

Classical Musicians v. Copyright Bots

How Libraries Can Aid in the Fight

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ABSTRACT

The COVID-19 pandemic forced classical musicians to cancel in-person recitals and concerts and led to the exploration of virtual alternatives for engaging audiences. The apparent solution was to livestream and upload performances to social media websites for audiences to view, leading to income and a sustained social media presence; however, automated copyright enforcement systems add new layers of complexity because of an inability to differentiate between copyrighted content and original renditions of works from the public domain. This article summarizes the conflict automated copyright enforcement systems pose to classical musicians and suggests how libraries may employ mitigation tactics to reduce the negative impacts when uploaders are accused of copyright infringement.

INTRODUCTION

The COVID-19 pandemic, unlike anything the country has seen in a century, forced industries to reevaluate the manner in which they provide services to the public. Businesses and citizens everywhere made hairpin turns as they quickly searched for virtual alternatives to everyday in-person activities. With many remaining home for extended periods of time, demand for digital content and entertainment skyrocketed. In May 2020, Comcast reported a 40% increase in online video streaming since March 1, just weeks before governments instated stay-at-home mandates.¹ Throughout the year, subscription-based streaming services saw enormous surges in customer usage and, likewise, social media platforms saw a significant spike in content production and consumption.² Daily blogging on Facebook replaced in-person interactions, and YouTubers generated higher volumes of videos to meet viewer demand.

Classical musicians were also heavily reliant on social media platforms in order to showcase performances as pointed out in the *Washington Post* article “Copyright Bots and Classical Musicians are Fighting Online. The Bots are Winning.” Highlighted by American Library Association’s *American Libraries*, the article illustrated the toll social media content moderation algorithms took on classical musicians sharing their performances online.³ This article became the starting point for the 2021 study “Are YouTube and Facebook Canceling Classical Musicians?,” which investigated the relationship between classical musicians and automated copyright enforcement systems.⁴ The following is a summary of this study’s findings and brings attention to the role libraries can play in aiding classical musicians facing copyright infringement claims.

AUTOMATED COPYRIGHT ENFORCEMENT

Evidence shows that automated copyright enforcement systems wrongfully remove user-uploaded materials in the name of copyright protections on a regular basis.⁵ In fact, it happens so often that the Australian Broadcasting Corporation began wittingly dubbing such instances “copywrongs.”⁶ These algorithms are not designed to distinguish between recordings of music

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owned by record labels and those shared online by freelance musicians. They are instructed to recognize copyrighted recordings and content resembling those recordings as identical matches, ensuring the protection of intellectual property from unauthorized reproduction. As such, automated content moderation systems are incapable of making allowances for the performance of works from the public domain. Such performances comprise nearly all of a classical musician's repertoire.

Automated copyright enforcement systems are typically based on a combination of matching and classification methods. The most effective matching technique for content moderation is perceptual hashing, which isolates unique strings of data (hashes) taken from an uploaded file and compares distinguishing markers and patterns to a database of samples provided by copyright owners.⁷ This technique allows systems to detect exact matches and iterations of the original work, such as live recordings and remixes.⁸ Among classification methods, artificial neural networks with deep learning are best suited to the task of algorithmic moderation. Consisting of a network of nodes, they are meant to simulate the structure and function of neural networks in animals and humans.⁹ This enables them to solve multifaceted, dynamic problems, which makes them ideal for instantaneous content moderation, allowing them to identify musical similarities in real time.¹⁰

Both YouTube and Facebook enable users to upload recordings and broadcast live feeds to their websites. Matching techniques are used to review prerecorded content since the upload process allows for automated systems to sample the material for comparison to the companies' hash databases before allowing the recording to be posted.¹¹ In contrast, live broadcasts are transmitted instantaneously and allow for no time to review the footage before it is visible online. Therefore, hashes cannot be sampled from streaming content, requiring that classification methods using training data identify infringing material on the fly.¹²

While these algorithms make content moderation easier, they are limited in their capacity. One study showed that YouTube is surprisingly inaccurate in its attempts to recognize infringing material in live broadcasts, failing to identify 26% of copyrighted footage within the first thirty minutes of streaming and blocking 22% of non-infringing livestreams.¹³ Research strongly suggests that the only factors considered by music copyright enforcement systems are pitch, volume, and melodic and harmonic contour.¹⁴ Those values alone cannot be used to distinguish copyrighted works from the public domain. As such, these systems are not yet advanced enough to account for the total complexity of human creativity, and human intervention is required before these programs systematically accuse uploaders of copyright infringement.¹⁵

Compositions in the public domain are not subject to copyright; however, recorded performances of compositions from the public domain can be copyrighted. Individuals may upload or livestream their own performances of classical music without fear of infringing copyright but may not upload another musician's copyrighted recordings of the same pieces. For example, no one owns the copyright to Bach's cello suites and, therefore, anyone can profit from performing these works. Sony Music, though, owns the copyright to Yo-Yo Ma's recordings of Bach's cello suites, and anyone uploading these specific recordings to social media would be infringing copyright and subject to the repercussions. Unfortunately, automated copyright enforcement systems often misidentify an individual's performances as copyrighted recordings.

THE IMPACT ON CLASSICAL MUSICIANS

Classical musicians are accustomed to having their content misidentified for infringing copyright, but with the pandemic forcing many more musicians to share performances regularly on social media, the problem has become ever more pervasive. Adrian Spence, the artistic director for chamber ensemble Camerata Pacifica, found himself appealing multiple copyright claims from both Facebook and YouTube. On occasion, he would dispute several claims issued by different copyright owners for the same recording. Until these issues were resolved, Facebook suspended Camerata Pacifica's ability to livestream, and YouTube displayed a notification on their channel informing viewers that their videos were likely to be removed due to anticipated copyright infringement.¹⁶ Owen Espinosa, a high school senior, was preparing for a piano recital, and during rehearsal, Facebook ended his livestream over claims of copyright infringement. He was unable to successfully appeal the claim which meant that Facebook would not host his performance. Instead, he had to broadcast his recital on an acquaintance's YouTube channel.¹⁷

Michael Sheppard, a professional pianist, has had broadcasts interrupted and videos removed by Facebook multiple times with notifications stating that music owned by Naxos of America was detected in his performances.¹⁸ After Facebook rejected his disputes, Sheppard took to Twitter, alerting Naxos of his situation. His videos were eventually restored, but nothing could be done about his livestreams.¹⁹ The Violinist.com broadcasts weekly, hour-long concerts featuring multiple guest musicians. During one of these performances, Facebook muted child violinist Yugo Maeda due to a claim of copyright infringement. After appealing the notice, Facebook un-muted Maeda's performance three days later.²⁰

While COVID-19 exacerbated the issue, classical musicians often had their performances interrupted or removed from social media. In 2019, conducting students at the University of British Columbia had their Facebook Live feed interrupted over copyright infringement claims and, in 2018, Facebook removed a recording of an in-home performance given by pianist James Rhodes also stating that the music infringed copyright.²¹ Also in 2018, the Australia Broadcasting Corporation's ABC Classic FM livestreamed a performance of Beethoven's *Symphony No. 9*. The broadcast ended with Facebook issuing a claim stating that the music in question was owned by two different copyright owners.²²

In 2016, violinist Claudia Schaer disputed several of YouTube's copyright claims. She typically had success with these appeals, but one of her recordings received three claims from different copyright owners. She was able to refute two of them; however, the third remained, and she was warned that if she was unsuccessful in her second attempt at appealing the claim, her account would receive a copyright strike, deleting her video from the site permanently. She felt both intimidated and aggravated by the ordeal.²³

The author of this article has also had to refute a copyright infringement claim on YouTube. According to the notice, 51 seconds of the author's approximately five-minute performance of Beethoven's "Für Elise" infringed copyright. As a result, the claimant authorized YouTube to include ads in the video, allowing them to generate revenue. The dispute was upheld after the claimant's 30-day window for a response expired. Although the author does not rely on monetized videos and livestreams for income, it is unethical for another entity to profit from the work of an unaffiliated individual.

DISPUTING A COPYRIGHT CLAIM

While there is recourse for uploaders facing copyright claims from social media sites, the appeals process can be lengthy and overwhelming. It can take more than two months for YouTube to render a verdict when a musician disputes a copyright notice. During this span of time, classical musicians depending on ad revenue cease to generate income as these funds are held by the company until a final decision is made, at which point all profits accumulated by the video are released to the appropriate party. If the claim is upheld, the recording may remain online with proceeds going to the supposed copyright owner.²⁴ Uploaders may attempt to refute the result, but a failed appeal leads to the video's removal and a copyright strike levied against the uploader's preventing them from livestreaming and monetizing videos for three months. Should this occur, a counter notification can be issued which insists that the content in question has been mischaracterized as infringing and requires that would-be copyright owners file a lawsuit to uphold the claim. After three strikes, accounts are permanently deleted along with all associated uploads.²⁵

The time that elapses for a final verdict along with the suspension of uploading and livestreaming permissions due to a copyright strike amounts to more than five months without being able to sustain an income. When a single performance is charged with multiple claims from different entities, as in the aforementioned examples, the uploader must dispute each one individually. This makes it easy to accumulate copyright strikes, risking account termination. It would be reasonable to assume that many classical musicians who endure these circumstances avoid the dispute process for fear of YouTube removing their recordings, enforcing limitations on their ability to broadcast and monetize videos, and even permanently deleting their accounts. Meanwhile, mistakenly recognized copyright owners can leverage this by appropriating the earnings generated by the work of unaffiliated musicians. Furthermore, should the matter be redirected to the courts, the uploader faces the burden of retaining legal counsel.

YouTube algorithms deal with approximately 98% of all copyright issues and, because YouTube's business model generates profits primarily via user-uploaded content, it has been found to show bias towards established copyright owners.²⁶ Copyright owners can set preferences for how they want the system to react to instances of copyright infringement, resulting in the automatic monetization of 95% of claims for the copyright owner. As a result, user uploads make up 50% of the revenue generated by YouTube for the music industry.²⁷ Although Google reported in 2018 that 60% of disputed claims were found in favor of accused uploaders, the system clearly benefits established copyright owners.²⁸

All of the aforementioned musicians who were accused of copyright infringement had their livestreams interrupted, saw their videos removed, and witnessed companies profiting from their work performing music that has long since passed into the public domain. YouTube's video series *Copyright and Content ID on YouTube* attempts to educate users on how automated copyright enforcement and the dispute process work, and while fair use and copyright permissions are discussed, the public domain is never mentioned; although, YouTube does offer a brief explanation of the public domain on its help site.²⁹ According to the US Copyright Act, the duration of copyright extends to 70 years after the death of the known composer, and for uncredited compositions or those composed by a musician under a pseudonym, copyright is recognized for 95 years from the date the work was published or 120 years from when it was composed, depending on which

expires first.³⁰ While record labels are fully within their right to protect the recordings they own, that should have no bearing on individual musicians performing pre-twentieth-century music.

The majority of online music consumption occurs on social media sites with 47% of the market share going to YouTube.³¹ Reports from Deezer showed a near 20% increase in users listening to classical music since the start of the pandemic.³² Given that more users are gravitating towards listening to classical music, and that the most popular digital access point for music is YouTube, classical musicians coping with pandemic-induced restrictions were presented with what should have proven to be a lucrative opportunity. Adhering to social distancing requirements and stay-at-home mandates meant musicians cancelled their performances, leading to an exploration of virtual alternatives such as uploading recordings and livestreaming. Obstructing these activities interrupts their sole source of income.

CONCLUSION

While researchers have suggested a handful of improvements for automated copyright enforcement systems, they have not addressed the role that libraries can play in assisting classical musicians.³³ The Tampa-Hillsborough County Public Library, prior to the spread of COVID-19, maintained four branches outfitted with recording studios; today, that number has grown to five. Prior to pandemic library closures, recording studios were reserved just over 800 times, amounting to about 1,600 hours of usage between January 1, 2019 and March 13, 2020. Patrons using the recording studios produce music and videos with the intention of uploading them to social media. Other libraries with recording studios likely see their patrons doing the same, but without knowledge of copyright.

Libraries have the means and the motive to assist classical musicians. Libraries can hold classes covering the basics of copyright, fair use, and the public domain, or that expand upon how automated copyright enforcement systems work on social media. Library staff, however, may feel overwhelmed by the numerous texts on these subjects and may not know where to begin. An excellent starting point is the Frequently Asked Questions page on the US Copyright Office website. This webpage offers explanations for a broad array of copyright-related issues and questions.³⁴ Fair use allows for unauthorized borrowing from a creative work; however, navigating how fair use is determined is always challenging. Steven M. Davis' "Computerized Takedowns: A Balanced Approach to Protect Fair Uses and the Rights of Copyright Owners" is a reliable point of reference for defining fair use, its application in copyright infringement cases, and ethical and legal implications regarding the limitations of algorithmic moderation systems.³⁵ For a thorough look into the mechanics and applications of automated copyright enforcement, refer to the previously mentioned "Are YouTube and Facebook Cancelling Classical Musicians?" This article offers a synopsis on the shift from physical to digital media, descriptions of different algorithmic models developed specifically for copyright enforcement, and an account of how YouTube's and Facebook's copyright enforcement systems came to be.³⁶

Libraries can also offer help sessions that support patrons through the copyright claims dispute process. The YouTube dispute interface is user friendly, and the instructions are comprehensible. Throughout each step, explanations are offered to clarify what is being required of the user. For example, when asked for the reasoning behind the dispute, the user is offered four options: the disputed material is original content, the user has acquired permission to reproduce the content, the content falls under fair use, or the content originates from the public domain. Once selected,

additional explanations for each option are given in order to provide further clarification and context which allows the user to reconsider their choice and also helps the user better explain how their content falls under the selected category. Finally, the user is asked to provide a narrative explaining how the content in question does not infringe copyright. Facebook's counter-notification process is less generous, providing brief, ineffectual descriptions of copyright and a simple form requesting the user's personal information and explanation for why the copyright infringement claim is unfounded.

After library staff demonstrate the use of these interfaces, patrons can be guided to library resources to help them articulate and refine their arguments. For anything that cannot be found among the library's collections, library staff may need to assist with internet searches, or patrons may request materials through interlibrary loan. Additionally, patrons may still feel overwhelmed by the terminology being presented, which would further support the need for library programming that covers copyright-related topics. When considering the research involved to produce a convincing counterargument, information literacy and metaliteracy classes may be warranted.

Libraries can also encourage patrons to include descriptions in their uploads and livestreams with links to supporting evidence explaining that the featured music belongs to the public domain, and as the uploader, they own the rights to recordings and broadcasts of their own performances. The public domain description on YouTube's help page provides links to Columbia University Libraries' Copyright Advisory Service and Cornell University's Copyright Information Center, and it suggests that these resources can lead to supporting evidence regarding works in the public domain.³⁷ Another excellent resource is the International Music Score Library Project's Petrucci Music Library. This database of almost 200,000 compositions belonging to the public domain features both sheet music and recordings of each of these works.³⁸ Users can also point to *The Public Domain Song Anthology*, a book comprising 348 popular songs from the public domain; the entire text can be downloaded from the publisher's website.³⁹ These resources and explanations can be included in disputes to support the reasoning for why a copyright claim is invalid.

It should be noted that library employees are most often not lawyers, and as such, it is ill-advised to answer direct questions about the specific legality of the myriad of situations musicians face when disputing copyright claims. These matters require expert, specialist knowledge with which library staff are not equipped. The role of the library should only be to provide access to resources and inform the public on various issues regarding the use of information. As information specialists, librarians are in a unique position to educate patrons on information policy, and in this case, copyright. Library systems with law libraries or with access to law collections and databases would be especially suited to teach patrons about copyright, guide them through the dispute process, and assist them with gathering resources to support their counterarguments. The Tampa-Hillsborough County Public Library and other systems like it that are outfitted with both music recording studios and a law library are encouraged to offer such services.

Hopefully, this overview of automated copyright enforcement, its impacts on classical musicians, and the suggestions to libraries offered here will promote further conversation that eventually leads to action and a possible solution. Perhaps, as progress is made, automated copyright enforcement systems will grow more hospitable towards user-generated recordings and livestreams of classical music. After all, social media should be able to freely host the artistic talents of all musicians.

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