in the recording are separate copyright-protected works," (U.S. Copyright Office). A musical work can be defined as a song's underlying composition along with any lyrics that may go with the song. Musical works are typically created by a composer or song writer. However, a sound recording is a series of

musical, spoken, or other sounds fixed in a recording medium, such as a CD or a digital file, called a phonorecord. Sound recordings are usually created by the recording's performer, producer, or others (U.S. Copyright Office). These two different works are what is protected by United States copyright law.

Although an artist's work is protected by copyright law as soon as it is in a fixed tangible medium, there is an additional way artists can protect their work. If someone was to illegally use an artist's original work, and the artist wants to form a lawsuit, registering their work is the best way to cover their bases in court. One of the main benefits of registering a copyright is having a timestamp on the artists material. This way, if a copyright infringement case was to be brought to court, it is absolutely clear who the original artist is and when they created their work.

Registering a copyright is a relatively easy process and the copyright office requires three items. "Applying for registration with the U.S. Copyright Office requires an application, a filing fee, and a copy of the work," (U.S. Copyright Office). Registering a copyright is required for any copyright infringement case and it streamlines the process of defending an artist's work in court.

Using someone else's work is becoming more popular in today's music culture, but there are hoops an artist must jump through to do this legally. There are generally three ways an artist can legally use another's work. An artist can legally use another's work if the work is in the public domain, if they get permission from the copyright holder or license the work, and finally, they can rely on statutory limitations of expectations such as the Fair Use Act (U.S. Copyright Office). There are two ways artist typically use another's work, sampling and covers. Both techniques have different licensing processes. "Sampling in music involves taking a section of audio from another source — in this instance, an existing song — and then reworking it into the creation of a new track," (Kapoor, 2023). This means, while trying to obtain a license for a

sample, the inquiring artist must license the "sound recording" type of work. The artist with the original work can negotiate any price for the license to the sample as well as refuse the rights altogether, according to an article by Ostrow (2022). The other main technique for using an artist's work is covering. This is when another artist performs the same lyrics and musical composition as the original artist. Covers have a different licensing system, an article by Romano law states that, "Provided you pay the statutory fee and meet the copyright law requirements, a compulsory mechanical license, found in §115 of the Copyright Act, allows you to reproduce and distribute someone else's composition as a new sound recording," (2022). Navigating the legal landscape of using another artists' work requires a thorough understanding on two different kind of works that can be licensed, as well as the types of licenses required to obtain the rights to a specific musical work.

Artificial Intelligence presents a unique threat to music copyrighting because it is a very new, fast developing technology and copywriting laws are relatively vague for AI. An article published by the University of Illinois Chicago states that, "AI enables machines to learn from experience, adapt to new inputs, and execute tasks resembling human capabilities. By leveraging AI technologies, computers can undergo training to perform particular tasks through the analysis of extensive data sets and the identification of patterns within the data," (2024). It is important to note from this definition that AI systems are "trained" to generate specific outputs, meaning there must be a human interaction when songs are generated using AI. This begs the question; How does AI generate entire songs? The answer involves training the machine learning algorithm by inputting a vast collection of songs in a particular genre or style. The algorithm then examines patterns and structures within the music such as chords, melodies, beats, rhythms, and instrumentation, and then generates new music that is similar in style and structure,

according to an article on techopedia.com (Pal, 2024). There is another, more controversial way that AI program creates lyrics for these songs, using deepfake technology.

Deepfake music is created in a similar manner as previously discussed, however it poses a different threat. Deepfake music is made by taking a large collection from one particular artist's voice, style and musical elements, and reconstructing it to say whatever the person behind the AI program would like, as mentioned in the Wildcat Tribune, (Arunsaravanakumar, 2023). This raises many red flags for the music industry, and the Recording Industry of America (RIAA) have voiced their concerns. "To the extent these services, or their partners, are training their AI models using our members' music, that use is unauthorized and infringes our members' rights by making unauthorized copies of our members works," the RIAA's report adds. "In any event, the files these services disseminate are either unauthorized copies or unauthorized derivative works of our members' music," (RIAA, 2022). The RIAA makes the claim that using the work of their artists' is infringing upon their rights, but they aren't the only ones with legal concerns about the use of deepfake AI technology.

After examining the existing copyright laws for music works, and how AI programs generate music, the incident regarding the AI song using Drake and The Weeknds' generated vocals requires more context. As previously stated, an anonymous TikTok user by the name of Ghostwriter997 released an AI song mimicking the work of superstars Drake and The Weeknd. After Universal Music Group was successful in removing the song from streaming services, many concerns became apparent from the incident. Louis Tompros, an intellectual property expert and Harvard law lecturer gave some valuable insight into what the current legal landscape looks like with AI-generated art. "I think of the impact of AI on copyright in two categories. One is the rights that AI-generated material itself has, and the second is what rights someone might

have that they can assert against AI-generated material." Says Tompros, "On that first issue, the question is: Who, if anyone, owns the copyright to material that is in whole or in part generated by artificial intelligence," (Reed, 2023). This statement focuses on the legal status and ownership of AI-created content. Traditionally, copyright law protects ownership of creative works for human creators. However, as AI becomes more capable of creating original content, the question arises: who owns the copyright to the material? Should it be the AI system's developer, the user, or the AI itself? Is Artificial Intelligence is considered an autonomous entity capable of creative expression? These are questions that remain in a gray area for copyright law.

The Copyright Office provided some guidance on this subject. On March 15, 2023, the U.S. Copyright Office announced that works created with the assistance of artificial intelligence may be copyrightable, provided the work involves sufficient human authorship, as stated in an article on Ropes&Gray.com by Ameri, Gourvitz (2023). After researching the inner workings of how music is created by AI, it is known that a human must train the AI to get an output from the program. According to the policy statement, AI works cannot be copyrighted because they do not meet the human authorship requirement. For example, when an AI program creates a complex written, visual, or musical work in response to a human prompt, the "traditional elements of authorship" are determined and executed by the technology rather than the human user, so the resulting work is not copyrightable. A work containing AI-generated material, on the other hand, may be copyrightable if there is sufficient human authorship, such as when a human selects or arranges AI-generated material creatively, or when a human modifies material created by AI technology (Ameri et al. 2023). In future lawsuits that may arise from AI-generated music, the courts will have to decide how much human input constitutes for copyright protection.

If the AI-generated song is not found to be copyrightable, how were the attorneys from Universal Music Group able to get the song taken down in a timely manner? The actions taken by attorneys representing Universal Music Group to remove "Heart on My Sleeve" from platforms such as TikTok and Spotify demonstrate copyright enforcement strategies, especially those outlined in the Digital Millennium Copyright Act (DMCA). Tompros explains this process, stating, "There is a process under the Digital Millennium Copyright Act which allows a rightsholder to give notice that a work they are distributing is, in the rights-holder's view, violating their copyright rights," (Reed, 2023) This emphasizes the procedural requirement for platforms to promptly comply with takedown requests in order to protect their own liability under the DMCA. Tompros suggests that the scrubbing of the song was accomplished because of a producer tag that was used in the song. Metro Boomin, a well-respected music producer in the hip-hop scene has distinct producer tags that he plants in every original song he creates. McLaughlin expands more on the use of producer tags by stating, "In the world of hip-hop production, a catchy and memorable producer tag can be just as iconic as the beat itself. These tags serve as audio signatures, letting listeners know who crafted the instrumental they're about to enjoy." (2023) In the AI song "Heart on My Sleeve" a direct copy of the Metro Boomin producer tag was used in the song when he was clearly not the producer of the song. Since the producer tag was a direct mimic of Metro Boomin's personal producer tag, the attorneys were able to conclude that the producer tag was illegally sampled. In result, the song was scrubbed from all streaming services on the grounds that it infringed on the copyright owner.

While this seems like a win for UMG and its artist's, the threat of AI deepfakes still remains an issue. Once again, the Harvard Law expert Louis Tompros, has his own ideas on how artists can argue against AI infringement. It is known that in order for an AI program to generate a

deepfake the program must first be trained. "They might argue that this AI-generated song was the result of training the AI on Drake's works, and to do that, someone had to copy Drake's works into this system, and that copying was an act of copyright infringement," (Reed, 2023). According to the Copy Right Act, "Only the owner of copyright in a work has the right to prepare, or to authorize someone else to create, a new version of that work. Accordingly, you cannot claim copyright to another's work, no matter how much you change it, unless you have the owner's consent" (Fair Use: U.S. Copyright Office). If UMG Lawyers can prove to the courts that the music used to train the AI program was copied, then they may have grounds for a legit copyright lawsuit. However, "They may also try to make the argument that the output itself is some form of copyright infringement, because it is derivative of those artists' works," (Reed, 2023). It seems that UMG attorneys may have grounds for a solid copyright lawsuit, however Universal Music Group may have another option to argue the use of AI deepfakes.

Universal Music Group's most reliable option for a lawsuit may be a misappropriation tort, more specifically an infringement upon the artists' right to publicity. In The Law of Journalism and Mass Communication book, the authors define right of publicity as, "an appropriation tort that protects celebrities' rights to have their names, pictures, likeness, voices and identities used for commercial or trade purposes," (Ekstrand et al. 2024, pp.263). Since the AI song mimicked the artists' voices to an uncanny degree, the attorneys for UMG have solid grounds for a right of publicity infringement case. In fact, this is not the first time a famous artists' voice has been mimicked for commercial gain, and the precedent has already been set on this issue.

Bette Midler was a celebrated singer and was offered to sing in a commercial for Ford Motor Company. She refused the offer, but Ford Motor Co. was determined to have her sing in the commercial, so they opted for a sound-alike to replace her voice and carry on with the

commercial. Midler was highly identifiable in the commercial even though neither her name nor photograph had been used. Midler sued and won in the case of Midler v. Ford Motor Co., 849 F.2d 460 (9th Cir. 1988). The court determined that Midler should be compensated for the misappropriation of her voice, holding that, when "a distinctive voice of a professional singer is widely known and is deliberately imitated in order to sell a product, the sellers have appropriated what is not theirs and have committed a tort in California," (McPherson, 2014). It is important to note that the precedent set for this case applies to the state of California, where Universal Music Group is fortunately located. A right of publicity case could be a viable option for the UMG attorneys.

Since the AI-generated song mimicking Universal Music Groups artists' Drake and The Weeknd is a relatively recent issue, there has not been an official lawsuit yet. However, it is important to acknowledge the specifics on what artists and record labels may be fighting against in possible upcoming lawsuits. Bill Donahue, a writer for Billboard magazine has some opinions on what will come of the recent debacle. "The fight ahead will likely be over how AI platforms are "trained"- the process where machines "learn" to spit out new creations by ingesting millions of existing works. From the point of view of many in the music industry, if that process is accomplished by feeding a platform copyrighted songs — in this case, presumably, recordings by Drake and The Weeknd — then those platforms and their owners are infringing copyrights on a mass scale," (Donahue, 2023). As mentioned earlier, AI programs are trained by uploading a substantial amount of voice recordings to program the vocal files it generates. Since the person who uploaded the songs to the AI program did not have a license to the artists' work, they should be guilty of copyright infringement in future AI copyright related cases. In fact, Universal Music group made a statement after the debacle. "The label said clearly that it believes such training to

be a violation of copyright law, and the company previously warned that it will not hesitate to take steps to protect our rights and those of our artists," (Donahue, 2023). It is very probable that there will be cases debating this issue in the near future. But who will be liable for infringement?

The blame in potential lawsuits regarding AI-generated content mimicking famous artists could fall on multiple parties involved in the creation. On one hand, the companies who have ownership over the AI programs could be liable for allowing the mass amount of infringement to occur on their platform. Yet, the individual who uses and uploads songs to the platform could be held liable as well. Donahue suggests that in this scenario, those who uploaded copyrighted material to train the AI program could be held accountable for copyright infringement (Donahue, 2023). There are many questions that remain unanswered on the process of AI generation to mimic artists. The technology that is used to generate these works is incredibly innovative and rapidly progressing. There will certainly be lawsuits in the future to protect artists from AI infringing upon their copyrighted material.

Ultimately, the emergence of AI-generated music, as demonstrated by the controversy surrounding the release of "Heart on My Sleeve," highlights the pressing need for an in-depth reevaluation of copyright laws in today's digital world. As Jonathan Faber correctly points out, the creation of highly realistic AI-generated content presents significant challenges and threats to rights holders, musicians, and music industry businesses (Donahue, 2023). Understanding the legal landscape surrounding copyright is vital for comprehending the complexities of this issue. The foundation of copyright law in the United States protects original works fixed in a tangible medium, which includes both musical works and sound recordings. While copyright protection is built into the act of creation, registration provides additional legal benefits, such as a timestamped record of ownership and the ability to fight infringement claims in federal courts

(U.S. Copyright Office). Additionally, navigating the legal landscape of using others' works requires an understanding of the nuances of public domain, licensing, and statutory limitations such as fair use.

Nevertheless, the emergence of AI technology creates new challenges for copyright enforcement. AI systems, trained on massive quantities of existing works, raise concerns about the extent of human authorship and the copyrightability of AI-generated content. Recent policy statements from the United States Copyright Office clarify that works with sufficient human authorship may be copyrightable; however, the application of these principles to AI-generated content is still murky. The "Heart on My Sleeve" incident demonstrates the intersection of AI and copyright regulation, as Universal Music Group acted rapidly to scrub the song from streaming platforms. The use of producer tags, as well as potential violations of the right to publicity, highlight the complex legal issues surrounding artificial intelligence-generated music. Louis Tompros' insights into the copyright implications of AI-generated content emphasize the significance of clearly outlining ownership and liability in this rapidly changing landscape.

In the near future, the music industry is expected to encounter complicated legal challenges as it deals with the implications of AI-generated songs that mimic well known artists' voices. Bill Donahue's observations on the training process of AI platforms, along with the potential for widespread copyright infringement, highlight the need for proactive measures to protect artists' rights. Future lawsuits may establish the liability of AI platforms, individual users, and copyright infringers in cases involving AI-generated songs (Donahue, 2023). To address the legal complexities of AI-generated music, policymakers, legal experts, and industry stakeholders must collaborate to create solid foundations that balance innovation with intellectual property rights

protection. As artificial intelligence technology advances, proactive steps and well-informed legal strategies are vital for protecting creators' rights and interests in the digital music landscape.

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