

Bellarmino University

ScholarWorks@Bellarmino

Undergraduate Theses

Undergraduate Works

4-26-2022

Digital Killed the Analog Star: An Evaluation of Copyright Law and its Effects on the Modern Jazz Musician

Anne Wamsley
acwamsley@gmail.com

Follow this and additional works at: https://scholarworks.bellarmino.edu/ugrad_theses



Part of the [Intellectual Property Law Commons](#), and the [Music Commons](#)

Recommended Citation

Wamsley, Anne, "Digital Killed the Analog Star: An Evaluation of Copyright Law and its Effects on the Modern Jazz Musician" (2022). *Undergraduate Theses*. 79.
https://scholarworks.bellarmino.edu/ugrad_theses/79

This Honors Thesis is brought to you for free and open access by the Undergraduate Works at ScholarWorks@Bellarmino. It has been accepted for inclusion in Undergraduate Theses by an authorized administrator of ScholarWorks@Bellarmino. For more information, please contact jstemmer@bellarmine.edu, kpeers@bellarmine.edu.

**Digital Killed the Analog Star:
An Evaluation of Copyright Law and its Effects on the
Modern Jazz Musician**

Anne Wamsley

Advisor: Prof. Dave Clark

Bellarmino University Honors Program

April 22, 2022

Abstract

This paper is a survey of modern American copyright law and an analysis of its effectiveness in the age of online music streaming through the use of grounded theory research practices, including a review of precedent and history of copyright law and interviews of jazz musicians that have varied levels of experience in different positions throughout the industry. Since music has become a commodity, it has needed to be protected by the law to ensure that musicians are paid fairly for the consumption of their work. Before the modern era, musicians made their living predominantly from record, tape, and CD sales, making concert tickets and licensed merchandise much cheaper. Now, though, is the time of streaming services such as Apple Music, Spotify, Tidal, and Soundcloud, which allow users to listen to all music on their platform for free with ads, or uninterrupted at the price of a subscription fee. It is a great opportunity for listeners to hear their favorite artists and songs whenever is most convenient for them. However, these services offer very little compensation to the artists whose art they have on their platform, many times less than a penny for every time their song is played.

Table of Contents

<i>Introduction</i>	2
<i>Chapter 1: Literature Review</i>	5
<i>A History of Copyright Law</i>	5
<i>Survey of Current Literature</i>	21
<i>Researcher Reflexivity and Positionality</i>	25
<i>Chapter 2: Methodology</i>	25
<i>Objectives</i>	25
<i>Research Method and Design</i>	26
<i>Sampling</i>	28
<i>Participants</i>	29
<i>Techniques Used for Data Analysis</i>	32
<i>Trustworthiness</i>	33
<i>Chapter 3: Results and Discussion</i>	34
<i>Themes</i>	34
Theme 1: Role of PROs	34
Theme 2: Legislative Change.....	36
Theme 3: Role of the Consumer	37
<i>Discussion: The Royalty Renaissance Theory</i>	39
<i>Chapter 4: Implications and Conclusion</i>	42
<i>Limitations</i>	42
<i>Future Directions</i>	43
<i>Implications</i>	44
<i>Conclusion: “We can’t rewind, we’ve gone too far”</i>	44
<i>Appendix A</i>	46
<i>Appendix B</i>	47
<i>Appendix C</i>	48
<i>Bibliography</i>	49

Introduction

The United States Department of Health and Human Services defines the poverty line for a single-member household to be \$12,880 for the year of 2021.¹ With Spotify's current rate per stream at around \$0.003,² a musician would need to garner about 4.3 million streams on the service to meet the poverty line of a single-member household, before taxes and record companies get their cut. To put that into perspective, Duke Ellington's best-selling album of his career *Piano in the Background*, contains some of Ellington's most popular works---including the jazz classic "Take the 'A' Train." In total, the album has generated about 20.1 million streams since being added to Spotify as of December 2, 2021, which would give Ellington \$60,411 in streaming revenue. It sounds like a livable salary until one considers that Ellington would then have to not only pay the state and federal taxes on that \$60,411, but pay Columbia Records, the American Society of Composers and Publishers (ASCAP), and the eighteen other musicians that participated in the production of that album. If Duke Ellington could not make a living in today's music industry, where is the hope for everyone else?

As someone who studies both law and music, it is beyond troubling to see the injustice being done to my fellow musicians by the law that is supposed to be protecting them in a society where their art is needed now more than ever, especially amidst the COVID-19 pandemic. Most

¹ "2021 Poverty Guidelines and Computations," Office of the Assistant Secretary for Planning and Evaluation (U.S. Department of Health and Services, January 2021), <https://aspe.hhs.gov/topics/poverty-economic-mobility/poverty-guidelines/prior-hhs-poverty-guidelines-federal-register-references/2021-poverty-guidelines/2021-poverty-guidelines-computations>.

² David Hesmondhalgh, "Is Music Streaming Bad for Musicians? Problems of Evidence and Argument," *New Media & Society* 23, no. 12 (September 19, 2020): pp. 3593-3615, <https://doi.org/10.1177/1461444820953541>, 3599.

Americans have turned to digital art consumption and turned away from physical copies for the sake of affordability and ease, whether that be through streaming music, videos, movies, or theatrical productions. And who can blame them? Why pay \$9.99 for a CD with 8-10 songs on it when you can pay \$7.99 per month to have unlimited access to millions of songs on your device, any time and anywhere?

However, therein lies the problem. Without the revenue of physical media sales such as CDs and vinyl, musicians are left with a significant gap in pay that they are forced to fill by increasing concert ticket and merchandise prices. Their consumers that are used to free or very cheap access to this product, are then turned away and buried deeper into their connection with streaming, and the cycle continues in perpetuum for artists that are not being carried by their name recognition and major record labels. Given the present legislation surrounding copyright and streaming platforms, how might artists be more equitably compensated for their creative intellectual property? How do current artists navigate this new era and what personal experiences do they have with current copyright legislation? What are some possible changes or suggestions that could be made to copyright legislation and practices that would make them more equitable for those in the music industry?

These questions will be investigated through first establishing what got the industry to its current state, by analyzing how copyright law and music itself has changed since America's founding and taking an objective look at the legislation and legal precedent that exists today. Following that will be interviews of musicians and employees of the industry, mostly through a lens of jazz as that is my area of expertise, detailing their experience with the digital age and how it has impacted their ability to make a living creating art. These accounts will then be analyzed

for commonalities and inform suggestions for possible solutions to these quickly developing issues.

Chapter 1: Literature Review

A History of Copyright Law

To truly grasp the implications of the crisis facing musicians resulting from streaming services, one must first understand the progression of copyright law and music itself throughout American history. The purpose of examining these two histories simultaneously is to show that the progression of one undisputedly has an influence on the other. Upon examining this timeline, the disconnect in timeliness between technological advances and the legislation that regulates them will become increasingly obvious as the years progress. For a glossary of terms regarding copyright, refer to Appendix A.

Looking through a strictly American lens, the need for copyright protection for music began in the year 1640, when the *Bay Psalm Book* was the first mass-produced sheet music to be sold in North America. This was a book of hymns written by Richard Mather and not only was it the first instance of mass-produced sheet music, but it was also the first book of any type to be mass-produced in the United States, which were British colonies at the time.³ Due to the increasing popularity and accessibility of the printing press, books were being printed often, but with no compensation being given to the authors. Thus, the *Statute of Anne* was passed in 1710 in an attempt to compensate authors and break up monopolies that had begun to develop among booksellers. Through this law, written works were protected for 14 years and allowed to apply for a 14-year extension if the author was still alive. Following the end of either or both 14-year periods, the creation would then enter the public domain where it is free to access by all. The United States was still a British colony at this time, and therefore this law applied to Americans

³ Haraszti Zoltán, *The Enigma of the Bay Psalm Book* (Chicago, IL: University of Chicago Press, 1965).

as well. However, even after declaring independence, the United States would reference the *Statute of Anne* when developing their Constitution and sets of laws later in the century.⁴

As the century progressed, both Europe and the United States entered the Industrial Revolution in the mid-18th century, which allowed printing presses to become more common in cities throughout these continents. Because of this, sheet music became much more accessible and affordable and for the first time in recorded history, music became a physical commodity.⁵ Shortly thereafter, the United States declared independence from Britain and ratified their own constitution in 1787. In it is included the basis for all American copyright legislation to follow under Article I, Section 8 which states that Congress has the power 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.”⁶

The Copyright Act of 1790 was the first official piece of American legislation that explicitly dealt with copyright protections for creators.⁷ This law stated that copies of maps, charts, and books qualified for protection from infringement for 14 years following publication with an opportunity to apply for a 14-year extension. After the work’s period of protection elapsed, it would then enter the public domain, almost exactly like Britain’s *Statute of Anne*. What made the Copyright Act of 1790 different from its British counterpart is how copyright

⁴ “A Brief History of Copyright in the United States,” Timeline (U.S. Copyright Office, 2021), <https://www.copyright.gov/timeline/>.

⁵ Andre J. Millard, *America on Record: A History of Recorded Sound*, 2nd ed. (New York, NY: Cambridge University Press, 2005), 87.

⁶ U.S. Const. art. I. sec. 8. cl. 8.

⁷ “A Brief History of Copyright in the United States,” Timeline (U.S. Copyright Office, 2021), <https://www.copyright.gov/timeline/>.

registration was organized. The United States delegated this duty to the district court where the creator resided. In 1831, the Copyright Act was revised to protect works for an initial 28-year period as opposed to the original 14 and maintain the opportunity for creators to apply for a 14-year extension on their protection. That same year, the song “Maid of My Love” written by David L. Richardson became the first song to receive copyright protection in American history.⁸

Copyright legislation and music development became relatively dormant from this point in history up until the middle of Reconstruction. However, in 1870, the Copyright Act was revised once more. The purpose of this revision was to move the administration of copyright protection and registrations from local district courts to the newly established Library of Congress Copyright Office to create a more centralized procedure for creators.⁹ American inventor Thomas Edison was credited with the invention of the phonograph seven years later in 1877.¹⁰ The phonograph is the ancestor of the modern record player, using tin foil cylinders to play back recorded sound. Alexander Graham Bell built on Edison’s invention and created the graphophone in 1886, which uses wax cylinders as opposed to tin foil.¹¹ Originally, the graphophone was created to record telephone conversation, but it quickly became used for music recordings as well. These new inventions also caught the attention world leaders.

Many of the world’s leading economic powers met at the Berne Convention for the Protection of Literary and Artistic Works in Berne, Switzerland that same year. Its signatories

⁸ “A Brief History of Copyright in the United States,” Timeline (U.S. Copyright Office, 2021), https://www.copyright.gov/timeline/timeline_19th_century.html

⁹ *Ibid.*

¹⁰ Andre J. Millard, *America on Record: A History of Recorded Sound*, 2nd ed. (New York, NY: Cambridge University Press, 2005), 31.

¹¹ *Ibid.*

created a basis for mutual recognition of copyright status across government lines and that works are protected from infringement as soon as they are created.¹² However, it is important to note that the United States chose not to attend this convention and did not accede to it until 1988. Two years after the Berne Convention for the Protection of Literary and Artistic Works, Emile Berliner invents the gramophone in 1888, which takes the technologies of the graphophone and phonograph and combines them while allowing the gramophone to play discs with imprinted grooves on them.¹³ Because of this, the gramophone is the most recognizable and similar ancestor to the modern record player. By the beginning of the next decade, sheet music was becoming increasingly accessible to the general public due to its affordable price and music education's rise to prominence in the late 19th century.¹⁴ This meant that because more people were being taught to read music in school, more people were compelled to buy sheet music as it became available.

To catch up with its global counterparts, the United States passed legislation that had similar terms to the Berne Convention called the Chace Act in 1891. This Act gave limited copyright protection to works by artists who were from nations other than the United States.¹⁵ It was not until 1897, however, that American musicians are finally given the exclusive rights of copyright holders through the Copyright Amendment Act of 1897, which also protects music

¹² A Brief History of Copyright in the United States,” Timeline (U.S. Copyright Office, 2021), https://www.copyright.gov/timeline/timeline_19th_century.html

¹³ Andre J. Millard, *America on Record: A History of Recorded Sound*, 2nd ed. (New York, NY: Cambridge University Press, 2005), 32.

¹⁴ *Ibid*, 88.

¹⁵ A Brief History of Copyright in the United States,” Timeline (U.S. Copyright Office, 2021), https://www.copyright.gov/timeline/timeline_19th_century.html

from being performed publicly without proper authorization from the copyright holder.¹⁶ This change was monumental to the American musician and gave way to many evolutions to come, both in terms of their protections under the law and the inventions they created.

At the turn of the twentieth century, player pianos were at the height of their popularity.¹⁷ Player pianos not only functioned as a typical keyboard instrument but could also play back recordings made on piano rolls that could be inserted into the piano. This is how many families were able to hear the most popular music during the time. In 1908, the Supreme Court of the United States heard the case *White-Smith Music Publishing Co. v. Apollo Co.*, 209 U.S. 1 (1908), which dealt with two already published songs being sold on piano rolls by a salesperson, the defendant, without the consent of the composer, the plaintiff. The plaintiffs stated that the defendant had made copies of their works by translating it onto a piano roll and are therefore infringing on the plaintiff's copyright protections. However, the Court ruled that the piano rolls created by the defendant were not unauthorized copies, but instead parts of a machine.¹⁸

Fortunately, this decision was later eclipsed by Congress' passage of the Copyright Act of 1909, which grants copyright protection to published works that contain a notice of copyright in or on the work.¹⁹ If a work was published but contained no notice of copyright, it was considered to be in the public domain and available to all. Additionally, the Copyright Act of 1909 extended the period of protection to 28 years with an option to apply for an additional 28 if

¹⁶ *Ibid.*

¹⁷ Alfred Dolge, *Pianos and Their Makers: A Comprehensive History of the Development of the Piano*, vol. 1 (New York, NY: Dover Publications, Inc., 1972), 160.

¹⁸ *White-Smith Music Publishing Co. v. Apollo Co.*, 209 U.S. 1 (1908).

¹⁹ "A Brief History of Copyright in the United States," Timeline (U.S. Copyright Office, 2021), https://www.copyright.gov/timeline/timeline_1900-1950.html

the creator was still alive, giving the creator a total of 56 years of protection and included the first compulsory mechanical license. A mechanical license allows anyone to use another's copyrighted work without procuring the consent of the creator so long as the user adheres to the provisions of the license (mostly fees). This set the first mechanical rate of royalty at 2 cents to be split between producers, songwriters, and other participants. However, because musicians are often occupied with performances, traveling, and writing, it was very difficult for these payments to be calculated, collected, and distributed accurately. Thus, a need was created for a group whose sole job is to deal with the collection and distribution of royalties. This is where performance-rights organizations (PROs) come into the picture.

One of the most well-known organizations for musicians, the American Society of Composers, Authors, and Publishers (ASCAP), was founded in 1914 and still exists today. ASCAP is a non-profit PRO that works to protect its members' works from infringement by monitoring the performances and uses of these works, collecting licensing fees from the users, and returning that money to the creators almost entirely in the form of royalty payments.²⁰ Essentially, places that play music belonging to any ASCAP member (radio stations, streaming services, etc.) must pay ASCAP to use that music. ASCAP in turn, gives that money to the creator.

For example, in the 1917 case of *Herbert v. Shanley Co.*, 242 U.S. 591 (1917), a New York City diner was playing music for its customers without the authorization of the music's composers, so ASCAP sued. The Court held that creators still deserve compensation if their

²⁰ Andre J. Millard, *America on Record: A History of Recorded Sound*, 2nd ed. (New York, NY: Cambridge University Press, 2005), 178.

music is being played, regardless as to if there is a charge for admission.²¹ Because of this ruling, ASCAP and other PROs now have the legal backing to pursue licensing fees from those using copyrighted music. The creation of PROs like ASCAP has made the issue of distributing royalty payments more centralized, but also arguably more complicated because it is very difficult to keep track and monitor every single performance or play of a song whose creator belongs to that PRO.

World War I ended shortly after the *Herbert v. Shanley Co.* ruling and there is an explosion in the popularity of radios. It was then that broadcast stations gave updates on news and entertainment and began sowing the seeds of constant media that we experience today.²² The radio was the main source of media consumption through both the Roaring Twenties and the Great Depression. However, the late 1930s and 1940s ushered in the “electrical age” .²³ During this time, the 78 rotations-per-minute (RPM) shellac disc was created and machines that functioned as both a radio and a phonograph were sold. This meant that not only did families have access to pre-recorded media on a more portable medium, but they also had access to live broadcasts being made on radio stations, all from the same machine.

To provide artists with another option when choosing a performance-rights organization, Broadcast Music, Inc. (BMI) was established in 1939.²⁴ BMI works similarly to ASCAP, in that they also collect licensing fees from places that perform copyrighted music from their members

²¹ *Herbert v. Shanley Co.*, 242 U.S. 591 (1917).

²² Andre J. Millard, *America on Record: A History of Recorded Sound*, 2nd ed. (New York, NY: Cambridge University Press, 2005), 3.

²³ Andre J. Millard, *America on Record: A History of Recorded Sound*, 2nd ed. (New York, NY: Cambridge University Press, 2005), 6.

²⁴ *Ibid*, 294.

and then distribute those fees to musicians as royalties. What makes BMI unique, however, is that it is exclusively for musicians whereas ASCAP represents composers, authors, and publishers.

In terms of world history, World War II is raging throughout the globe during this time. Because of the increased availability of radios and recorded sound, there is estimated to be a 25% increase in the playing of music “in the background”, also called “Muzak”, of daily activities during the War.²⁵ This had an immeasurable effect on the use of music in everyday life, bringing it to workplaces, malls, factories, households, and everywhere in between. Music as background is one of the few things that has remained constant in the evolution of technology throughout the twentieth and twenty-first centuries. Even today, one cannot go into any business or establishment without hearing some form of music quietly playing over speakers, occupying any silence that might arise.

Following the conclusion of World War II, the United States entered a period of innovation, both in terms of technology and in terms of legislation. The post-war era allowed for the United States to focus on improving aspects of life that are not necessarily considered “required” for living but are an investment in improving the American culture and education system. For example, in 1947, all existing copyright law was finally permanently incorporated via positive codification into United States Code under Title 17.²⁶ The process of positive codification allowed for all past modifications of the Copyright Act to be compiled into a single place that is clear and uniform.

²⁵ *Ibid*, 4.

²⁶ A Brief History of Copyright in the United States,” Timeline (U.S. Copyright Office, 2021), https://www.copyright.gov/timeline/timeline_1900-1950.html

Moving forward into the 1950s, the transistor radio was created in 1954 and for the first time in recorded history, people could take music with them wherever they went due to the transistor's small size and wireless nature.²⁷ The hiss of radio static and entering areas unable to reach signal while carrying the transistor radio quickly became a thing of the past only ten years later with the invention of the Norelco Carry-Corder by Philips.²⁸ This was the first cassette-player on the United States market and advanced the idea of portable music created by the transistor radio by allowing listeners not only to take music wherever they went, but they could select the music they were listening to as well. No longer were the days of endless searching of radio stations trying to find something the listener enjoyed. Instead, their favorite tunes were conveniently packed onto a small plastic rectangle that was cheap to make and therefore affordable to the consumer.

That is not to say that cassette tapes did not come with their own issues, however. The nature of both the media and the player made it very easy for the tape inside the cassette to come out and become tangled or create a loud hissing sound within the player. Additionally, cassette tapes have media on both sides of the tape, meaning that when one side ended, it was the responsibility of the listener to flip over the tape to continue listening. This is what inspired the invention of the 8-track tape in 1965, which was designed specifically for music listening and did

²⁷ Andre J. Millard, *America on Record: A History of Recorded Sound*, 2nd ed. (New York, NY: Cambridge University Press, 2005), 219.

²⁸ *Ibid*, 317.

not require to be flipped over.²⁹ That same year, Ford released cars with built-in 8-track players, which allowed for a higher quality listening experience while driving.

During the 1950s and 1960s, the United States government was relatively silent in its adaptation of copyright law due to the numerous global and national events occurring almost simultaneously. Not only was the country involved in three wars (Korean, Vietnam, and the Cold War), but it was experiencing extreme social unrest with the rise of the Civil Rights movement, anti-war protests, LGBTQ+ rights, environmentalism, and feminism. Understandably, the United States' legislation was kept almost completely occupied by these events until the early 1970s. However, in 1971, Congress extended limited federal copyright protection under the Sound Recording Amendment of 1971 to all recordings made after February 15, 1972, for 95 years following publication and after which, those recordings will become public domain.³⁰ This was a drastic change which moved the copyright protection of sound recordings from being protected by varying state laws to being protected by unified United States Code under Title 17.³¹ Additionally, it gave creators the exclusive right of reproduction. Sound recordings made prior to February 15, 1972, were limited to protection by state laws alone. It is not until many years later that an amendment is made to this law to eventually give federal protection to sound recordings made before February 15, 1972.

²⁹ Andre J. Millard, *America on Record: A History of Recorded Sound*, 2nd ed. (New York, NY: Cambridge University Press, 2005), 299.

³⁰ A Brief History of Copyright in the United States,” Timeline (U.S. Copyright Office, 2021), https://www.copyright.gov/timeline/timeline_1950-2000.html

³¹ U.S.C. Title 17 § 301.

Four years later, the Copyright Act of 1976 was signed into law, making it only the fourth revision to the Copyright Act since America's founding.³² This revision extended federal copyright protection to all works in a tangible form, regardless as to if they are published or not, beginning on January 1, 1978. Additionally, the term length of protection also changed for works published on or after January 1, 1978, to last the lifetime of the creator plus an additional fifty years before it enters the public domain.

Regarding the technology of music, the late 1970s and into the 1980s proved to be a time of great innovation and evolution. One invention that was quintessential to the culture was the Walkman, first invented in 1979.³³ The first edition of the Walkman was not popular among Americans because of its clunky shape and high price, but after quite a few modifications to its size and its engineering creating an overall decrease in price, the second edition of the Walkman (called the Walkman II), was an incredible success in the United States.³⁴ It quickly replaced the transistor radio because of the user's ability to listen through headphones and created a new world of listening on-the-go. Sony alone sold 25 million units in the United States from 1981-1991.³⁵

Vinyl records remained the top-selling music media through the early 1980s, with the cassette quickly gaining ground behind it. However, there was a new competitor being invented

³² A Brief History of Copyright in the United States," Timeline (U.S. Copyright Office, 2021), https://www.copyright.gov/timeline/timeline_1950-2000.html

³³ Andre J. Millard, *America on Record: A History of Recorded Sound*, 2nd ed. (New York, NY: Cambridge University Press, 2005), 324.

³⁴ *Ibid*, 325.

³⁵ Andre J. Millard, *America on Record: A History of Recorded Sound*, 2nd ed. (New York, NY: Cambridge University Press, 2005), 325.

in 1982 that would soon overtake both vinyl and cassette tape sales within the decade: CDs. By 1986, cassettes took the lead as the most popular music media as the result of an 80% drop in vinyl sales from 1978-1988.³⁶ Americans were consuming more music than ever and wanted that music to accompany their daily busy schedule and were therefore more drawn to smaller, more portable mediums. Because of this, CD sales were not far behind that of cassettes by 1988 when CDs had eclipsed vinyl in popularity.³⁷

The next year, 1989, is when the United States finally acceded the aforementioned Berne Convention that established global standards of copyright 103 years prior.³⁸ Looking briefly back to the sales of music technology, the music industry was completely converted to the digital age when CD sales eclipse that of cassettes in 1991.³⁹ CDs allow listeners to play their music portably and privately like was the case with cassettes, but because they are created using digital laser engraving, CDs create an overall clearer and more appealing listening experience than tapes. Additionally, there is no need to flip it over, as the entire album can fit on a disc, and the listener no longer must deal with tangled tapes in their player. Granted, CDs are more expensive than a plastic cassette, but listeners were more than willing to pay that extra amount in the 1990s for a higher quality listening experience.

Because consumers were buying at a higher rate than ever, the Audio Home Recording Act of 1992 ensured that royalties are given to performers, copyright owners, writers, and

³⁶ *Ibid*, 355.

³⁷ *Ibid*, 356.

³⁸ "A Brief History of Copyright in the United States," Timeline (U.S. Copyright Office, 2021), https://www.copyright.gov/timeline/timeline_1950-2000.html

³⁹ Andre J. Millard, *America on Record: A History of Recorded Sound*, 2nd ed. (New York, NY: Cambridge University Press, 2005), 356.

publishers of sound recordings based on the amount of media sales one procures.⁴⁰ Additionally, the ushering in of the digital age caused two major treaties from the Berne Convention, the World Intellectual Property Organization (WIPO) Copyright Treaty and the Phonograms Treaty, to be adopted and revised to protect sound recordings and performances in a digital environment.⁴¹ On a national scale, Congress passes the Digital Millennium Copyright Act of 1998 to implement the changes made to the WIPO treaty. This was not the only copyright legislation passed that year, however.

The Sonny Bono Copyright Term Extension Act, also called the Mickey Mouse Protection Act, was also passed, and added to Title 17. It extended the protection of copyrighted works from 50 years following the creator's death to 70 for works created on or after January 1, 1978, for the most part. However, for the sake of clarity, the individual exceptions will not be covered here. To see a full table visualizing the dates and copyright protection terms of sound recordings, see the graphic in Appendix B. As an amendment to the Act, the Fairness in Music Licensing Act was added onto it, which relieved small businesses from having to acquire a performance license to play music in their establishment.

The end of the millennium offered the beginning of a new era: downloading. In 1998, Diamond Multimedia attempted to introduce an MP3 player that has the capability to hold music downloaded from a computer. However, their attempt was blocked by the Recording Industry of America (RIAA), who stated that such a machine would violate the Audio Home Recording

⁴⁰ A Brief History of Copyright in the United States," Timeline (U.S. Copyright Office, 2021), https://www.copyright.gov/timeline/timeline_1950-2000.html

⁴¹ *Ibid.*

Act.⁴² Following modifications, Diamond Multimedia overcame the Audio Home Recording Act and created a new, widely accessible, MP3 player in 1999 called the Rio PMP (Portable Media Player).⁴³ This invention came just in time for the creation of Napster, the first widely used peer-to-peer (P2P) downloading software, meaning that files are shared between users and users can download files shared with them.⁴⁴ Shortly following was the creation of its competitor Limewire as well as Pandora Radio. What made Pandora unique is that it took the aspects of a typical radio station but chose songs to play on those stations based upon your “likes” and “dislikes.”

Napster was not long-lived, however. In 2001, it was forced to shut down after being bombarded with lawsuits from artists such as Metallica, Dr. Dre, and Madonna after users illegally circulated unpublished copies of their music.⁴⁵ This was seen specifically in the court case *Metro-Goldwyn-Mayer Studios, Inc. v. Grokster, Ltd.*, 545 U.S. 913 (2005), where the Supreme Court ruled that providers of software that allows for the file-sharing of copyrighted media may be held accountable for any and all copyright infringement that occurs on their software.⁴⁶ With the fall of one giant, another rose quickly to take its place: iTunes. Announced the same year as Napster’s closing, by Apple CEO Steve Jobs promised iTunes as an online marketplace for music where songs could be bought once for \$0.99 and streamed an infinite

⁴² Andre J. Millard, *America on Record: A History of Recorded Sound*, 2nd ed. (New York, NY: Cambridge University Press, 2005), 395.

⁴³ *Ibid.*

⁴⁴ Diana Yassin, “A Brief History of Streaming Services,” *The Michigan Daily* (University of Michigan, April 20, 2021), <https://www.michigandaily.com/music/brief-history-streaming-services>.

⁴⁵ *Ibid.*

⁴⁶ *Metro-Goldwyn-Mayer Studios, Inc. v. Grokster, Ltd.* 545 U.S. 913 (2005).

amount on any device it was downloaded onto. iTunes went live in 2003 and led the industry of music streaming for a decade.

Meanwhile, the Sonny Bono Copyright Term Extension Act was being challenged in the Supreme Court Case *Eldred v. Ashcroft*, 537 U.S. 186 (2003). Eric Eldred, the Petitioner, and an online journalist whose work heavily relied on use of public domain sources, challenged the Act, claiming that Congress had exceeded their powers in the Copyright Clause of the Constitution which states that Congress shall protect works for “a limited time.”⁴⁷ However, the Court held that the Act was within Congress’ scope of powers, thus upholding its legality.⁴⁸

An additional change to the world of copyright law occurred in 2004 under the Copyright Royalty and Distribution Reform Act (CRDRA); the most substantial addition being the creation of the Copyright Royalty board (CRB). The CRB is a panel of three judges that determine the royalty rates and terms of copyright law’s intellectual property licenses (most often the public performance and mechanical licenses). This means that the CRB has discretion over the rate of distribution of any royalties given to the Copyright Office from license-holders. Currently, the CRB holds that for 2022, only 15.1% of a streaming service’s income must be dedicated to royalty distribution.

The mid-2000s served as an almost Wild West-like environment for the Internet. Things were growing faster than they could be controlled and the introduction of YouTube in 2005 only made this more difficult.⁴⁹ Now, anyone could post any video at any time with little-to-no

⁴⁷ U.S. Const. art. I. sec. 8. cl. 8.

⁴⁸ *Eldred v. Ashcroft*, 537 U.S. 186 (2003)

⁴⁹ Diana Yassin, “A Brief History of Streaming Services,” *The Michigan Daily* (University of Michigan, April 20, 2021), <https://www.michigandaily.com/music/brief-history-streaming-services/>.

repercussions. YouTube stayed this way for quite some time before its administration finally began to control their content and implement algorithms to help ensure a safe environment. Spotify was created shortly after in 2006, where it quickly gained ground as a competitor to iTunes because it allowed its users to listen to its vast catalogue of music for free with the occasional interruption of advertisements. What was groundbreaking about Spotify, however, was that it was the first to offer a subscription service for its users which allowed them to avoid the advertisements, download songs offline to their devices, and select any song at any time to stream. Throughout the next ten years, consumers quickly began to realize that it was cheaper to pay a flat rate per month (\$7.99) and be able to access almost all music at any given time as opposed to paying that same amount for a single album on iTunes.

Questions were raised as to if companies that provide streaming services to paying customers (such as Netflix, Hulu, and Spotify) qualifies under a type of public performance as the decade progressed. The Supreme Court addressed this question in the 2014 case of *American Broadcasting Companies, Inc. v. Aereo, Inc.*, 573 U.S. 431 (2014), where they held that this streaming of copyrighted works does qualify as a public performance. Therefore, the services giving these public performances must first pay the proper licensing fees for their use. This decision gives way to the latest piece of legislation regarding copyright law: the Orrin G. Hatch-Bob Goodlatte Music Modernization Act of 2018.

The Music Modernization Act combines three previously introduced bills: the Music Modernization Act of 2018 (S.2334), the Classics Protection and Access Act (S.2393), and the AMP Act (S.2625).⁵⁰ Title I (Music Licensing Modernization) seeks to improve the amount of compensation songwriters receive and ease the process of licensing by creating an independent

⁵⁰ Music Modernization Act of 2018, Pub. L. No. 115-264, 132 Stat. 3676 (2018).

agency called the “Mechanical Licensing Collective” (MLC) to take charge of the logistics of royalty distribution. Title II (Classics Protection and Access) enables what are called “legacy artists” (those who recorded music prior to 1972) to receive royalties when their music is played digitally. Title III (Allocation for Music Producers) creates a consistent legal process for studio professionals to receive royalties for music they helped create.

What one may notice is missing from each of the aforementioned acts, laws, and Supreme Court decisions, is a straightforward and guaranteed rate for creators that ensures a livable wage. The Copyright Royalty Board establishes the rate at which what percentage a service must allocate for royalties but does not consider regulating how much ought to be given to each creator directly. Because of this, there is never a direct way of estimating how much one may get from their works on a streaming service. Granted, the COVID-19 pandemic has slowed down many legal proceedings, but the pandemic has also allowed music and art to be consumed digitally now more than ever. Thus, it is imperative that the fight for livable pay for America’s artists continue as we navigate through this new environment.

Survey of Current Literature

Borgmann discusses the new regulations on royalty distribution introduced by the Copyright Royalty Board (CRB) in January of 2018 because of a trial between the National Music Publishers Association (NMPA) and the National Songwriters Association International (NSAI) against many big-name streaming services (Pandora, Spotify, Apple, etc.).⁵¹ These

⁵¹ Callie P. Borgmann, “The Future of Streaming Music: The Music Modernization Act and New Copyright Royalties Regulations,” *University of Denver Sports & Entertainment Law Journal* 21, no. 23 (2018): pp. 19-24, <https://heinonline.org/HOL/P?h=hein.journals/denversel21&i=23>, 23.

regulations are supposed to increase royalty revenue from streaming services by over fifty percent in the next five years in order to help bridge the gap between digital and physical sales. Before the introduction of these new regulations, there were many formulas used to calculate how much was paid to songwriters. However, now a much simpler formula is used to determine this rate: songwriters are paid based on either total content costs or a percentage of revenue, whichever is greater. It also addresses the problem of untimely payments by introducing a late fee of either 1.5% or the highest lawful rate, whichever is lower, to be made by the streaming company when payments are not made in a timely fashion.

It is Paveck's contention that the Music Modernization Act (MMA) is good conceptually but will ultimately only benefit multinational companies that are experienced in the music industry, leaving songwriters, specifically those who are from foreign nations or are independent and unfamiliar with the complexities of the industry, to continue to be paid very little in comparison to the companies themselves.⁵² This will not solve the problem, he believes, but instead merely shifts the burden of royalty payment to a third party without attempting to simplify this already complicated system.

In exchange for paying publishers for every song streamed, interactive streaming services were given retroactive safe harbor on copyright infringement lawsuits prior to 2018. Paveck argues that this may be unconstitutional in that it violates procedural requirements guaranteed under due process and/or the Takings Clause of the Fifth Amendment. Additionally, he brings up that the MLC board is made up predominantly of music publishers (10 out of 14) whereas songwriters only account for the remaining four seats. This, he argues, will not allow for

⁵² Spencer Paveck, "All the Bells and Whistles, but the Same Old Song and Dance: A Detailed Critique of Title I of the Music Modernization Act," *Virginia Sports and Entertainment Law Journal* 19, no. 1 (Fall 2019): 74-96. *HeinOnline*. 96.

adequate songwriter representation and will continue the tradition of publishers having power over the creators themselves.

In her conclusion, Chandler also analyzes the flaws of the Music Modernization Act and addresses that large companies such as Apple and Spotify will not be held accountable for any unlicensed uses of intellectual property on their platforms prior to January 1st, 2018.⁵³ This may feel as a “bail-out” to some for these companies by the MMA through not holding them responsible for their wrongdoing. Additionally, she addresses the concern of music publishers holding power over songwriters when it comes to royalty distribution through the Mechanical Licensing Collective’s board having a 10-4 majority of publishers. Chandler states that these are both valid concerns and ought to be considered but holds overall that the MMA is a revolutionary piece of legislature that will change the future of music copyright law for good. She emphasizes that the law was a bipartisan creation through the request of music publishers, broadcasters, songwriters, senators, and house leaders. Therefore, she believes that the MMA has the best interests of *all* musicians in mind, not just publishers and streaming services.

All popular streaming services currently operate on what is called a “service-centric licensing,” meaning that the company itself receives the subscription fees of users and then distributes that into royalties to be paid to musicians based on their total number of plays or streams. This gives rise to the problem of streaming fraud, as well as the issue of artists not being fairly compensated for the number of subscribers they bring to the service. Dimont argues that they should instead turn to what he calls a “user-centric licensing,” where a user’s subscriber fee

⁵³ Kaitlin Chandler, “The Times They Are a Changin’: The Music Modernization Act and the Future of Music Copyright Law,” *Tulane Journal of Technology and Intellectual Property* 21 (2019): pp. 53-70, <https://heinonline.org/HOL/P?h=hein.journals/tuljtip21&i=61>, 67-69.

would instead go to artists that they listen to pro rata. He argues that choosing a minimum stream rate would do little to fix the inherent inequities that exist within.⁵⁴

Marshall begins by classifying streaming services into three types: streaming radio/webcasting, locker services, and on-demand.⁵⁵ Streaming radio, also called webcasting, is just that: radio that is simply heard online that either is a specific station or genre. The listener does not choose which songs play and is free. However, there is an option for the listener to pay to avoid hearing ads and reaching a listening limit. Pandora is the most popular type of this streaming service. Locker services are those that allow listeners to play music directly from the internet or upload it to devices once it is purchased. Music can be bought on a song-by-song basis or through entire albums/collections and played on applications that hold this program. For example, the “Music” app on Apple devices is connected to iTunes. On-demand services are similar to streaming radio services except that the listener is able to choose what is played and is not limited to simply “their” catalogue of purchased music.

Spotify began receiving backlash for their payment policies to artists most notably in 2009 when Lady Gaga spoke out against the service after receiving only \$167 as a royalty payment for her song “Poker Face” that received over one million streams on Spotify alone. He compares the beginning era of digital sales to the pioneering of CD sales in that financial success is determined by scale, major labels have a chokehold on the industry, and artists themselves make little to no money. This, then leads one to wonder if the decline in music sales and increase

⁵⁴ Joseph Dimont, “Royalty Inequity: Why Music Streaming Services Should Switch to a Per-Subscriber Model,” *Hastings Law Journal* 69, no. 2 (2018): 675-700. HeinOnline. 697.

⁵⁵ Lee Marshal, “Let’s Keep Music Special. F – Spotify’: on-Demand Streaming and the Controversy over Artist Royalties,” *Creative Industries Journal*, 8 no. 2 (2015): 177-189. doi:10.1080/17510694.2015.1096618. 178.

in merchandise and concert ticket prices began with the CD and 8-track industry and has been accelerated by digital streaming.

Researcher Reflexivity and Positionality

As a jazz musician myself that has been surrounded by digital technology for my entire adult life, I understand that this creates bias toward musicians and against legislation because of personal experiences with both. Many of my classes required for my degree in jazz emphasized the importance of performing and not depending on revenue for streaming services while still maintaining an online presence following graduation. I have witnessed my colleagues go without work because of the brutal combination of the digital age and the COVID-19 pandemic that effectively shut down live performances.

However, I acknowledge that the Internet and streaming are not going anywhere any time soon. Thus, I have been driven to study and analyze how musicians can find proper compensation during this age of 24/7 media – not only for my own future as a hopeful professional musician, but for the future of all people who have found their calling in music and are struggling to maintain a comfortable living like was possible in years past.

Chapter 2: Methodology

Objectives

The objective of this study was to analyze the effectiveness of American copyright law on professional jazz musicians (those who make their primary income from performing and/or writing music) and others involved in the industry (those who manage the musicians, engineer their recordings, etc.) and use that analysis to develop a theoretical explanation of what is

causing this disparity in artists' income and what can be done to remedy it. To gather this data, the study was based around the following questions: how a musician's life has changed since the introduction of computers and digital audio streaming (either positively or negatively), why the participants believe this change occurred, and what their proposed methods of amending this problem, if they believe there is one.

In an age where the Internet is widely available and vastly unregulated, this study seeks to bring attention to the injustice artists, specifically jazz musicians, face in seeking compensation for their work. By doing so, the experiences recorded in this study also has the potential to be used as a catalyst for legislative change that would allow musicians to be more adequately compensated for their work in a time where exposure is often the only pay musicians receive. This study also has the potential to inspire further research into the effectiveness of modern copyright law on not only musicians of other genres and demographics, but artists of all kinds whose experiences were unable to be accounted for due to time and resource restraints.

Research Method and Design

Acknowledging that I sought to examine personal experiences and develop a potential solution to issues articulated by the participants using comparative analysis, I selected Glaser and Strauss' Grounded Theory (1967) as the primary research method. This method is defined as "the discovery of theory from data systematically obtained from social research,"⁵⁶ and is considered one of the five types "of qualitative research that we most frequently see in the social,

⁵⁶ Barney G. Glaser and Anselm L. Strauss, *The Discovery of Grounded Theory: Strategies for Qualitative Research* (Piscataway, NJ: Aldine Transaction, 1967), 2.

behavioral, and health science literature.”⁵⁷ “Social research” can be conducted in a myriad of ways; however, this particular study was conducted using one-on-one interviews through different mediums: phone call (audio only), video call, and in-person conversation. By conducting interviews with open-ended questions with the four participants, they were able to detail their relationship with current legislation and their experience as a musician that had to follow it without simplifying it into “yes” or “no” answers. In turn, this created more substantial data that displays the complexity of the issue being studied and allows for more detailed analysis on their similarities and differences regarding experience, relationship, and their personal opinions. Through this analysis, patterns also can emerge, which will then inform the theory being created using evidence from the interviews using the following questions:

1. Have you found it easier or harder to make money in the music industry? Why?
2. Do you feel as if your work now gets comparable compensation to what it received prior to the digital age (before the 1990s)? If not, why do you think that is?
3. How were you forced to adapt as the world advanced into the digital age from the 1990s to the 2000s? What, if any, changes did you have to make?
4. How would you describe your experience with streaming services since their rise to popularity in the early 2010s?
5. Given your knowledge and experience, do you think that this pattern of mass consumption made possible by streaming services is sustainable for the music industry as a whole? Why or why not?
6. How has the pandemic and, by proxy, the increase in digital music consumption affected your life and income as someone in the music industry?

Each interview lasted from 45 minutes to an hour, which allowed each participant to not only answer each question fully and potentially answer multiple at the same time, but it also allowed them to go into detail on their personal experiences in and surrounding law in the music industry.

⁵⁷ John W. Creswell and Cheryl N. Poth, *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*, 4th ed. (Thousand Oaks, CA: Sage Publications, 2018), 10.

Sampling

Purposeful and convenient sampling was used in this study to identify music industry experts who currently are or have been involved in music copyright.⁵⁸ Participants for this study were chosen based upon the level of their known experience of the music industry and their openness to being interviewed about it. Three of the four participants are based in the Louisville, Kentucky area, which allowed for much flexibility in scheduling their interviews and an ease of access to them because of secondhand personal connections. Their ages ranged from 45-76.

Understandably, this may come across as potentially skewing when analyzing their experiences, as their “prime” years of success occurred either before or on the cusp of the digital age. However, because this study serves to compare the changes of legislation and compensation in the music industry before and after digital audio streaming, older musicians’ perspectives become much more valuable to this particular study and forming a theoretical explanation. Younger musicians do not have the experience of a “before” and “after” so-to-speak, they only have known a world where music is available at any given time. This is not inherently bad; it just lacks the perspective needed for this study’s comparative analysis. Additionally, when analyzing jazz musicians specifically, it is imperative to note the inherent age disparity among performers. The vast majority of well-known jazz musicians are 40 or above, and those that are below that threshold are constantly booked around the world because they are seen as “young, up-and-coming” acts. Thus, that made younger musicians with sufficient experience in the industry significantly less likely to be available for interviews.

⁵⁸ John W. Creswell and Cheryl N. Poth, *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*, 4th ed. (Thousand Oaks, CA: Sage Publications, 2018), 100.

Participants

Data was collected via semi-structured interviews with four participants, each with varying degrees of involvement with the music industry.⁵⁹ The first interview was conducted with Jason Marsalis (b. March 4, 1977) on October 14th, 2021, via video call. Marsalis is a jazz percussionist that specializes in mallet percussion and makes his living touring and performing. He is the youngest member of the Marsalis family, which often referred to as “the first family of jazz” because of their decades-long involvement with the genre among their father Ellis and his sons Wynton, Branford, Delfeayo, and Jason.⁶⁰ The brothers have also all been named “Masters of Jazz” by the National Endowment for the Arts in 2011.⁶¹ Based out of New Orleans, Jason Marsalis has been in numerous ensembles where he has recorded countless records. Additionally, Marsalis can be seen in the video documentary *New Orleans: City of Jazz* ©1997.⁶²

Next, I interviewed Jonathan Wolff (b. October 23, 1958) on February 1st, 2022, via phone call. Wolff is a world-renowned composer and member of the PRO SESAC who specializes in writing music for television but got his start as a jazz pianist growing up in Louisville. He has written music for 75 television shows across all major networks (CBS, NBC, ABC, Fox, Disney, etc.), 44 of which are the show’s central theme. Most know him for writing the theme for the 90s super-hit show *Seinfeld*, but he has also written music for shows such as

⁵⁹ John W. Creswell and Cheryl N. Poth, *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*, 4th ed. (Thousand Oaks, CA: Sage Publications, 2018), 165.

⁶⁰ The Editors of Encyclopedia. "Marsalis family." Encyclopedia Britannica (Encyclopedia Britannica, September 17, 2020), <https://www.britannica.com/biography/Marsalis-family>.

⁶¹ *Ibid.*

⁶² Barry Kernfeld, ed., *The New Grove Dictionary of Jazz*, 2nd ed., vol. 2 (London, U.K.: Macmillan Publishers, 2002), 715.

Saved by the Bell, *Reba*, and *Will & Grace*.⁶³ Wolff has also given lectures about copyright law and music business at every undergraduate Ivy League institution, including four of the country's T14 (top fourteen) law schools, and some of the country's most elite undergraduate institutions for music such as the Berklee College of Music, the Julliard School, and the New England Conservatory. According one review by Brain K. Price, Clinical Professor of Law and Director of Transactional Law Clinics at Harvard Law School, Wolff has given, "one of the best and most insightful lectures I've heard."⁶⁴ Wolff has also testified as an expert witness on copyright law in many major copyright cases, two of which were before the Copyright Royalty Board.

On February 3rd, 2022, I interviewed John LaBarbera (b. November 10, 1945) who, like Marsalis, is a member of "one of the all-time great families in jazz,"⁶⁵ alongside his brothers Joe and Pat. LaBarbera is a Grammy-nominated jazz composer, producer, arranger, and trumpeter that is most recognized by his work with as the arranger for the Buddy Rich Orchestra from the late 1960s into the 1970s.⁶⁶ Afterward, LaBarbera began to focus primarily on composing and arranging while serving first as the Director of Jazz Ensembles at Cornell University from 1988 to 1991 and later moving to the University of Louisville. There he joined the jazz faculty and implemented graduate and undergraduate courses in composing, arranging, and music business.

⁶³ Ji Ryan, "Composer Jonathan Wolff on Creating 'Seinfeld' Theme Music, New 'Seinfeld' Soundtrack Album," *Forbes* (*Forbes Magazine*, August 27, 2021), <https://www.forbes.com/sites/jimryan1/2021/08/27/composer-jonathan-wolff-on-creating-seinfeld-theme-song-new-seinfeld-soundtrack-album/?sh=79d3f69e2b27>.

⁶⁴ "Reviews," Jonathan Wolff - Seinfeld Music Composer, November 29, 2018, <https://seinfeldmusicguy.com/reviews/>.

⁶⁵ Nicholas F. Mondello, "The LaBarbera Brothers: Jazz DNA," *All About Jazz*, November 7, 2013, <https://www.allaboutjazz.com/the-la-barbera-brothers-jazz-dna-john-la-barbera-by-nicholas-f-mondello>.

⁶⁶ Barry Kernfeld, ed., *The New Grove Dictionary of Jazz*, 2nd ed., vol. 2 (London, U.K.: Macmillan Publishers, 2002), 529.

Following his retirement in 2014 after 23 years at the University of Louisville, LaBarbera was named “Professor Emeritus” by the University. He is an ASCAP member that is a two-time recipient of the National Endowment for the Arts award for Jazz Composition, where he also served as a panelist in the music category, a seven-year-term as the Jazz Editor for the International Trumpet Guild, and has testified as an expert on copyright in several major copyright claims cases.

The final interview was conducted in person with Andre Guess on February 11th, 2022. Guess offers a unique perspective to this study in that he does not write or perform music, but instead works in the managerial realm. He is a Louisville native that studied economics at the University of Louisville while still maintaining a passion for music and advocacy. Guess’ experience includes six years working at Jazz at Lincoln Center, a globally known jazz band based in New York City that seeks to entertain and educate the world about jazz, four of those years were as the company’s Vice President and Producer. Currently he serves as the CEO and President of GuessWorks, Inc. as well as Louisville’s Fund for the Arts. Guessworks, Inc. is a consulting and management firm created by Guess that represents some of jazz’s top names with clients such as Christian McBride, Nicholas Payton, and the Estate of Charles Mingus.⁶⁷ Fund for the Arts is Louisville is a “regional nonprofit committed to building a vibrant community through the power of the arts.”⁶⁸

⁶⁷ “Andre Kimo Stone Guess,” AEA Consulting - People (AEA Consulting), accessed March 25, 2022, https://aeiconsulting.com/about/people/andre_kimo_stone_guess.

⁶⁸ “About Us,” About | Fund for the Arts (Fund for the Arts), accessed March 25, 2022, <https://fundforthearts.org/about-2/>.

Techniques Used for Data Analysis

As is considered standard procedure in Grounded Theory practice, the data collected through semi-structured interviews was analyzed using the constant comparative method.⁶⁹ This method is defined as “[t]he process of taking information from data collection and comparing it to emerging categories,”⁷⁰ and is done through a multi-step process of inductive coding. Corbin and Strauss describe coding as “doing analysis and denoting concepts to stand for data.”⁷¹ Coding is done to assist the researcher in identifying common themes throughout the data, in this case, interviews, and then using those themes to assemble a theory that links the themes together and addresses the research questions.

The researcher first begins with a process called “open coding”, where sections of the data are organized into one- or two-word codes that serve as a summary of the ideas conveyed by the interviewee. These codes are then compared against each other using the constant comparative method and combined further into major categories, also called “axial coding.” The final step of the analysis process is “selective coding”, which is the creation of one final theme using the categories found in the axial coding process, which is then used to form the final theory.⁷²

⁶⁹ John W. Creswell and Cheryl N. Poth, *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*, 4th ed. (Thousand Oaks, CA: Sage Publications, 2018), 83-84.

⁷⁰ *Ibid*, 85.

⁷¹ Juliet M. Corbin and Anselm L. Strauss, *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*, 4th ed. (Thousand Oaks, CA: Sage Publications, 2015), 215.

⁷² John W. Creswell and Cheryl N. Poth, *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*, 4th ed. (Thousand Oaks, CA: Sage Publications, 2018), 85.

Throughout the coding process, the researcher is “memoing” as they analyze the data, writing down any ideas they may have about core themes or potential theories. Additionally, the researcher is constantly seeking to “saturate”, or fully develop, the data through the aforementioned method of constant comparison.⁷³ This may take the form of asking additional questions during the interview process to receive more detailed information, reviewing notes and transcripts from the interviews, or any combination of the two.

Trustworthiness

To understand the experience of professional musicians better, these biases were restrained by making data collection as neutral as possible (in this case, writing interview questions and conducting them in such a way that does not convey my personal opinions). Additionally, because of the complexity of this issue, it quickly became apparent during my research as well as the interviews that there is no one-size-fits-all solution that will appease musicians, lawmakers, and consumers because all have different experiences and relationships with the law and digital music streaming. Because of this, the participants’ opinions were not pigeonholed into an overall “positive or negative” view of streaming by the end of the interview, but instead each aspect of their complex relationship was analyzed and considered through two methods that are standard of qualitative research: member-checking and triangulation.

The participant’s answers were recorded with direct quotations and ideas that were repeated by the interviewer (myself) and verified by the participant via member-checking before moving to the next question or topic, which is considered “most beneficial” to ensuring the

⁷³ *Ibid*, 87.

trustworthiness of the researcher's account when working alone.⁷⁴ This served as a way of validating the responses and ideas during the interviews.

Triangulation is when the researcher “makes use of multiple and different sources...to provide corroborating evidence,”⁷⁵ and is also a common standard of validation in qualitative research. It allows for the researcher to present multiple sources that come to the same conclusions. In this study, this was completed by conducting interviews with a variety of participants from a variety of positions in the music industry. Thus, it is ensured that not one experience is used to describe the experience of all involved in the music industry. Instead, it allows for patterns to emerge from unlike groups, in this case, careers.

Chapter 3: Results and Discussion

Themes

The data from the interviews conducted was divided into a total of fifteen codes during the open coding process. From these fifteen codes, three main themes emerged. Those themes then informed the formation of the overall theory itself. A graphic of these findings and deductions can be found in Appendix C.

Theme 1: Role of PROs

Performance-rights organizations (PROs) are an integral part of the modern music industry. Although there are several smaller PROs around the world, the American Society of

⁷⁴ John W. Creswell and Cheryl N. Poth, *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*, 4th ed. (Thousand Oaks, CA: Sage Publications, 2018), 261.

⁷⁵ *Ibid*, 260.

Composers and Publishers (ASCAP) and Broadcast Music, Inc. (BMI) are the two largest, with their combined membership totaling over 1.5 million American musicians, songwriters, and publishers. These organizations work as a middleman between the artist and those playing their music, collecting royalties, and distributing them to their clientele. Their work, of course, is not done for free. The artist and their respective PRO negotiate this rate during the process of negotiating the artist's contract.

During his interview, Jonathan Wolff described his experience with PROs throughout his career. Initially, Wolff was a member of ASCAP but switched quickly to SESAC (formally known as the Society of European Stage Authors and Composers) after an invitation was extended to him. Wolff explained that ASCAP's size (which is due to consent decrees issued upon it and BMI back in 1941 as a governmental antitrust sanction) makes the corporation slow to operate and, in Wolff's experience, inaccurate in calculating his royalty payments. "An intern of mine calculated that I was missing over \$50,000 in royalty payments after designing a simple algorithm that monitored when shows with my music played on television," Wolff recalled. This difference was quickly settled by ASCAP, but it leads one to wonder what implications this has for other musicians that may not be able to afford an intern to double check their paystubs.

Both Wolff and LaBarbera expressed discontent with the current structure of PROs during their interviews. Wolff explained that because of technology, "The data [number of plays a song gets] is there, it's just not being used." LaBarbera concurred with this, stating "There's no clearinghouse to keep track of data [streams]...when there were only three record companies, they controlled how much product [music] was released," alluding to the sheer amount of product that PROs must deal with when distributing royalties. Combined with the aforementioned consent decree requirements of ASCAP and BMI, this creates a massive job on

the part of PROs that requires much attention to detail. However, because the size of their clientele is exponentially larger than the size of their staff, it is difficult for these two PROs to record and calculate royalty payments with 100% accuracy for each of their 1.5 million members total.

Theme 2: Legislative Change

The contempt many musicians have with legislation is not regarding laws that already exist but is instead regarding laws that do not exist although many feel they should. Take, for example, the existence of the Copyright Royalty Board (CRB), which is the chief entity of determining the terms and distribution of statutory licenses. Many are quick to blame the CRB for the rates they are paid per stream or play, especially from Spotify. However, Wolff, who has testified twice before the CRB as an expert witness on copyright, states that the CRB “is in charge of determining the legality of copyright law, not how companies spend their money.”

This, then, gives rise to an issue of ethics on the side of the employer (PROs, record companies, streaming companies, etc.). In an era where mass consumption is easier than ever as a result of streaming services with little regulation as to how streaming companies budget their money, it has also become easier than ever for these employers to take advantage of musicians, paying them the minimum while increasing company profit. In the corporate workplace, a federal floor has been established for wage and worker safety as a result of past instances of worker exploitation via minimum wage legislation and the establishment of the Occupational Safety and Health Administration (OSHA). These exploitations were brought to the attention of Congress only after affected workers unionized, amplifying their voices to lawmakers.

Currently, there is not a single union that represents musicians collectively. There are several smaller unions, two of which being the Union of Musicians and Allied Workers and the American Federation of Musicians, but there is unintentional competition between them, causing division instead of the unionization they seek. LaBarbera believes that unionization of musicians into a single collective group with recognizable spokespersons would help bring attention to the injustices being faced. “Congress isn’t going to listen to a jazz musician,” he stated. “They’re going to listen to a celebrity – someone they recognize.”

Theme 3: Role of the Consumer

The group with the most power regarding copyright law and equitable distribution is inarguably the consumer from an economic standpoint in a capitalist society like the United States’. They control the demand of all products, which then informs creators of that product how much they should supply as well as how much they should charge. Thus, when almost all music ever created became eligible for mass distribution online, companies realized that this could be done very cheaply, allowing for a significant profit margin on the part of the company itself. These companies either frequently work with or are “most often funded by venture capital investors or parent companies, such as Google and Apple.”⁷⁶ For instance, Apple Music is owned by its parent company Apple, Spotify works frequently with Facebook, and YouTube Music is owned by Google.

Take for example, Spotify’s earnings in the fourth quarter of 2021 as seen in the table below. Spotify continues to grow in size from quarter to quarter in total number of monthly

⁷⁶ David Sax, *The Revenge of Analog: Real Things and Why They Matter* (New York City, NY: PublicAffairs, 2016), 20.

active users (MAUs) and up 18% from the previous year while their operating expenses increased only 12%, continuing their pattern of growth⁷⁷ while performance rights revenues grew only 4%.⁷⁸ This has left musicians and others involved in the industry with no other choice than to try other approaches in an attempt to reach their audience in a profitable manner.

SUMMARY USER AND FINANCIAL METRICS			% Change		
USERS (M)	Q4 2020	Q3 2021	Q4 2021	Y/Y	Q/Q
Total Monthly Active Users ("MAUs")	345	381	406	18%	7%
Premium Subscribers	155	172	180	16%	5%
Ad-Supported MAUs	199	220	236	19%	7%
FINANCIALS (€M)					
Premium	1,887	2,178	2,295	22%	5%
Ad-Supported	281	323	394	40%	22%
Total Revenue	2,168	2,501	2,689	24%	8%
Gross Profit	575	668	712	24%	7%
Gross Margin	26.5%	26.7%	26.5%	--	--
Operating (Loss)/Income	(69)	75	(7)	--	--
Operating Margin	(3.2%)	3.0%	(0.3%)	--	--
Net Cash Flows From Operating Activities	107	123	119	--	(3%)
Free Cash Flow¹	74	99	103	--	4%

During his time managing many of jazz's foremost names, Andre Guess worked with his artists to navigate these changes. He discovered that "media is no longer scarce, curation is the real value – when something is recommended by a trusted source." Streaming was available and accessible during his years of exclusive managerial work, but he recalled his artists depending heavily on the sales of physical media during shows – especially signed CDs. He recognized that people are no longer buying CDs to use, but instead only buying them if the listener deems it as collectible. Jason Marsalis also brought up how music lacks scarcity in his interview, stating that

⁷⁷ "Spotify Technology S.A. Announces Financial Results for Fourth Quarter 2021," Business Wire (Spotify Technology S.A., February 2, 2022), <https://www.businesswire.com/news/home/20220202005417/en/>.

⁷⁸ "Global Music Report 2022 - State of the Industry," News (International Federation of the Phonographic Industry, March 22, 2022), <https://www.ifpi.org/ifpi-global-music-report-global-recorded-music-revenues-grew-18-5-in-2021/>.

“music is now data...a limitless commodity of sound,” which can be distributed and shared whenever, wherever, and with whomever.

When asked what, in his opinion based on his experiences, would be the best solution to this inequity faced by artists, Marsalis called for a “cultural reset that teaches the importance of appreciating music as an art.” One way he suggested going about this is continuing to foster the “vinyl revolution” that is occurring among younger generations by making records more accessible and overall increasing their quantities of production. Guess acknowledged that a “cultural reset” is the overall goal, however he believes in the importance of utilizing social media and technology as a tool to work for artists and the power of curation that streaming services allow, such as generated playlists that recommend artists related to others. He used his experience during the COVID-19 pandemic to justify his position. “At the start of the pandemic, people had a philanthropic attitude and were implored to give more than usual because they knew musicians were struggling, but this quickly stopped,” he stated. Much like the introduction of music’s widespread free availability on Spotify and YouTube, people quickly took advantage of it because consumers ultimately always want to pay the lowest possible price with little consideration for the product’s creator.

Discussion: The Royalty Renaissance Theory

The final step in the process of conducting a grounded theory study is articulating a “substantive-level theory” using connections found in the themes articulated as part of the selective coding process.⁷⁹ This theory, named “The Royalty Renaissance Theory” is articulated

⁷⁹ John W. Creswell and Cheryl N. Poth, *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*, 4th ed. (Thousand Oaks, CA: Sage Publications, 2018), 88.

in the form of discussion in the paragraphs below and as a visual model in Appendix C, both of which are standard to the process of presenting one's grounded theory.⁸⁰

The Renaissance was a period of invention and innovation throughout Europe, starting in Italy in approximately the fourteenth century. Described as a period of "rebirth" in major disciplines such as economics, politics, philosophy, and the arts, scholars began to approach their studies with a "humanist" point of view that shifted the focus away from religion and instead to the accomplishment and celebration of what it means to be human. This led to increased value being placed on education and a revitalized interest in creating art for the sake of art itself instead of for the sake of glorifying God. People began patronizing artists to create works for them at a rate never seen before, thus reinvigorating the value that art had in society. It is this societal appreciation for the arts that inspired the name of the theory that emerged from my study.

It quickly became clear during the initial phases of research that the issue of royalty distribution cannot be resolved with a single, universal solution such as a piece of legislation. Instead, it is my contention that a combination of reform of the structure of performance-rights organizations, legislative regulation of streaming services as a result of unionization on behalf of musicians, and overall education of the consumer will begin the journey toward fair wages. These tenants align closely with the initiatives described in the Four Pillars of Fair Marketplaces for Music by the International Federation of the Phonographic Industry⁸¹:

- Music's value should be recognized
- Copyright frameworks should be clear and provide for legal certainty

⁸⁰ *Ibid.*

⁸¹ "Creating a Fair Environment for Music," Campaigns (IFPI, June 25, 2020), <https://www.ifpi.org/ifpi-priorities/creating-a-fair-environment-for-music/>.

- All parties should be free to agree to the terms of their relationship
- Adequate tools should be available to prevent music from being made available illegally

Streaming services are not going anywhere any time soon and are used by millions of people around the world because of their accessibility. In fact, they hold the possibility for great strides in the music industry for artists, but that potential will not be unlocked until there is advocacy for musicians in the day-to-day operations of these corporations.

A possible way this could be accomplished is by first reforming the consent decree requirements of ASCAP and BMI, which have rendered the companies almost too large to function properly with their total membership near 2 million artists. By allowing ASCAP and BMI to choose which artists they recruit, it will create a more competitive and ultimately valuable market in the music industry for streams and royalties. Additionally, it will decrease the overall number of members the PROs have which will allow for more accurate calculation and allocation of royalty payments.

Establishing a federal floor for royalty rates is an example of possible legislation that could work in conjunction with the reform of PROs to create a more equitable distribution of royalties to musicians whose art streaming services rely upon to survive. Some have argued that it is not the job of the government to instruct businesses on how to spend their money, which ultimately is correct, but this is backed by precedent established when Congress passed the Fair Labor Standards Act (FSLA) of 1938 that established a federal minimum wage for all businesses using their authority to regulate interstate commerce as is given to them in the Constitution.⁸²

⁸² U.S. Const. art. I sec. 8 cl. 3.

This was done after unions of workers came before Congress demanding them to step in and regulate their working conditions as part of the New Deal programs enacted by President Franklin Roosevelt. Therefore, it is not unheard of for the federal government to step in, but first musicians need to work together and voice their needs as a unified group with recognizable representatives to speak on their behalf, as was suggested by LaBarbera in his interview.

These legislative changes are more likely to occur if the general public themselves also realize the urgency for reform. It goes undisputed that the majority of people listen to music on a daily basis in some form or another, whether that be through radio in the car, streaming services, CDs, or records. At the end of 2021, there were 523 million total users of paid subscription accounts on streaming services worldwide, so streaming is no longer a phenomenon localized to the world's wealthiest countries.⁸³ Thus, consumers must recognize their role in this fight and participate as they are able. This can be done in any number of ways from buying merchandise or physical media to using streaming services that are transparent and fair about how royalties are paid, and anything in between.

Chapter 4: Implications and Conclusion

Limitations

Time was perhaps the biggest limitation of this study. Given that it was conducted as I was in the process of completing my B.A. in Political Science and B.M. in Jazz Piano while taking 19 credit hours or more per semester, prepared and performed two recitals, working a part

⁸³ “Global Music Report 2022 - State of the Industry,” News (International Federation of the Phonographic Industry, March 22, 2022), <https://www.ifpi.org/ifpi-global-music-report-global-recorded-music-revenues-grew-18-5-in-2021/>.

time job, and was involved in extra-curricular activities on campus, I had many other things occupying my time while I was researching from August of 2020 to April of 2022. If I had been able to dedicate my entire time to this study, I recognize that I would have been able to interview more participants, thus collecting more data, and researching more about copyright law and its complexities.

Another limitation faced was overall inexperience with copyright law and intellectual property, as all my knowledge on it came solely from the research completed for this study. Because this is a study done at the undergraduate level, I acknowledge that my understanding and application of the law is not that of an attorney or legislator. However, this does not discredit the precedent and current legislation used throughout the process of data analysis, as it is all still recognized precedent.

Future Directions

This study is meant to serve as a catalyst for further research and investigation done into royalties and copyright law by further qualified individuals. This could take the appearance of repeating this study but with legal professionals and executives of streaming services or perhaps with a wider swath of musicians across multiple genres and locations. If this is done, it could serve as the catalyst and inspiration for change at the legislative level of Congress or organizational level of musicians – either of which would be extremely beneficial to remedying this issue. Additionally, this study serves as an educational tool for artists that can be used as a catalyst for change, not only in the way they consider their career, but in how they choose to move forward in the digital age.

Implications

For the musician and those involved in the industry, this study serves to shed light on not necessarily *why* musicians are struggling to make ends meet in an age where more music is available than ever, as it is a problem faced almost universally by artists, but instead it demonstrates *how* this inequity can begin to be addressed. However, it also has implications for the non-musician as well. Needless to say, music holds a very special place in our society and has since the days of cavemen. Music has been able to connect us in ways words never can and continues to foster that special shared connection of the human experience. But, now more than ever, it is imperative that people realize the value of music and help musicians in their fight for just wages.

Conclusion: "We can't rewind, we've gone too far"

Musicians are frequently told how their careers are not financially lucrative and how they should find a "real" job, many times by the people that listen to music in their car on the way to work and in the office. The world would be deafeningly silent without music, so it is imperative that society fosters a survivable wage for these artists when more people are patrons of the arts, albeit very cheap ones, than ever before by paying to listen to their creations in true Renaissance fashion. Reform of PRO structure and legislative regulation of royalty rates in conjunction with education of the consumer is only the beginning of this journey, but this study has shown that these would be steps in the right direction using standard methods of qualitative research. I acknowledge that technology and streaming are too embedded in our society for them to just be removed outright. As was stated in the 1980 hit "Video Killed the Radio Star" by The Buggles, "We can't rewind, we've gone too far." Digital may have killed the analog star, but it is not too

late for a societal renaissance that allows for musicians to be equitably compensated for the work they are already providing to the world.

Appendix A

Glossary of Terms

Blanket License – Blanket performing rights licenses for the exhibition of musical compositions, whether by broadcast, webcast, streaming video-on-demand, or other means of communication to the public in the United States and its territories.

Copyright – The exclusive legal right to reproduce, publish, sell, or distribute the matter and form of something.

Intellectual Property License – Any license, permit, authorization, approval, contract, or consent granted, issued by or with any person relating to the use of intellectual property.

Umbrella under which all intellectual property licenses fall.

Mechanical License – A statutorily created license that allows the use of copyrighted materials without the explicit permission of the copyright owner. In exchange, a royalty is paid to the copyright holder.

Performance Rights Organization – An organization that collects and distributes royalties on behalf of its artists.

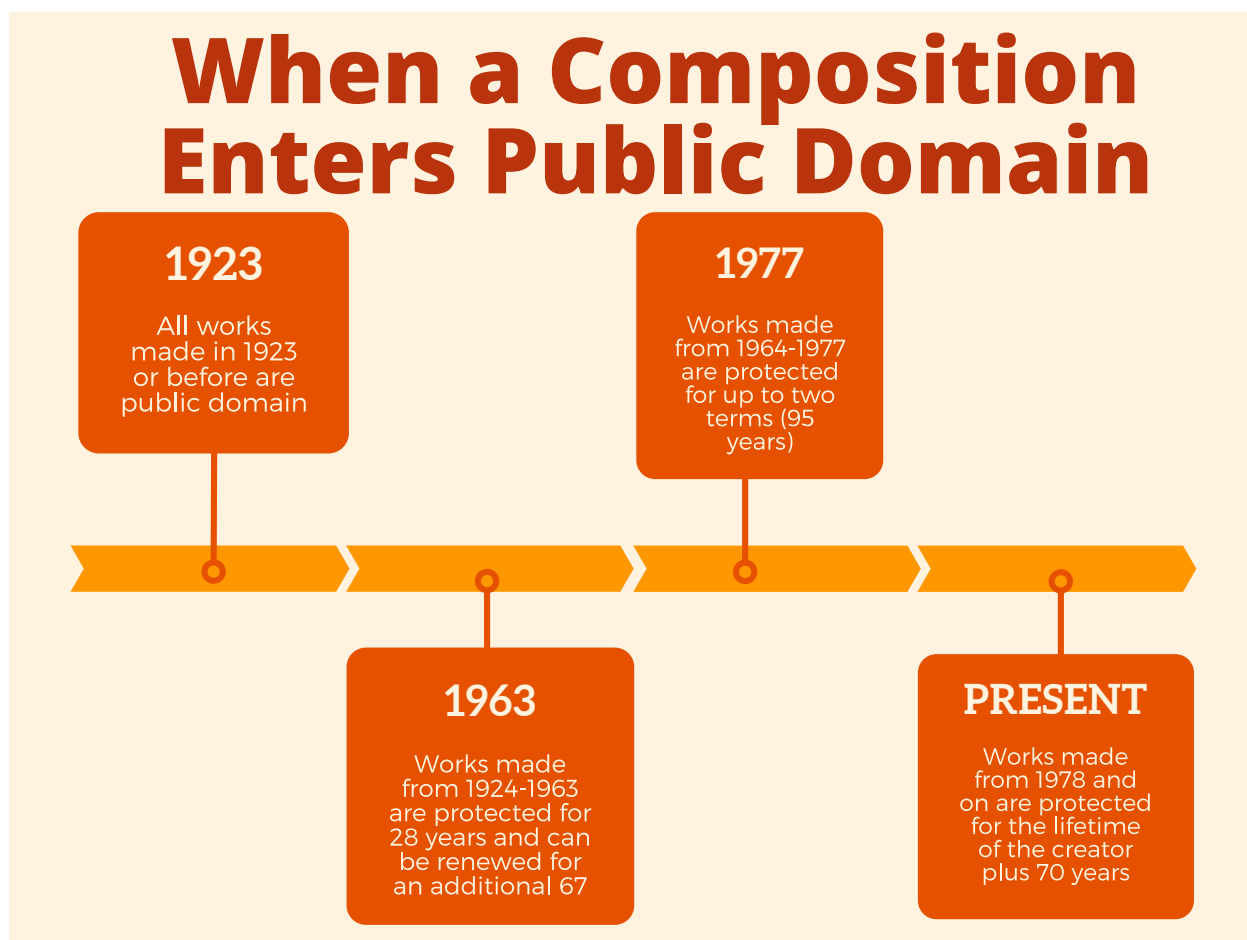
Public Domain – Includes every creative work that is no longer protected by a copyright, trademark, or patent.

Public Performance License – A license that grants the right to perform the work in, or transmit the work to, the public.

Royalty Payment – A compensation to the owner of intellectual property or natural resources for the right to use or profit from the property.

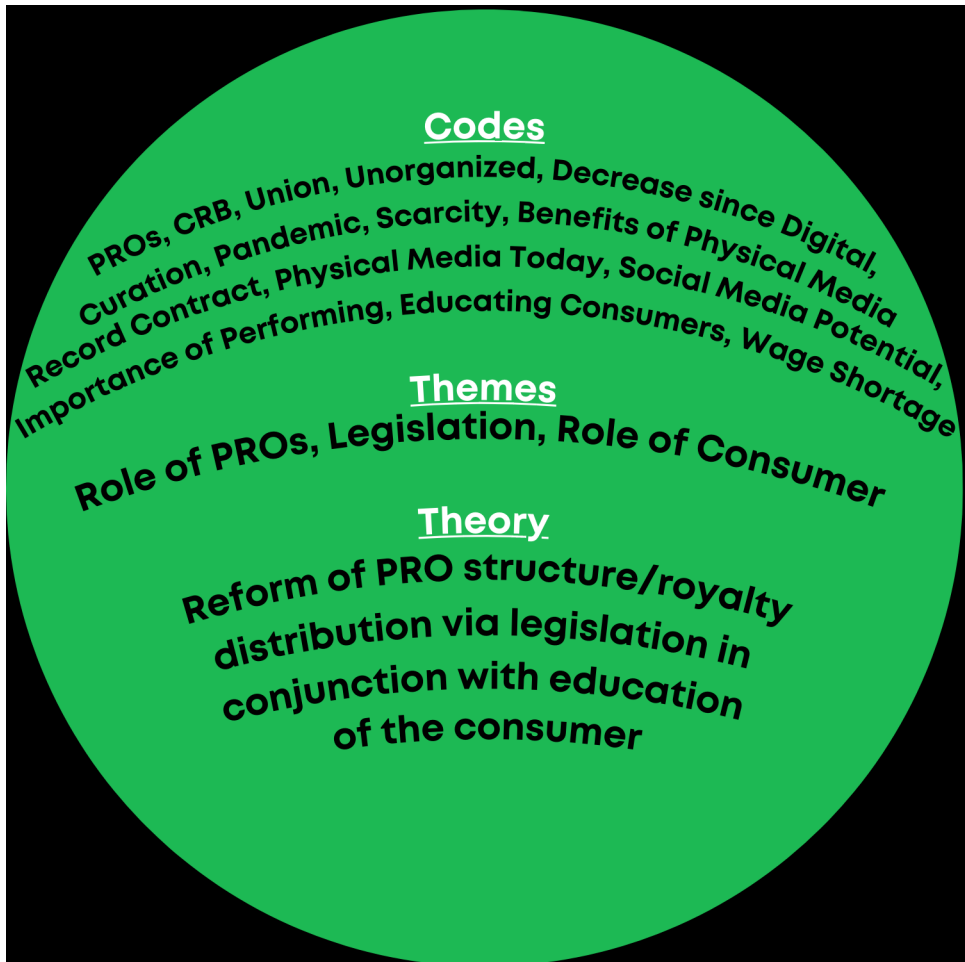
Appendix B

Determining when a work will become public domain



Appendix C

Visual summary of findings: The Royalty Renaissance Theory



Bibliography

- “2021 Poverty Guidelines and Computations.” Office of the Assistant Secretary for Planning and Evaluation. U.S. Department of Health and Services, January 2021.
<https://aspe.hhs.gov/topics/poverty-economic-mobility/poverty-guidelines/prior-hhs-poverty-guidelines-federal-register-references/2021-poverty-guidelines/2021-poverty-guidelines-computations>.
- “About Us.” About | Fund for the Arts. Fund for the Arts. Accessed March 25, 2022.
<https://fundforthearts.org/about-2/> .
- “Andre Kimo Stone Guess.” AEA Consulting - People. AEA Consulting. Accessed March 25, 2022. https://aeaconsulting.com/about/people/andre_kimo_stone_guess.
- “A Brief History of Copyright in the United States.” Timeline. U.S. Copyright Office, 2021.
<https://www.copyright.gov/timeline/>.
- Borgmann, Callie P. “The Future of Streaming Music: The Music Modernization Act and New Copyright Royalties Regulations.” *University of Denver Sports & Entertainment Law Journal* 21, no. 23 (2018): 19–24.
<https://heinonline.org/HOL/P?h=hein.journals/denversel21&i=23>.
- Britannica, T. Editors of Encyclopedia. "Marsalis family." Encyclopedia Britannica, September 17, 2020. <https://www.britannica.com/biography/Marsalis-family>.
- Burkholder, J. Peter, Donald Jay Grout, and Claude V. Palisca. *A History of Western Music*. New York, NY: W.W. Norton and Company, 2019.
- Chandler, Kaitlin. "The Times They Are a Changin': The Music Modernization Act and the Future of Music Copyright Law." *Tulane Journal of Technology and Intellectual Property*, 21, (2019): 53-70. *HeinOnline*,
<https://heinonline.org/HOL/P?h=hein.journals/tuljtip21&i=61>.
- Corbin, Juliet M., and Anselm L. Strauss. *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*. 4th ed. Thousand Oaks, CA: Sage Publications, 2015.
- “Creating a Fair Environment for Music.” Campaigns. IFPI, June 25, 2020.
<https://www.ifpi.org/ifpi-priorities/creating-a-fair-environment-for-music/>.
- Creswell, John W, Cheryl N. Poth. *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*. 4th ed. Thousand Oaks, CA: Sage Publications, 2018.

- Dimont, Joseph. "Royalty Inequity: Why Music Streaming Services Should Switch to a Per-Subscriber Model." *Hastings Law Journal*, vol. 69, no. 2, (February 2018): 675-700. HeinOnline.
- Dolge, Alfred. *Pianos and Their Makers: A Comprehensive History of the Development of the Piano*. 1. Vol. 1. New York, NY: Dover Publications, Inc., 1972.
- Glaser, Barney G., and Anselm L. Strauss. *The Discovery of Grounded Theory: Strategies for Qualitative Research*. Piscataway, NJ: Aldine Transaction, 1967.
- "Global Music Report 2022 - State of the Industry." News. International Federation of the Phonographic Industry, March 22, 2022. <https://www.ifpi.org/ifpi-global-music-report-global-recorded-music-revenues-grew-18-5-in-2021/>.
- Haraszti Zoltán. *The Enigma of the Bay Psalm Book*. Chicago, IL: University of Chicago Press, 1965.
- Hesmondhalgh, David. "Is Music Streaming Bad for Musicians? Problems of Evidence and Argument." *New Media & Society* 23, no. 12 (September 19, 2020): 3593–3615.
- Kernfeld, Barry, ed. *The New Grove Dictionary of Jazz*. 2. 2nd ed. Vol. 2. 3 vols. London, U.K.: Macmillan Publishers, 2002.
- Marshall, Lee. "Let's Keep Music Special. F—Spotify': on-Demand Streaming and the Controversy over Artist Royalties." *Creative Industries Journal*, vol. 8, no. 2, 29 (Oct. 2015): 177-189., doi:10.1080/17510694.2015.1096618.
- Millard, Andre J. *America on Record: A History of Recorded Sound*. 2nd ed. New York, NY: Cambridge University Press, 2005.
- Mondello, Nicholas F. "The LaBarbera Brothers: Jazz DNA." *All About Jazz*, November 7, 2013. <https://www.allaboutjazz.com/the-la-barbera-brothers-jazz-dna-john-la-barbera-by-nicholas-f-mondello>.
- Paveck, Spencer. "All the Bells and Whistles, but the Same Old Song and Dance: A Detailed Critique of Title I of the Music Modernization Act." *Virginia Sports and Entertainment Law Journal*, vol. 19, no. 1, (Fall 2019): 74-96. *HeinOnline*.
- "Reviews." Jonathan Wolff - Seinfeld Music Composer, November 29, 2018. <https://seinfeldmusicguy.com/reviews/>.
- Ryan, Jim. "Composer Jonathan Wolff on Creating 'Seinfeld' Theme Music, New 'Seinfeld' Soundtrack Album." *Forbes*. *Forbes Magazine*, August 27, 2021. <https://www.forbes.com/sites/jimryan1/2021/08/27/composer-jonathan-wolff-on-creating-seinfeld-theme-song-new-seinfeld-soundtrack-album/?sh=79d3f69e2b27>.

Saldaña Johnny. *The Coding Manual for Qualitative Researchers*. 2nd ed. Thousand Oaks, CA: Sage Publications, 2013.

Sax, David. *The Revenge of Analog: Real Things and Why They Matter*. New York City, NY: PublicAffairs, 2016.

“Spotify Technology S.A. Announces Financial Results for Fourth Quarter 2021.” Business Wire. Spotify Technology S.A., February 2, 2022.
<https://www.businesswire.com/news/home/20220202005417/en/>.

Yassin, Diana. “A Brief History of Streaming Services.” The Michigan Daily. University of Michigan, April 20, 2021. <https://www.michigandaily.com/music/brief-history-steaming-services/>.