



Copyright Laws and Digital Piracy in Music Industries

The Relevance of Traditional Copyright Laws in the Digital Age and How Music Industries should cope with the ongoing Piracy Culture.

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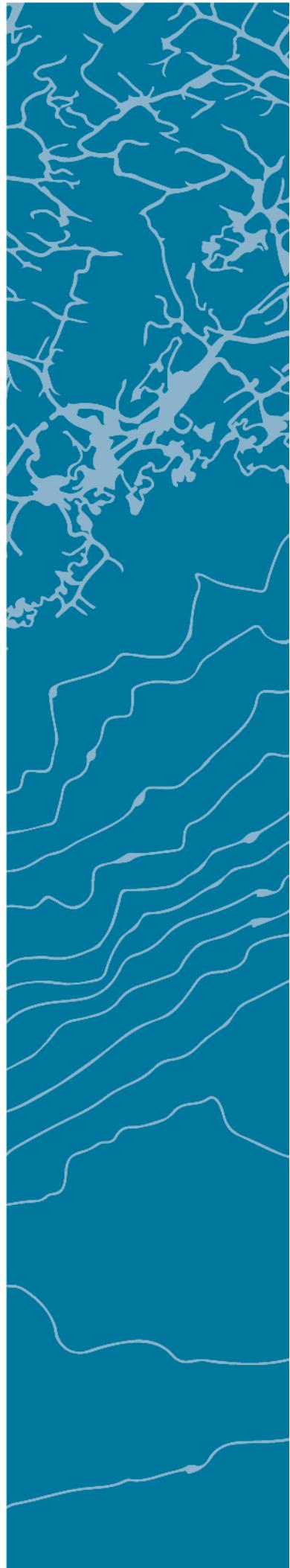
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ABSTRACT

The copyright laws formed in the publishing age in the eighteenth century have come a long way to the twenty-first century of the modern digital age. From the Statute of Anne in 1710 to Music Modernization Act in the U.S. and Article 17 in the European Union in 2018, several conventions held up until this date, but there are still issues or even more issues emerging in the music industries. On the other hand, digital technologies have been rapidly growing with the advent and access of the internet, which has dramatically reformed traditional music business models. Even after the successful shut down of Napster by RIAA, the music industries are continuously facing substantial economic losses every year due to evolving digital piracy.

This study seeks to find the relevance of traditional copyright laws in the digital age, their relationship with the piracy issues in music industries, and a possible way to control ongoing digital piracy. For this purpose of the research, a qualitative secondary method with documentary analysis was chosen. Several available data from past to current were selected, skimmed, synthesized, presented thematically, and finally analyzed in the research work.

The analysis results show that the copyright laws are insufficient and less relevant in the modern digital age. The digital issues are somehow related to the copyright laws created by inappropriate clauses and wordings. Secondary ethnographic data from the psychological perspective of piracy show that the justification of illicit behavior and antipathy towards music industries is another reason for piracy among youths. Finally, the study of emerging technologies such as blockchain technology shows possibilities in solving revenue distribution issues, transparency issues, and intermediaries' role issues. On the other hand, artificial intelligence shows considerable potential and promising future of music industries in many ways while controlling the ongoing piracies.

LIST OF ABBREVIATIONS

AI – Artificial Intelligence

ASCAP – American Society of Composers Authors and Performers

BVMI - Bundesverband Musikindustrie

CISAC – Confédération Internationale des Sociétés d’Auteurs et Compositeurs

CJEU - Court of Justice of the European Union

CMOs – Collective Management Organization/s

DMCA – Digital Millennium Copyright Act

DRM – Digital Rights Management

DSP – Digital Service Provider

EUCD – European Union Copyright Directive

IFPI – International Federation of Phonographic Limited

MCPS – Mechanical Copyright Performers’ Society

MLC – Mechanical Licensing Collective

MMA – Music Modernization Act

PPL - Phonographic Performance Limited

PRS – Performing Rights Society

P2P – Peer to Peer

PROs – Performing Rights Organization/s

SACEM - Société des Auteurs, Compositeurs et Éditeurs de Musique

SCAPR - Societies’ Council for the Collective Management of Performers’ Rights

TRIPS - Trade-Related Aspects of Intellectual Property Rights

WIPO – World Intellectual Property Organization

List of Figures

Fig. (I). From Statista.com (I):

<https://www.statista.com/statistics/669113/number-music-streaming-subscribers/>

Fig. (II). Logo of Antipiracy campaign in the 1980s by BPI

https://en.wikipedia.org/wiki/Home_Taping_Is_Killing_Music

Fig. (III). InCopro - The PRS for UK: Top Stream Ripping Sites in the UK (Screenshot by author)

<https://www.pratformusic.com/press/2020/usage-of-stream-ripping-services-increases-1390-percent-in-three-years>

Table of Contents

ACKNOWLEDGEMENT	2
ABSTRACT.....	3
LIST OF ABBREVIATIONS.....	4
LIST OF FIGURES	5
TABLE OF CONTENTS.....	6
1. INTRODUCTION.....	9
1.1 The Beginning.....	9
1.2 Getting into It.....	10
1.3 Moving Further	11
2. METHODOLOGY	13
2.1 Methodological Approach	13
2.2 Data Collection Methods & Analysis	14
2.3 Methodological Choices	15
2.4 Limitations	16
3. COPYRIGHT LAWS: BACKGROUND AND ISSUES	17
3.1 Introduction.....	17
3.2 Brief History of Copyright Laws	17
3.2.1 The Statute of Anne	18
3.2.2 Meanwhile around Europe.....	18
3.2.3 Berne Convention and Revisions.....	18
3.2.4 Copyright and the Related (Neighboring) Rights	20

3.3	Collective Management Organizations (CMOs)	21
3.4	Digital Millennium Copyright Act (DMCA).....	24
3.5	Recent Developments in Copyright Laws	25
3.5.1	Article 17 & Article 11	26
3.5.2	Music Modernization Act (MMA).....	28
3.6	Copyright Issues: Then and Now.....	29
3.6.1	Three Major Issues of Copyright	29
3.6.2	Issues on Controls and Rights.....	31
3.6.3	Issues on Sampling, Remix and Mashups.....	33
3.6.4	Issues on Copyright Term Extension	36
3.6.5	Issues on Fair Use Exceptions	37
3.7	Summary	38
4.	DIGITAL TECHNOLOGY AND PIRACY ISSUES	39
4.1	Introduction.....	39
4.2	Evolution of the Digital Age.....	39
4.3	Rise of Online Music Streaming Services	40
4.3.1	Increase in Online Music subscribers	40
4.4	Piracy in Music Industries	43
4.4.1	Pre-Digital Piracy: Home Taping	44
4.4.2	Digital Piracy and MP3.com	45
4.4.3	Napster and P2P File Sharing.....	46
4.4.4	Stream Ripping: Extended Form of Piracy?.....	47
4.4.5	Stream Manipulation: A New Form of Piracy?.....	50

Copyright Laws and Digital Piracy in Music Industries

4.4.6	The Psychology behind Piracy	51
4.4.7	Culture of Music Piracy: Is it even Possible to Stop?	53
4.5	Digital Technologies and Music Industries	56
4.5.1	Blockchain Technology Vs. Copyright Issues	57
4.5.2	Artificial Intelligence (AI) Vs. Piracy issues	60
4.6	Summary	62
5.	ANALYSIS	64
5.1	Revisit to the Beginning.....	64
5.2	The Relevance of Traditional Copyright Laws in the Digital Age.....	65
5.3	How Music Industries should cope with Digital Piracy?.....	67
6.	CONCLUSION	71
6.1	Final Thoughts	71
6.2	Further Recommendations	72
	REFERENCES.....	74

Chapter 1

INTRODUCTION

1.1 The Beginning

The basic concept of copyright is the right to protect someone's creation from being illegally copied or distributed to others without their consent. In contrast, infringement or piracy is just the reverse action. Not so long ago, when music industries were going through an analogue era, I would rather call *the golden era*, nothing was more complex to understand and handle. Selling physical copies of albums and distributing sales revenue to different rightsholders was much more manageable and easier. The terms copyright and infringement were less prevalent when they were making a high income from the business. People were less aware of piracy cases, and also, the authors, songwriters, and performing artists were living a decent lifestyle on their creativity. However, it was just until the end of the twentieth century.

Today, digital technologies have been influencing our lifestyle, society, and even culture in many ways. Technologies surround us in every step of our lives. Though digitalization has proved beneficial to some business sectors, severely impacted sectors are the creative industries like literature, movie, and music industries.

On June 1, 1999, when a digital platform called 'Napster' was launched by a college student named Shawn Fanning for sharing mp3 files peer to peer (P2P) among the college students, everything started to be complicated for the rightsholders like music labels, publishers, music companies and artists. Napster was one of the first popular online music sharing platforms, which had 80 million registered users at its peak, but in 2001 it was shut down after a court decision having several lawsuits of copyright infringement cases. This incident also showed how vulnerable the current music industries were at that time. Since it was just the beginning of the disruption in the music industry, no one had any idea that it would come so far to change the whole scene of the traditional music business models. It soon started impacting the functions of the music industries and even the roles of music industry personnel.

1.2 Getting into it

The copyright legislations are the essential assets and the core of the music industries, i.e., copyright industries, as defined by Wikström (2013). When exploited, copyrighted materials generate some incentives to the authors in return, making sense that it should be protected from any mis-exploitation. Moreover, Collective Management Organizations (CMOs) worldwide are administering the revenues generated by further exploiting copyrights and distributing them to the related rightsholders, which balances today's music industries' economy. Nevertheless, even with technological advancement, there are vast difficulties handling millions of songs daily, their incentives and piracy side by side. So, there are significant issues today in the music industry than ever, resulting in a substantial loss that was ever suspected before.

From the world's first official copyright legislation known as 'The Statute of Anne' in 1710, later international copyrights legislation known as Berne Convention in 1886 to the amendments such as Rome convention in 1961, World Intellectual Property Rights (WIPO) treaty in 1996, Digital Millennium Copyright Act in the U.S. in 1998, to European Union's Copyright Directive Article 17 and Music Modernization Act in 2018, there are various amendments made throughout these centuries. However, due to the slow process of amendments, enforcements, and adaptations compared to technological advancements, there are questions on these legislations' relevance in this digital age.

The evolution of digital technology has come so far that it has given features to all of us that we can share any digital files instantly over the internet with our friends or to the public virtually, so as we can access the shared files by others easily on the internet without any cost or a minimal cost. The culture of piracy is rooted somehow with such freely available facilities on digital platforms. Furthermore, today's social sites are also playing a vital role in sharing such unauthorized files on digital media. So, piracy has spread worldwide, which has always been big trouble for copyright industries for decades. Though it has damaged so much to the music industries' economy, there are no such counteracts that would fix 'the crisis' today.

Today, we have entered into the age of 'streaming,' which most countries have already adopted. We can access and listen to any songs and movies instantly for free 'Freemium' and 'Premium'

features with a minimum monthly subscription charge or download as our preferences. There are online streaming services like Spotify, Apple Music, iTunes, Idagio, Google Play Music, Amazon Music, Deezer, Tidal, Pandora, Soundcloud, and so on, where we can access millions of songs for free or subscribe with a minimal monthly charge or download songs with a minimum charge. Even with the rise of streaming services, there is a significant loss for music industries due to emerging piracy.

The U.K. based company called MUSO (2020), which monitors copyright infringement cases worldwide, recently stated that 'ten years ago Torrents were the mainstay but, as of August 2019, MUSO's data shows that Torrents now only account for just 6.7% of all music piracy worldwide. Meanwhile, unlicensed streaming makes up 33.6%, and stream-ripping sites 31.3%. '

We can see, piracy has been changing its forms over time, but the copyright legislations and music industries do not seem to be ready for such evolutions and adaptations to new technologies and a new eco-system. Whereas another factor also could be the lack of public awareness of copyright protection. So, one could argue that if music piracy increases with the increase of new technologies or the loopholes in the traditional copyright laws or lack of public copyright awareness.

1.3 Moving Further

I have always wondered about 'What? ', 'How?' and 'Why?' of the music business (production and distribution especially) from my teenage, when I started listening to my favorite songs collecting audio cassettes, C.D.s and reading magazines related musicians, artists, and music industries. In my opinion, that somehow relates to being a music student, a researcher in the same field today. Further, I have considered this research an excellent opportunity to explore what I had always quest for, even though there is a big difference in the objectives.

Hypothesis:

'The piracy culture in music industries still does exist due to the lack of adaptations to new emerging technologies. '

Furthermore, the objectives of this research are.

- To find the relevance of traditional copyright values in the digital age.
- To find possibilities on how music industries should cope with the piracy culture.

The research questions are as below.

1. What is the relevance of traditional copyright laws in the digital age?
2. How should music industries cope with the culture of digital piracy?

Chapter 2

METHODOLOGY

2.1 Methodological Approaches

This research is based on *Qualitative Research*, in which the data collection is executed as a *Secondary Research Method*, which is popularly known as *Desk Research*. So collectively, it is a Qualitative Secondary Research or Qualitative Desk Research. Besides, the research analysis lies under the category of *Document Analysis*. Before moving further, all the terms are described thoroughly.

Qualitative research is defined as a type of Research of Arts and humanities or social sciences that collects and works with non-numerical data and interprets meaning from these data that help understand social life through the study of targeted populations or places (Crossman, 2020). This type of research involves collecting and analyzing non-numerical data such as text, video, or audio, for understanding concepts, opinions, or experiences that can gather in-depth insights onto a problem or generate new ideas for the research humanities and social sciences. Qualitative research is the opposite of quantitative research, which involves numerical data for statistical analysis (Bhandari, 2020).

Desk research is widely executed for market research analysis. However, it is often used in humanities and social sciences, where the secondary data are vital role players. McQueen and Knussen (2002) describe that the secondary data is the opposite of primary data, i.e., information and data required to answer the research question is already available or collected by other researchers. The data could be used to review previous research findings as part of a literature review, consult a government statistic, or even read a chapter in a textbook, where the researcher plays no part in gathering primary data (p. 14).

Data is an essential factor available or obtained from textbooks, research journals, articles, newspapers, published interviews, and websites in the desk research method. These data are analyzed and further used as the demand for the research problem.

The research problems such as the relevance of traditional copyright laws in the digital age and digital piracy in music industries, need to be addressed by the critical document analysis of theories and current discourses including historical background, past researches on issues of copyrights, current digital technological progress and even data of music piracy.

Document analysis is the systematic procedure of reviewing documents, including printed and electronic such as digital and internet-transmitted materials (Bowen, 2009, p. 27). He further explains that to understand and develop empirical knowledge; the document should be examined and interpreted (Corbin & Strauss, 2008; Rapley, 2007, as cited in Bowen, 2009).

Since there are hugely available documents published by several academics and scholars from a different period, within this research problem, the author preferred to design this research as a qualitative secondary research method with documentary analysis.

Further, the methods of data collection and analysis justify the methodological choices, limitations of these methodologies.

2.2 Data Collection Methods & Analysis

The data required for the document analysis was collected from several textbooks written by renowned academics. Furthermore, a significant portion of the data was retrieved from the internet. The popular databases such as Google Scholar, JSTOR, ResearchGate, ScienceDirect, Journals. Journals.sagepub, Investopedia, Wikipedia, and the University's library database (uia.no/bibliotek) were used for the digital access of the relevant pieces of literature such as copyright background and issues, the evolution of digital technologies, and issues of digital piracy.

The literature related to the research topic was accessed, downloaded, and opened with the software called Mendeley Desktop and Mendeley Reference Manager, which made loads of documents easy to read and quick to reference. The documents were then thoroughly skimmed, summarized, and paraphrased in the related issues or topics, which gave the final outline of chapters 3 and 4.

Further several websites such as Kildekompasset, wlv.ac. Uk/skills, Oxbridgeessays, Scribbr, Thoughtco, and many more proved invaluable helps for reforming, formatting the thesis outcome.

2.3 Methodological Choices

The research is undertaken as a qualitative secondary research method or desk research because of the substantial advantages compared to few disadvantages. Bowen (2009) explains some advantages of this methodology as:

- Efficient: Less time consuming, more efficient than other research methods, requires data selection, no data collection.
- Availability: Most of the documents are available in the public domain, easy to access using the internet.
- Cost-effectiveness: Less costly than other research methods, since data have been already collected remains the evaluation of content and quality.
- Unobtrusive and non-reactive: Since primary researchers already collect the data, it is non-reactive - lack of reflexivity counters for not being real-time.
- Stability: Non-reactive, documents are stable, so suitable for reviews as it requires. The investigator's presence does not affect the results (Merriam, 1988, as cited in Bowen, 2009).
- Exactness: The inclusion of exact names, references, and other details makes the data advantageous for the research process (Yin, 1994, as cited in Bowen, 2009).
- Coverage: Documents provide broad coverage – an extended period, many events, and many settings (Yin, 1994, as cited in Bowen, 2009, p. 31).
- No Room for Ethical Issues: Since the data are selected rather than collected in the fieldwork, there are no ethical dilemmas or issues.

These are some of the key factors why the author preferred to use the qualitative secondary research method with documentary analysis. Further, the limitations of this methodology are discussed.

2.4 Limitations

Every research method has its limitations and disadvantages. In the integration of qualitative secondary method, some disadvantages as described by Bowen (2009) are as follows.

- Insufficient Detail: Some documents do not provide sufficient detail to answer the research question.
- Low Retrievability: Difficult to retrieve or not retrievable sometimes. Access to some documents may be deliberately blocked (Yin, 1994, as cited in Bowen, 2009).
- Biased Selectivity: Biases might occur in selecting documents that could hinder the potential of actual research (p. 32).
- Time Consuming: These problems, as mentioned above, sometimes lead to unanticipated or unnecessary time consumption.

In this particular research, the author tackled some obstacles such as insufficient detail and low retrievability, hence led to time-consumption while analyzing the retrieved theories and current discourses. However, as opposed to the primary data, which needs interviews, fieldwork, and surveys to obtain primary data which often tend to struggle with lots of ethical dilemmas due to the respondents' will, situation, and consents, the secondary research or desk research methodology was found to be very beneficial and useful.

Chapter 3

COPYRIGHT LAWS: BACKGROUND AND ISSUES

'If I have seen further, it is by standing on the shoulders of giants.'

- Sir Isaac Newton (1675)

3.1 Introduction

Copyright is an intellectual property that was formed for the protection from unauthorized uses of creative works. However, there are vast differences between the age of publishing when copyright laws were enacted and, to date, the advanced digital age. Advancement in new technologies, misinterpretation, and misuse of the insufficiently worded clauses of laws, made authorities rethink and reform the existing copyright laws, creating urgency for addressing such issues to prevent such illicit activities. Hence, copyright laws have been through several revisions and amendments in the form of conventions. Nevertheless, copyright laws are evolving on and on; it still seems to have debates and controversies along with it. Moreover, the rules or the laws are the most susceptible areas which tend to have controversies and issues.

This section presents a brief history of copyright to the recent amendments briefly in chronological order. Besides, theories produced by different academics on copyright issues in music industries from its historical time, thematically.

3.2 Brief History of Copyright Laws

Although the copyright concept is believed to exist from the ancient time of Greek, Roman authors and poets, the legislative form of copyright only started after the 1450s, when Johannes Gutenberg invented the movable type printing press. The printing machine's new technology revolutionized the publishing work of that time, which led to introducing and implementing a new set of rules to protect those literary works. However, it took more than two centuries to reach the official introduction of copyright legislation of this modern age.

3.2.1 The Statute of Anne

The Statute of Anne, also known as *The Copyright Act 1710*, is the first copyright law in history, named after the Queen Anne of England. This Act is an unprecedented step in copyright history created to protect the authors' rights for publishing their literary works and music sheet papers, which is the framework for today's copyright laws. This law had a provision for the authors to control their works for a limited period of 14 years and a provision of renewal for another 14 years.

3.2.2 Meanwhile around Europe

After implementing this law in Great Britain, several acts were introduced to protect authors' rights all over the European countries related to literary works, drama, and industrial property. Most notably, in 1777, when musical works produced in notation sheets were also included as copyrightable material, embraced by the statute of Anne (Little, n.d. p.2). Later, in 1790, U. S. also introduced *U.S. Copyright Act 1790* for books, maps, and charts and revised in 1831, including protection for musical compositions published in notations under this law. In 1842, France and Germany also implemented the copyright legislation for publishers of sheet music. Similarly, the Paris convention in 1883 in France was held to protect industrial properties, which was signed by 14 European member states. In 1851, the world's first collecting society for music-related royalties was established, known as Société des Auteurs, Compositeurs et Éditeurs de Musique (*SACEM*) in France, to protect performing rights (ibid).

3.2.3 Berne Convention and Revisions

In 1886, the Berne Convention was held, which is supposed to be the pioneer of today's international copyright legislation. The convention covers the protection of literary and artistic works of authors, musicians, poets, painters, and so on, which could be exploited in various ways. The convention is based on three fundamental principles containing a series of provisions determining the minimum protection to be granted and special provisions available to developing countries that want to use them. The three basic principles are as follows.

- (I) Works originating in one of the contracting states must be given the same protection in each of the other contracting States (principle of 'national treatment').
- (II) Protection must not be conditional upon compliance with any formality (principle of 'automatic' protection).
- (III) Protection is independent of the existence of protection in the country of origin of the work (principle of 'independence' of protection).

The Berne Convention was revised in Paris in 1896, known as *Paris Additional Act*, and in Berlin in 1908, known as *the Berlin Act*, which extended the duration of copyright to the author another plus fifty years and declared for no formal necessity of registration for copyrights legality. Again, it was revised and completed at Berne in 1914, known as *Berne Additional Protocol*, in Rome in 1928, known as *the Rome Act*, which introduced the authors' moral rights. In 1948, Brussels, known as the *Brussels Act*, Stockholm in 1967 known as the *Stockholm Act*, and Paris in 1971, known as *the Paris Act* and was amended in 1979.

(MacQueen et al., 2007 as cited in Wikström, 2013) though the Berne Convention was initially a European instrument, when the USA signed the convention in 1989 and since 1994 when the TRIPS (Trade-Related Aspects of Intellectual Property Rights) Agreement made the convention a mandatory part of general international trade agreements, the convention has confirmed its position as the most significant treaty within the realm of international copyright (p.19). To a recent date, there are 178 countries out of 195 countries as contracting parties or signatories who have signed the convention (*Source: copyrighthouse.org*).

According to Wikström (2013), the value of international copyright legislation has been growing continuously after the digital age, resulting in the most discussed and controversial new treaties. Among them which has come into force is *World International Property Organization's (WIPO) Internet Treaty* in 1996 that served as the basis for national and regional legislation such as *Digital Millennium Copyright Act (DMCA)* in 1998 in the USA and *European Union Copyright Directive (EUCD)* in 2001 in Europe (p.19-20).

3.2.4 Copyright and the Related (Neighboring) Rights

Though the general concept of copyright has remained the same, its scope and width have been evolving and continuously following to adapting to technologies' development. Moreover, advancements in technologies are the primary influencers for such amendments on copyright.

World Intellectual Property Organization (WIPO), a global forum of the United Nations for intellectual property rights services, established in 1967, categorizes copyright as a branch of intellectual property. It defines copyright as a legal term used to describe the rights creators have over their literary and artistic works. Works covered by copyrights range from books, music, paintings, sculpture, and films to computer programs, databases, advertisements, maps, and technical drawings.

Hesmondhalgh (2013) states that copyright is one of the three main areas of modern intellectual property, which each protects knowledge or idea:

- Patents – protect ideas that are new, non-obvious, and useful or applicable to industries.
- Trademarks – protects symbols intended to distinguish the products of companies from one another.
- Copyrights – protect expressions defined by law as 'literary and artistic works, not the ideas (p.159).

Berne convention has categorized two types of copyright. One is *economic rights*, and another is *moral rights*.

Where economic rights give financial rewards to rightsholders from the use of their works used by others, moral rights give authors link to their works, which is related to their reputation and honor to the work, also called *integrity rights* (Source: wipo.org).

La Roche et al. (2011) describes that the purpose of copyright protection is to encourage artistic and literary works by providing economic incentives to be creative. Also, copyright law gives a temporary monopoly to of exclusive right to the copyright to:

- Use
- Reproduce
- Publicly perform and display a musical, literary, or artistic work (p. 2).

Wikström (2013) explains that the convention has been developed and expanded to feature to address several copyright features crucial to international copyright legislation. There is no necessity for formalities to register a song to be protected (*Article 5: Rights Guaranteed*). Moreover, since 1948, the convention has also introduced additional rights to respond to new technologies such as sound technology in *Article 9: Right of reproduction* (p.18).

Further, in convention's *Article 6bis* revised and amended in 1979 introduced the author's *Moral Rights*.

Economic rights are further divided into different categories.

- a. Reproduction Rights: *an exclusive right to make copies of a work.*
- b. Distribution Rights: *an exclusive right to issue copies of a work to the public.*
- c. Rental Rights: *an exclusive right to rent or lend copies of a work to the public.*
- d. Adaptation Rights: *an exclusive right to make adaptations of a work.*
- e. Public Performance Rights: *an exclusive right to perform or display a work in public.*
- f. Communication Rights: *an exclusive right to communicate a work to the public through digital channels, also covers broadcasting rights.*
- g. Display Rights: *this includes the displaying of music-related products, e.g., Karaoke Lyrics Display, Sheet Music)*

3.3 Collective Management Organizations (CMOs)

The function of a Collective Management Organization (CMO), also called Collecting Societies, is to collect, monitor, and distribute the other revenues generated through exploitation by different sectors as consumers. *SACEM* is the world's first CMO, which was established for composers and authors' rights at that time in France.

Towse (2001) defines Collecting Societies as non-profitmaking organizations controlled by their members on whose behalf, they issue individual as well as collective or blanket licenses whose primary functions are as follows:

- To license the works in which they hold the copyright for specific uses.

- To monitor the use and collect revenues.
- To distribute the revenue as royalties to members of the society (p. 96).

Furthermore, she explains the types of societies operating within the record industry as:

- Performing Rights Society (PRS) - assigned to performing and broadcasting right in works by composers and music publishers, i.e., royalty generated through the public performance or broadcast of music is paid to the composer, publisher of that piece.

For example, PRS for Music in the U.K.

- Mechanical Copyright Protection Society (MCPS) – licenses the mechanical right (the right of record) on behalf of composers and lyricists, i.e., anyone wanting to record a piece of music must obtain a license from it, paying the sale of the recordings.

Both PRS and MCPS companies are based in the U.K. which work for different licenses and rights.

- Phonographic Performance Limited (PPL) – licenses the performing and broadcasting right, i.e., the right to play or broadcast records in public. Its members are record companies who are owners of the copyright in sound recordings.

PPL is a U.K.-based copyright collective that is a member of the British Copyright Council (BCC).

Towse (2001) explains further, by issuing a blanket license, collecting societies also reduces the costs of users while obtaining all the necessary licenses from a large number of individual rights holders, which gives access to a vast repertoire of works. This licensing saves time and expenses so that users buy a license from PRS or PPL, which gives them the legal authority to use the whole catalogue of works.

For example, if a radio station wants to play every single recording from a record company's composer, then blanket licenses come to work, which applies equally to discos, restaurants, shops, and every other public place in which music is performed publicly.

Similarly, there are reciprocal agreements with overseas collecting societies that give foreign copyright repertoire licenses for international musical works. In the absence of reciprocal agreement between national collecting societies, international agreements entitle the individuals

to national treatment in countries as the appropriate convention members, e.g., Berne for composer and Rome for performers (p. 97, 98).

The major issues which the current CMOs are facing are:

- Collecting royalties from public performances is not effective in developing countries.
- Collecting synchronization royalties from different sectors such as T.V.s, Streaming Channels like Netflix, Radio Advertisements, etc.
- Configuring and Distributing collected revenues to the actual rightsholders.
- Monitoring and taking legal actions against the copyright infringers.
- Transparency in revenue collection and distribution.

Jenner and Brown (2006), in the report of MusicTank, argue that there are difficulties and conflicts in most cases such as efficiency, effectiveness, and equitability of the current CMOs, which could be addressed by enabling technology to develop the ideal price that would be attractive to the public. The current societies are structured on a territorial basis, which creates problems in the subsequent distribution of income worldwide, and there are also problems with accurate metadata, which lead to the problem of payment to the creators and copyright owners in each territory.

The two extreme examples are the lack of a performance right on terrestrial radio in the U.S., and the lack of blank levies in the U.K. undermine the legitimacy of the whole collecting society system resulting in a large *black box income* that is distributed in many ways, which lacks the transparency (p. 52). (*Note: MusicTank has closed its service since it was announced on November 5, 2018*).

Panda and Patel (2012) explain other types of CMOs, such as One-stop Shops and Rights Clearance Centers.

- One-stop shops: A group of collecting societies and
- Rights Clearance Centers: Offer a centralized source for users to obtain licenses, which have become popular in response to multimedia productions requiring users to obtain multiple licenses for relevant copyright and related rights.

Since performing rights are the major responsibility of CMOs to look after, they are also known as Performing Rights Organizations (PROs). Further, the broadcaster paid the performing rights where each society collects annual fees from broadcasters, live music venues, websites, and other

parties who perform music publicly. Furthermore, the income is divided between the composers and music publishers (p. 156).

Societies' Council for the Collective Management of Performers' Rights, known as SCAPR, founded in 1986 in Brussels, Belgium, is a non-profit umbrella organization for neighboring rights societies. It operates as an international platform for the development of cooperation between CMOs globally, representing 56 CMOs from 42 countries, which works towards improving the exchange of data, performers' rights payments across borders, the efficiency of management of rights, and the conclusion of bilateral agreements. In contrast, CISAC is the umbrella organization for authors' rights societies.

3.4 Digital Millennium Copyright Act (DMCA)

DMCA was enacted in 1998 in the USA, signed by President Bill Clinton. The DMCA's main purpose is to implement new regulations to protect intellectual property rights controlling digital technologies' misuse. Since the earlier phase of enactment of DMCA, it was controversial and widely criticized by many academics. The Act did not correctly address the primary purposes of controlling and maintaining a protected environment in the internet's eco-system and its issues related to digital ill-practices. Moreover, with the unstoppable pace of digital technologies' progressions, the regulation somehow seemed to be unfitted for such purposes.

Hayes (2015) explains that the DMCA copyright Act explicitly addresses the reproduction right in a digital environment. It is essentially the enactment of both H.R. 2281 and S.1121, which was introduced by Rep. Howard Coble and Sen Orrin Hatch in July 1997, respectively, later signed into law by Clinton on October 28, 1998. Since title I of DMCA is entitled to WIPO Copyright and Performances and Phonograms Treaties Implementation Act of 1998, it takes a minimalist approach to implement the treaties' requirements, which was the result of lack of necessary changes to the existing law of enhanced copyright protections of the U.S. at that time.

Further, he emphasizes that DMCA addresses only the requirements of Arts 11 and 12 of the WIPO Copyright Treaty and of Arts 18 and 19 of WIPO Performances and Phonograms Treaty, which provide legal protection against:

- Circumvention of effective technological measures that are used by rightsholders to restrict unauthorized acts with respect to their protected works, and
- The removal and alteration of any electronic rights management information – information that identifies authors, rights of owners, work or about the terms and conditions of use of the work or distribution or communication to the public about copies of works, knowing that the electronic rights management information has been removed or altered.

He states that these bills contain nothing about the reproduction right or how it relates to the digital environment (p. 76).

DMCA has two main issues regarding its ineffectiveness in today's digital sphere. The first one is that it does not address the problem of foreign piracy websites. For example, copyrighted material of U.S.-based websites could be available on websites of other countries illegally but, the U.S. government does not seem to be effective in taking action - since many of the nation show little interest in the protection of intellectual property. Hence, 42 countries have already established website blocking regimes to block access to foreign websites.

Similarly, she further adds that the second issue is DMCA's 'notice and takedown' approach, which seems much more ineffective. When any uploaded copyrighted content is requested to take down by the actual content owner, the internet intermediaries take action at a specific time. However, all too often, other copies of the same content are quickly reposted by the same or other users after being removed -leads to never-ending the game (Johnson, 2020).

A principal goal of the DMCA was to reduce online piracy; Johnson (2020) writes, unfortunately, online piracy poses a worse problem for copyright holders today than it did in 1998 with the rise of online streaming - including every form of digital formats such as movies, television music, books, videogames, and software.

3.5 Recent Developments in Copyright

The most recent significant steps on copyright development are the two acts known as Article 17 of the European Union Copyright Directive (EUCD) and the Music Modernization Act (MMA) of the U.S. These two are also called twin signature developments in the music industries in 2018,

according to music :ally (Lyons et al. 2019, *Music 2025*), out of which the Article 17 is still in the adoption process. The U.S. Government has already passed MMA (p. 108).

3.5.1 Article 17 (formerly, Article 13) and Article 11

Reynolds (2019) explains that on April 15, 2019, the European Council – the political body composed of government ministers from 28 member states voted for the copyright directive, which was passed by the European Parliament in March, most notably two specific parts of the law: article 11 and Article 13 (recently changed to Article 17). It is a directive that is designed to limit how copyright content is shared on online platforms, i.e., Article 17 requires online platforms to filter or remove copyrighted material from their websites and forces them to be liable for copyright infringements and supposed to draw more revenues from the tech giants towards artists and journalists. The six-member states Finland, Italy, Luxembourg, the Netherlands, Poland, and Sweden, voted against the law, three member states, Belgium, Estonia, Slovenia, abstained, and the remaining 19 member states voted for the directive. However, according to a [bbc.com](https://www.bbc.com/news/technology-51750300) article published on January 24, 2020, writes that the Universities and Science minister Chris Skidmore of the U.K. have announced officially that it is not implementing the E.U. copyright law after U.K. left the E.U.

Furthermore, Reynolds (2019) explains that, from the beginning, the laws have proved to be controversial since it would bring tremendous changes to today's most powerful platforms on the internet like YouTube, Facebook, and Twitter, which will be forced to take responsibilities for copyrighted materials being shared illegally on their platforms. On May 23, the Polish Prime Minister's office criticized as *it fuels the censorship and threatens freedom of expression*, announcing that it would bring a court case against Article 13 to the court of justice of the European Union. The proponents of the directive of copyright argue that currently, people are listening or watching and reading copyrighted materials on these platforms without paying for them. He argues that the most controversial segment, Article 13, which targets YouTube and YouTubers, is claimed by critics to impact creators negatively.

The criteria of Article 13 for which platforms would not need upload filters are as follows:

- Has been available for three years.
- Has an annual turnover below 10 million Euros.

- Has fewer than five million unique monthly visitors.

He argues that this means that a massive number of sites would need to install upload filters. Furthermore, even though the proponents argue that *memes* are protected as parodies and will not need to be removed under this directive, others argue that filters will not distinguish between memes and other copyrighted material, thus creating false infringements (also tagged as *meme ban*).

Kleinman (2019) explains that the most controversial two clauses of Article 11 and Article 13.

- Article 11: states that search engines and news aggregate platforms should pay to use links from news websites.
- Article 17: holds larger technology companies responsible for material posted without a copyright license. The tech companies will be more liable for any copyrighted content uploaded on their platforms.

Lyons et al. (2020) explain that for two decades and over, the relation between the music industry and the entire tech industry is dominated by the safe harbor provision, which was introduced in 1998 in DMCA, and the difference between how safe harbor works in the U.S. and the E.U. is just opposite: on the service providers and on the favor of the user respectively (Trapman, 2016, as cited by Lyons et al., 2020).

Bedingfield (2020) states that the directive would limit how copyrighted content is shared in online platforms, which requires these platforms to stop copyrighted materials from getting onto their platforms, leading to the widespread usage of automated filters and would take revenues away from tech giants but towards deserving artists. The big companies like YouTube, Twitter, and Facebook are the major opponents of the directive where Google claims that this move will change the web, and YouTube has encouraged a protest #saveyourinternet.

Lyons et al. (2020) state that the YouTube campaign was tagged as *carpet bombing* by British Phonographic Industries (BPI) and has created tensions between the two camps leading up to the next phase in the legislative process. The directive has been developed since October 2018 to voting processed in early 2019, which will be implemented from Spring 2021 (p. 108).

3.5.2 Music Modernization Act (MMA)

Music Modernization Act, shortly known as MMA, is the recent progress in the U.S. copyright history, which was signed into law on October 11, 2018, by President Donald Trump.

Lyons et al. (2020) state that the passage of the Orin G Hatch - Bob Goodlatte Music Modernization Act (MMA) mainly addresses those who had felt neglected in the digital era. They further explain them as songwriters, record producers, engineers, and eminent pre - 1972 recordings artists, which resulted from complex negotiations with multiple players such as PROs, publishers, digital services, and broadcasters over the previous two years. MMA provides a reform of the mechanical licensing system by introducing blanket licensing, allowing *a willing seller – a willing buyer* rate standard to establish Mechanical Licensing Collective, briefly as MLC. It was also an urge since none of the licensing agencies in the U.S., including the Harry Fox Agency (HFA), was able to provide the effective *universal blanket license* to any single Digital Service Provider (DSP) (p. 112).

Kirkbaumer (2020) states that the blanket licensing will only be effective from January 1, 2021, and there are some regulations for Digital Music Providers (DMPs) during this period. Firstly, DMPs should continue to have the compulsory licenses on a song-by-song basis, including notice of intention in the case of the copyright owner is known and if not known, then there is no need to have the compulsory licenses. Secondly, the copyright owner is not known until the first day of 2021; then, the DMP must transfer the royalties to the MLC, referred to as the limited liability exception.

He further explains that in order to be eligible for the limitation on liability, DMPs should meet one of these three requirements as follows:

- If DMPs identify the copyright owner, they must provide the account statements and pay the related owners' royalties.
- If the copyright owner is not identified DMPs by the end of the calendar month in which the work was first used, then DMPs must accrue and hold the royalties and,
- If DMPs do not identify the copyright owner until January 1, 2021, then the DMPs must transfer the royalties to the MLC, along with the cumulative statement of account that includes exact information that the copyright owner would have been provided.

3.6 Copyright Issues: Then and Now

3.6.1 Three Major Issues of Copyright

Nordgård (2018), in his book *The Music Business and Digital Impacts: Innovations and Disruptions in the Music Industries*, states that there are primarily three major issues related to copyright.

- Issues on Public Approval
- Issues on Economics of Copyright
- Issues on Digital Licensing

The first issue is about accepting copyright by the general public, which he states, is declined substantially with the digital changes and the copyright is actualized effectively in the public debates in the general public's attention (Menell, 2013, as cited in Nordgård, 2018). Further, he elaborates this with comparison to the analogue world where copyright was just of a little attention to fans and consumers through home-taping was an issue, but with the low-quality audio and limited scale, hence not equated with the online p2p file sharing (Drew, 2014, as cited in Nordgård, 2018). However, after the arrival of Napster in 1999, music copyright started grabbing the attention of the general public, creating different opinions, which Menell labels as *the perfect copyright storm* and argues that though the music industries had their online legal alternatives for music consumption, it did not meet the consumer's expectations (Menell, 2014, as cited in Nordgård, 2018). The initial legal responses through massive lawsuits to the fans and consumers turned them against the recorded music industry and its artists. Furthermore, Menell's (as stated by Nordgård) concerns are most importantly on public perception of the copyright system, its role, and function for the creative arts, science, democracy, and freedom, which is resulting in the rate of public approval at a shallow point (p. 14-15).

The second issue is related to the economics of copyright, which Nordgård describes in two points as copyright as an incentive to create and invest in new contents. Towse (as cited in Nordgård, 2018) in her article *Copyright and Economics (2004)* explains that copyright represents a tradeoff between society's costs of allowing a monopoly situation for the creators and the creators' benefit of having incentives to create. The two issues are such as:

- Expected declining costs for producing, distributing, and marketing music in a digital era and,
- Claims that artists still create, despite the severe undermining of copyright since the turn of the millennium (Waldfogel, 2011, as cited in Nordgård, 2018).

Nordgård (Towse, 2003, as cited in Nordgård, 2018) argues that when a work is published, it is vulnerable to be copied, and the copier does not have to invest the production costs; also, the copier only copies the successful works in the lower price than the first publisher, which makes the first publisher challenging to cover his costs and also incompetent in the market. He makes the point that the focus is given beyond the creator, more on the commercial exploitation of the creative content (p. 15-16).

The third issue is all about the problems with copyrights created with the digitalization, online distribution, and the consumption of music. Additionally, expanded copyright life, the challenges with exclusivity, and the difficulties with licensing new digital initiatives are internal debates within the music industries. He explains that the problem with music and copyright is that digitalization has turned music into public good (unlike private good - like food), which holds no excludability thus becomes ubiquitous and unpreventable – leads to free riding. This term refers to having benefited from a good without paying or sharing the economic burden (Levine, 2011, as cited in Nordgård, 2018). Another issue is with the *tragedy of anti-commons*, which is derived from the *tragedy of commons* by Towse (as cited by Nordgård) which refers to the goods held in common so that all users have free access, results in overuse – leads to underinvestment thus leads to low quality and scarcity.

The tragedy of anti-commons relates to the situation that too much ownership, fragmented across too many owners, stops innovation and prevents people or businesses from investing in anything that requires multiple copyrights from multiple partners since the sole work of finding and clearing all the rights are time and resource consuming, and also unpredictable. Furthermore, he writes that the problem lies in the unpredictability of finding all rights owners and obtaining all rights, which involves legal expertise, and dividing rights that could end up costly results as such that it may prevent investors from investing (p. 16-17).

3.6.2 Issues on Controls and Rights

When music industries moved into the electronic age after the publishing age, it started facing complications in handling such new technologies and implementing the existing copyright rules. The main reason behind this was that technological advancements were far ahead of copyright laws, enforcement, and anticipations by the marketplace and the authorities.

Frith (1988) presents the problems when music industries were rising with the adoption of electronic technologies. He outlines those issues - the exploitation of performing rights known as public performance rights: the monopoly privileges of musical copyright holders, i.e., their performing rights, vital for the entertainment industries' profit. The direct relation of music with films, videos, television programs, and indirect with advertisements, shopping malls, etc., the musical commodity generates income from the exploitation of performing rights within the media.

Since broadcasting networks were rising and using the musical products to exploit public performance rights, the revenue generated through such platforms was yet undefined and complex to monitor. The copyright clauses then were just not enough to address such rights.

Furthermore, he explains the issues with the performance rights that arose with the first application of copyright to the recording, which was stated as '*...as if such contrivances were musical works*'. The purchase of a gramophone provides the right of public performance that gramophone manufacturing companies agreed in the 1911 Act: the purchaser of a gramophone acquired with his purchase any right of public performance in that record (p. 59).

The authors Roche et al. (2011) describe that the Copyright Act was passed in 1909, long before radio broadcasting was developed. Then this advent was a challenge to copyright protection. Further, a case between the American Society of Composers Authors and Publishers (ASCAP) vs. Jewell-LaSalle Realty Co. in 1931 with the issue related to public performance rights was a landmark case that ASCAP filed a suit against the LaSalle Hotel and the owner and operator of a radio station of Kansas City, Missouri for allegedly violating copyright laws. The copyright infringement was in the form of broadcasting radio over loudspeakers in the LaSalle Hotel. Finally, the U.S. Supreme Court found this Act as infringement for exploiting public performance right, protected by copyright law (p. 2).

Frith also remarks on the Carwardine case (McFarlane, 1980, as cited in Frith, 1988), which was the case between a Gramophone company and a restaurant in 1934, on performing rights on the records, later won by Gramophone Company. The claim was under the term (*...and whatever it is drafters' intentions*) of copyright Act 1911, which states that the owner of the copyright in a record, i.e., manufacturer, has the sole right to use that record for performance in public, resulting in the establishment of Phonographic Performance Limited (PPL) by the manufacturers to administer their new rights. Then, the International Federation of Phonographic Industry (IFPI) also began to lobby governments worldwide to address domestic laws similar to manufacturers' rights as the Carwardine case (McFarlane, as cited in Frith, 1988, p. 58).

Though IFPI being a leading organization, was lobbying to represent the same rights to other countries as it was in Britain, it was not as persuasive and straightforward. Like France and the USA had never acknowledged a performing right in records until it was 1976: jukebox operators in the USA had to get a license from ASCAP and Broadcast Music, Inc. (BMI) for their songs as songs. Similarly, in Canada, record manufacturers did not even attempt to claim their performing rights until 1968, when the government began an official investigation of performing rights generally (ibid).

Another major issue related to copyright is the exploitation of reproduction rights, from small to large-scale unauthorized reproduction of musical commodities results in a massive loss to the economy of music industries.

Jenner and Brown, in the report of MusicTank (2006), a U.K. based music forum state that the introduction of 'making available' right (Ginsburg, 2004, as cited in Jenner and Brown, 2006) in the WIPO Phonogram Treaties attempted to address the oncoming difficulties but seems to be very confused and patchy in the U.K. which impacts on its practical terms. The main problem with it is the lack of basis for remuneration in standard contracts of the record companies. Further, they illustrate the case of The cheap Trick/ Allman Brothers class action filed in April 2006 in the U.S., challenges Sony BMG to justify why they are treating a digital download just like the sale of a physical copy, which if other record companies treat their artists in the same way, the legitimacy of copyright structures would be undermined and hence leads to more other issues (p. 42).

3.6.3 Issues on Sampling, Mashups, and Remix

Though sampling and remixing are not new acts in the music production field, it has always been controversial. The copyright issues in a sampling of musical pieces and remixes of prerecorded songs are not yet clearly covered by the copyright terms. When electronic devices emerged, giving musicians, studio engineers and producers, many new ways of recording sounds and manipulating them as they wanted was common even in the 1980s.

Frith (1988) explains that samplers are the devices that record sounds digitally and, when triggered, play it back any pitch over the range of an entire keyboard, which allows musicians, producers, and equipment manufacturers to borrow other artists' signature instrumental or vocal sounds, often directly from a compact disc (p. 66-67).

Hence, Frith questions that these phenomena consist of performance controls; should copyright law be revised to adapt to this new technology? Further, he points out two significant issues on this. First, on the credits or reward to the original author for using that prerecorded sound - a copyright problem; second, studio musicians' redundancy – a union matter. He suggests that this could be a significant shift of musicians and engineers in music-making that demands a new way of implementing copyright legislation. For example, computer programs provide instrumental sounds authored by their programmers classified in legal terms as literary works – whether a drum machine programmer could claim copyright on the rhythm produced by his software (p. 67).

Frith (1988) argues that copyright law is moving on the way to restrict the public use, which is against consumer interests, saying that the history of copyright is the history of the steady extension of legal clauses on what cannot be done – i.e., copyright law is ignoring the value of expansion of knowledge that technological changes could bring to the public (p. 71).

Remixing has a unique and significant importance in the field of music mostly. If presented creatively, without any considerable distortion on the original works, it is always appreciated and accepted readily by societies or audiences. Some never heard and never appreciated original works could also get recognition and popularity, giving them a new life through remixing.

WIPO explains that sampling and mashups executed without permission from the owners of rightsholders is a risky business that often leads to copyright infringements and lawsuits. Since some artists believe that rights owners should have the ultimate decision for their works' uses,

approval is a must. Furthermore, stating Aerosmith's lead singer Steven Tyler says, 'Approval is the most important right that a recording artist or songwriter has, and they need to retain the ability to approve how their essential used.'

Rostama (2015), a consultant at *WIPO*, writes in her article that most cultures around the world are the result of evolution through the mixing of different cultural expressions – for example:

- The U.S. media scholar Professor Henry Jenkins' argument on the story of American arts in the 19th century results from mixing, matching, and merging folk traditions from various indigenous and immigrant populations.
- A historical example of remixing, Cento – a literary genre popular in medieval Europe, consisting mainly verses or extracts directly borrowed from other authors' works giving a new form.
- The arts and architecture of renaissance Europe in the 15th and 16th centuries derived directly from Ancient Rome and Ancient Greece.
- A piece of Persian traditional music drawn from a repertoire known as *Radif* is a rearranged form of works of different artists that is improvised with new musical variations – their similarities with the original work are such that listeners often feel that the musical theme is heard before.

Hence, throughout history, the public has been actively involved in creating and re-creating culture, a phenomenon referred to by the U.S. academic Lawrence Lessig - 'Read/Write' culture (Lessig as cited in Rostama, 2015).

Baldwin (2020) presents some substantial issues on sampling with copyright provisions in the U.S., such as a split between the Sixth and the Ninth Circuits oversampling and sound recording copyright, considering the application of *de minimis* defense. *De minimis* is a legal provision that *states a claim requires some form of copying, but substantial copying*, so even if there is copying but not substantial, that would lead to no copyright infringements. Furthermore, he argues that hence it is not about how much the plaintiff's work is copied but how much of the defendant's work is composed of it so an infringing song even though composed entirely of one-note taken from the original, the *de minimis* would protect it, because only one note was copied.

Besides, he explains that the Sixth Circuit states that sound recordings in the 1976 Copyright Act's addition of the word *entirely* to § 114 mean that *work needs to be entire of independent creation*,

without any evidence of copying, for it to be substantially similar without infringing the original's copyright, the standard which sampling does not meet. Furthermore, the bright-line rule drawn by the Sixth Circuit is: de minimis provision does not cover the music sampling; hence it is a form of copyright infringement. The three main justifications for this are:

- It Made enforcement simple.
- Either get a license, or face legal consequences and,
- Market forces would keep license prices reasonable.

Whereas the Ninth Circuit, in the case of sampling, rejects these provisions given by the Sixth Circuit. Moreover, he also mentions that the MMA does not address the music sampling, nor does it address any problem of the inappropriate language of § 114 while it only addresses the downloading and streaming of music to personal devices (p. 310-314).

Li (2020) argues that due to the lack of addressing the remix works on the current copyright regime, most of the remix lawsuits have been settled out of the court, favoring the copyright owners than the court decisions. This implies that:

- Due to ambiguities in the copyright laws on the remix, neither copyright owners nor remixers have been confident in the outcome of the litigation.
- Most of the remixes have been acceptable to copyright owners because of the fan works, which helps promote copyrighted works, which are often unknown and unpopular to the audiences.
- Copyright owners have superior bargaining power over remixers, who have often been forced to accept unfair settlement terms and forfeit their work or adopt a new business model to survive.

He further argues that with such a backdrop, the copyright regime has failed to appreciate the importance of remix, which he uses a metaphorical state as 'illegitimate child' - a child who exists but has no exact legal status or rights (p. 115).

3.6.4 Issues on Copyright Term Extension (Monopoly Power)

Another major issue on which several scholars, academics are concerned is copyright term extension, the copyright protection period even after the author's death, which then lands on the public domain, and others can use it in their derivative works, remixes parodies.

Tschmuck (2017) states that the first statute of copyright Act *Statute of Anne 1710* provided 14 years of copyright protection – a term which could be renewed only once. Furthermore, throughout the different Copyright Acts, it was extended to 70 years after the author's death. In the U.S., the Sonny Bono Copyright Term Extension Act in 1998 extended existing copyright protection to 120 years after creation or 95 years after the publication, whichever endpoint is earlier. Similarly, the European Union extended the copyright term for sound recordings from 50 to 70 years in 2011.

Further, he explains the model presented by Landes and Posner (2003) for optimal copyright protection, which implies that increasing protection increases revenue and cost since much creative work reuses previous work. Furthermore, he concludes that a copyright term extension with two adverse effects:

- The number of works produced does not change – somewhat diminish.
- The cost of production and administration increase – the reason the size of the public domain decreases.

So, it proves that we have to expect a decrease in social welfare from the copyright term extension (p. 66).

Varian (2006) presents his argument on the extension of the copyright term that it is extended retroactively because the existing works were near expiration – to give it a new life. He explains that authors making incentives at present of work makes sense, but such retroactive extension of copyright makes no economic sense.

Tschmuck (2017) explains that the model created by Pollock (2009) from empirical parameters, i.e., Probability Density Function (PDF), shows significantly shorter-term extension than the current provision. It proves about 15 years of copyright term extension is best suitable for social welfare to an optimum, with revenue of copyright holders that equals production cost, in the long run, concluding, 70 years and more are too long from an economic perspective (p. 67).

Jenner and Brown (MusicTank, 2006) argue with a different perspective about the copyright term extension, stating that four companies control 75% of the modern music market and 25% by thousands of smaller companies, makes the issue of extending copyright particularly in sound recording, problematic in competition terms. The provision, which is set 50 years from the first release for the recorded performance, contrasts with the artist's life plus 70 years of the underlying music is a troublesome conflict between performers and music writer. This leads to a severe issue that the children and grandchildren of a writer can earn from recording a hit while the performers do not even have the income to help them economically. So, they suggest extending the copyright life of recordings though this action inevitably leads to real problems in competition terms. For example, major labels such as EMI, which earns up to 40% of its turnover from its back catalogue that is amortized years before and needs little promotion or marketing expenditure, has an enormous competitive advantage over newer entrants to the market by outbidding in signing new acts or buying up companies, artists that have managed to succeed.

Further, the authors suggest that any extension should only be permitted if the assignments of rights are limited, possibly 25 years from origination, and after reaching 50 years of the existing recordings, should be returned to performers and their estates. Furthermore, to level the playing field and allow performers to earn more from their efforts, they suggest the ideal extension be in the form of a remuneration right for performers and not an extension for the existing copyright holders (p.42-43).

3.6.5 Issues on Fair Use Exceptions

Fair use is the provision within the copyright law in the U.S., which uses the copyrighted materials with some limitations. U.S. copyright Office defines that 'Fair use is a legal doctrine that promotes freedom of expression by permitting the unlicensed use of copyright-protected works in certain circumstances.'

Towse (2002) describes the term '*Fair Use*' as the provision of law that provides unauthorized and unpaid use of copyrighted material for private use, which also excludes the copyright holder's exclusive right of authorization. Furthermore, she explains that the advent and use of copying machines, video recorders, and copying music via the internet have increased unauthorized uses, which crosses the limits of fair use – a hence important issue for the cultural industries.

Furthermore, she presents two types of issues related to the fair use provision.

- A too strong copyright regime providing little fair use would raise transaction costs, copyright-based earnings, transferring rents to rightsholders raising the costs of creating the work.
- A too weak copyright regime providing excess fair use would reduce transaction costs but would not provide sufficient incentives.

This leads to the dominant discussions of the impacts of digitalization on fair use and piracy.

She presents two opposing versions of discussion about the future of cultural industries: One, the cheap downloading would wipe out the authors' and publishers' ability to collect royalties, and another is that it would hugely facilitate their collection that fair use would be threatened (p. XVII).

3.7 Summary

Copyright laws have been serving humankind for almost three centuries. Nevertheless, there have been numerous conventions and reformations in the Copyright Acts; many academics, scholars, and critics criticize it.

The significant issues within the copyright are public performance rights, reproduction rights, copyright term extensions, general public approval, digital licensing issues, broadcasting rights, issues with remix, mashups, and sampling, are the loopholes of the copyright laws that led to the confusion, misinterpretations, and misuse of such terms and clauses by different users, rightsholders and consumers. These issues mark a big question to the relevance of the current copyright laws, which seems to be addressed soon.

Chapter 4

DIGITAL TECHNOLOGY AND PIRACY ISSUES

4.1 Introduction

Copyright laws and piracy have proved to be the two sides of a coin. Copyright laws began to draw the general public's attention in a real sense only after the arrival of the digital age - the beginning of piracy. From the past to the present, several authors have presented their research, views, and theories related to piracy, with different perspectives that are significant for the policymakers, related rightsholders, music industries, and the public.

This section provides different theories, data, and facts related to piracies. And then further leads to this research paper's Analysis chapter.

4.2 Evolution of the Digital Age

Unlike the history of copyright legislation, digital technologies and progress do not have that long history. The invention of C.D.s (Compact Disc) in 1982 by Sony and Phillips is considered the beginning of the digital age. In 1989, MP3 (Moving Pictures Expert Group – Audio Layer III) technology was introduced, which replaced the analog technology of sound recording and producing in L.P.s and Vinyl. This technology could easily compress lossy audio data encoding digitally in a small size. Combining these two advents made it possible to produce albums with songs as more as we want and almost with the same quality as analog technologies.

This was a disruptive innovation in the music industries, which was a demand of the music business. The availability of cheaper CD players and small devices like Walkman in the markets took the CD sales higher. However, soon with the internet's arrival publicly from the 1990s - 2000s, the eco-system of the music business started changing dramatically. According to Tschmuck (2017), the CD did not disrupt the recorded industry's value-added network despite the very different production technology involved. The rapid growth of high-speed Internet and MP3

compression technology was the central role player that led to P2P file sharing over the internet, which pushed music industries into the digital age (p.175).

4.3 Rise of Online Music Streaming Services

Today, almost all the business models worldwide have adopted online services, including music industries, adopting online music streaming. Mostly, these services are run by external players who are not from the music industries.

Nordgård (2018) states that the three major influencers, such as Apple, Google, and Spotify, are the leading companies in the distribution, consumption, and monetizing of music with different approaches and music business models. And further, Nordgård (2013, 2016a) as cited by Nordgård) emphasizes that on-demand, subscription-based streaming such as Spotify, Deezer, Tidal, and Apple Music are dominating the digital format businesses globally (p. 64).

4.3.1 Increase in Online Music Subscribers

Today, we have landed at the age of streaming, listening to songs, podcasts, or watching music videos and movies. We can consume music by streaming on-demand or download per song provided by several online services like Spotify, Apple Music, Google Play Music, Tidal, Amazon Music, Soundcloud, and many more. All of these platforms carry unique features by which listeners benefit from digital streaming.

A report published on *Statista.com* by author Amy Watson reports that the music streaming subscribers worldwide amounted to the growth by the first quarter of 2020, having 400 million, up from just under 305 million at the end of the first half of 2019. The report also shows that the paid music streaming subscriptions also have been growing year by year.

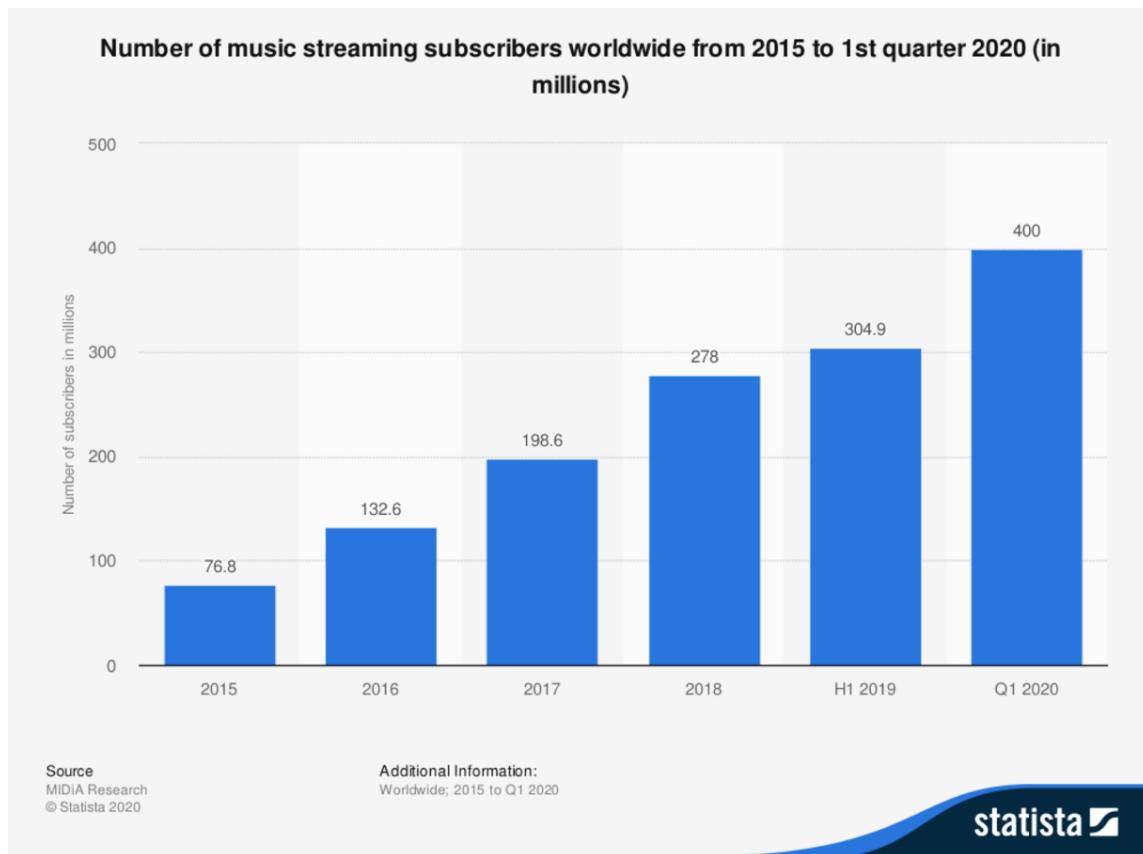


Fig. (I) (Source: Statista, 2020)

The above figure (I) illustrates worldwide music streaming subscribers' data taken from 2015 to the first quarter of 2020.

Today's one of the most popular streaming services is Spotify. It has both *the Freemium and Premium* model. Freemium is an *ad-supported version*, and Premium is a *monthly paid version without ads*. Wikström (2013) states that Spotify was established in 2006 and launched in several European countries in 2008 by two Swedes, Daniel Ek, and Martin Lorentzon, who had difficulty negotiating with major independent music companies. Spotify made a fundamental impact on high school students' music listening behavior, and their parents, who were music executives, believed it to compete with piracy and compensate the rightsholders (p. 118, 119).

Its popularity is so immense that it has 320 million users and 144 million subscribers as of 30th September 2020, reports newsroom.spotify.com. Iqbal (2020) of *business of apps* states that this is up from 271 monthly active Spotify users and 124 million Spotify Premium subscribers in Q4 of

2019 where 69 million increase in users makes 32% and 30 million increase in subscribers make 30% growth rate which is relatively consistent in recent years.

Bach (2003) explains that new entrants and competition in the currently unstable music market where record companies had failed to establish viable online music distribution services. The entry of Apple's iTunes Music Store in April 2003 proves to be a great success as a legal online music service that could serve the consumers streaming and downloading features of the per-song in just 99 cents. Soon, iTunes covered 70% of all legally downloaded music within two years, and it had yet to go further (p.16).

Wikström (2013) states that it was based on uniform pricing and system lock-in from its first year of running the service, which proved to be hugely successful for its business of selling music and Apple products worldwide. iTunes was using DRM technology called *Fairplay*, which restricted consumers from playing the music acquired on iTunes on other non-Apple devices. However, customers experienced complexities on the system lock-in feature, making them purchase the same songs again if they switched to non-Apple devices (Hax et al., 2001; Shapiro et al., 1999, as cited in Wikström, p. 103).

Later in 2007, another influential player, one of the world's largest online retailers, Amazon, introduced the single tracks using a tiered pricing structure and without DRM system lock-in. Eventually, Apple was also forced to abandon its initial strategy, and since 2009 it is offering its entire catalog without DRM, with different pricing (p.104).

Today, Apple company has been the most successful brand and music retailer in the global market. It has been upgrading and adding new services for the music, movie, podcasts, online reading like news and books, games, and so on, providing apps such as Apple Music in 2015, Apple T.V., and Apple Podcast.

It featured the services both streaming online and purchasing songs and downloading, which continues. Although Apple is considered an external player in the music business whose primary goal is to sell Apple products, it carries today's music industries' core objectives. Wikström & DeFillippi (2016) state that from 2003, Apple's iTunes music store has been the first company to offer music streaming services with the fairly pricing to its customers, however from 2013, it has been declining due to its focus only on selling their products, not the music and new and far more radical music distribution service Spotify is on the rise (p. 2).

4.4 Piracy in Music Industries

Disruptions in the music industries took what today's music business models have. The massive increase in the number of subscribers of Spotify, iTunes, and other streaming services are an example of this. However, even after adopting this, music industries seem to suffer a considerable loss in the economy due to the ever-evolving forms of piracy.

Campidoglio et al. (2009) further describe the two basic ways of copyright violations as:

- Unauthorized Acquisition: This form of piracy occurs when a consumer obtains copyrighted content illegitimately, for example, by an unauthorized download of content from a peer-to-peer file sharing service, such as Gnutella, or by obtaining illegitimate C.D.s or DVDs from a street vendor or friend (Spencer, 2006, As cited in Campidoglio et al.).
- Unauthorized Use: This form of piracy occurs when a consumer obtains a piece of copyrighted content legitimately and then attempts to use it in an unauthorized way.

Hayes (2015) states that copyright law provides one of the most important forms of intellectual property protection on the internet for at least two reasons.

- First, much of the material that moves in commerce on the internet is authorship works, such as musical works, multimedia works, audiovisual works, movies, software, database information, and the like.
- Second, because the very nature of an electronic online medium requires copying the data while transmitted through the various nodes of the network, copyright rights are obviously at issue.

Furthermore, he states the complexity of the current copyright issues related to digital technologies. Since the traditional copyright law was designed to protect the tangible copies, it is far more complex to identify in a digital world whether a copy is made, the location where it resides at any given time within the network. It is complicated also because the copies are made using the 'packet switching' process in which data is broken into smaller units called 'packets,' and the packets are sent as discrete units (p. 13).

Bach (2004) explains that even after Napster's shutdown, having several copyright infringement cases, the P2P files sharing services like Morpheus, Gnutella, and KaZaA were still emerging they were technically more advanced than their predecessor. He states that the CD sales were dropped

for the third straight year. It was 20% lower than in the 2000s. There was no doubt whether online music sharing affected the music sales stating that worldwide music sales in the first half of 2003 alone were down by almost 11% compared with the earlier year. And not only this, in the countries where internet broadband penetration was low, users bought pirated C.D.s from the street vendors rather than downloading them. It was worse everywhere in Eastern Europe, the Middle East, Latin America. The most significant source and the highest percentage of illegal copies could be found in East Asia, where China alone was leading with a 90% piracy rate. He concludes by stating that each one of three C.D.s was pirated at that time (p. 2, 5).

To present major piracy eras of music industries, it is divided into two categories, which are described further.

4.4.1 Pre-Digital Piracy: Home Taping

Along with the advent of electronic technologies, music industries also began to adopt a new business model. Production and availability of compact cassettes and cassette players were rising to their peak. However, at the same time, the problem with such technology was just yet to arrive.

Frith (1988) mentions, in the 1980s, home-taping as piracy was emerging along with the broadcasting of communication-based networks like satellite and cable T.V., which became threats to musical inventions. The decline of record sales with the rising sales of cassette tape-recorders and blank tapes accounted for 40% in the USA and 20% in European Economic Community (EEC) between 1978s-1983s (p. 59).

The figure below is a slogan '*Home Taping is killing music, and It's illegal*' of British Phonographic Industries (BPI), one of the most popular antipiracy campaigns in the 1980s, which was the reason for significant declination record sales of that time.



Fig. (II) Logo of Antipiracy campaign in the 1980s by BPI (*Source: Wikipedia*)

Menell (2014) states that though the home-taping piracy did not scale due to its copy quality. However, the main usage was for music portability, such as car stereos and Sony Walkman, which was not available in the current market until the 1980s (p. 14). This practice resulted from the scarcity of the facilities that the public wanted at that time, which became a remarkable version of piracy in the music industries' history.

4.4.2 Digital Piracy and MP3.com

Tschmuck (2006) remarks the establishment of the internet company *MP3.com* by Michael Robertson in November 1997, as the pioneer of free download services, started its business in 1998, providing customers service of digital automatic music service. This service provided facilities like burning songs to the C.D.s based on free downloads and sending them to the customers. Also, musicians were able to determine the price of a CD, which ranged from \$6.99 to \$30.00, by which they receive 50% of the sales. Since it was free for musicians, there were not any exclusive contracts between the company and the musicians; however, it had also premium artist program

feature with a charge of \$19.99 monthly, in which artist could get revenues from each download of their songs and also the revenue generated from advertisement (p.171).

However, music majors (Universal Music Group, EMI, BMG, Sony, and Warner Music) filed a case against MP3.com for copyright infringement, especially for its feature of MyMp3 service, which allowed customers to upload privately owned C.D.s through MP3.com databank and making them available. This case was settled out-of-court with the four majors except for Universal Music Group with the agreement of \$20 million compensation. Later, in 2000, the company was sentenced to compensate UMG with \$53.4 million with an agreement to give a 20% share of it. Finally, MP3.com was bankrupted, and in 2001, UMG took over the company (p.172).

This company no longer provides services for music sharing or streaming. The website is now run by CNET Networks that publishes news about digital music, artists, songs, services, and technologies.

4.4.3 Napster and P2P File Sharing

Wikström (2013) states that p2p networking was mainly to communicate and share resources in a computer network that is different from the traditional computer network typology known as client-server networking where it is far easier to locate the client and charge its owner with copyright infringement. Since there are no central servers in a true p2p network, communication takes place directly between the computers connected to the network, hence almost impossible to identify who is responsible for the distribution of the contents shared on the network, so p2p networking as such is neither suspicious nor illegal. However, p2p networking has been launched since 1979 as UseNet and 1984 as FidoNet till the date in several entirely legal applications such as media distribution and internet telephony (as cited in Oram, 2001), it is forever tagged as illegal distribution of recorded music (as cited in Alderman, 2001, p. 151).

Even though there were already legal music streaming services, Napster, which was launched in 1999, was the first *Peer to Peer* (P2P) file sharing platform, especially mp3 songs, became hugely popular and started creating big trouble for music industries. At its peak popularity, 80 million users actively participated in sharing and downloading audio files (MP3) worldwide. After a lengthy court defense, the Recording Association of America (RIAA) won the case against Napster.

Thus, it was shut down in July 2001. Napster was sued for several copyright infringement cases filed by record companies and artists also.

It was unpredicted for the music industries, a sudden attack on the traditional music business model, depending just on the hard copy sales. It impacted the recorded industries and the sales of manufacturing companies of CD, DVD, and devices and players, which was obvious. However, even after Napster's official shutdown, other P2P file-sharing software like Limewire, Grokster, Morpheus, KaZaA, Gnutella, Pirate Bay, and BitTorrent existed for decades.

4.4.4 Stream Ripping: Extended Form of Piracy?

As fast as streaming services are gaining popularity worldwide, there is also new emerging piracy, which is known as *stream-ripping*. This is not a new technology that pirates use to download music, but it is widely used nowadays to download unauthorized copies of songs, thus violating the copyright rules.

The PRS for Music, based in the U.K., explains that stream-ripping is the process by which licensed content is downloaded from the streaming services such as Spotify and YouTube, and then stored for later use on the end users' computer or mobile devices. There are several websites, software, and mobile apps to execute such ripping.

Johnson (2020) states that except for peer-to-peer file sharing, recent shifts in the way people consume content, over 80 percent of digital video piracy takes the form of illegal streaming, which is extremely popular nowadays. She further explains that in 2017, 28% of the U.S. adults and 61% of adults aged 18 to 29 said online streaming services were the primary way they watched television. The pirates have also made a similar switch, enabled by websites, apps, and devices that deliver pirated content live or on-demand.

The PRS for Music researched and published a report resulting from three years of comparison over stream-ripping trends in the U.K. between October 2016 to October 2019, later updated in September 2020. The report reveals a substantial proportion of the overall music infringement activity in the U.K., where stream-ripping services accounted for 80.2% of the top 50 music infringing sites.

The figure below illustrates top stream-ripping services in the U.K., for the specific month of October 2019, where *y2mate.com* dominates all other sites in the usage of downloading audio contents from YouTube. The report also shows that *y2mate.com* has overall monthly usage of approximately 648,184 over three years period since October 2016.

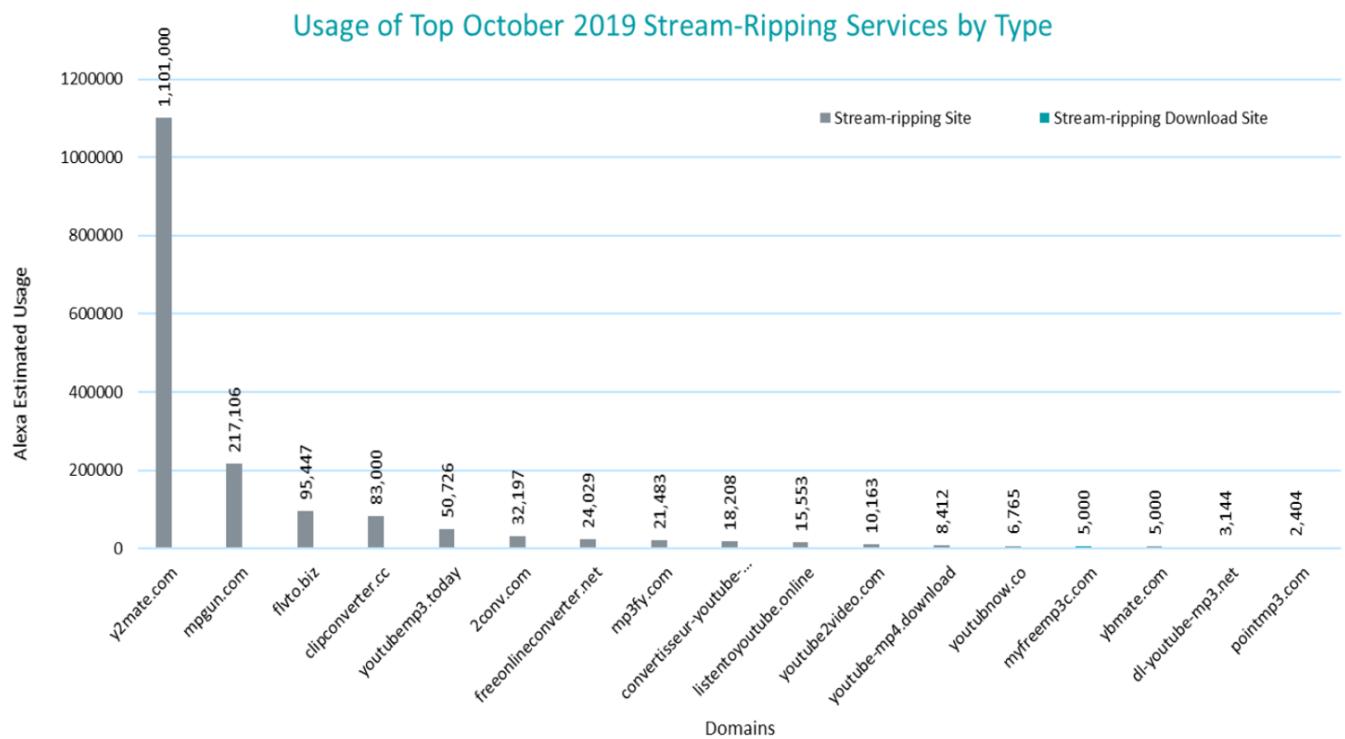


Fig. (III) Most Popular Stream Ripping Sites in the U.K.

(Source: InCopro: The PRS for Music, U.K.)

(Note: Screenshot by author)

The International Federation of Phonographic Industries (IFPI) states in their report, *Music Listening 2019*, which was conducted across 21 countries in April-May: within the age group (16-64) that 27% of those surveyed used unlicensed methods for listening and obtaining music and 23% used illegal stream-ripping services which is a leading form of piracy today. So, along with the popularity of streaming services, illegal ways of streaming and stream-ripping have also been the

most significant threat for music industries today, which was supposed to decrease with the rise of popularity of online streaming services.

Similarly, a U.K.-based music research company MUSO claims that there are legal music streaming services and increasing illegal music streaming trends as a new form of piracy, stream-ripping. MUSO's report for August 2019 shows that the unlicensed streaming rate is 33.6%, and the stream-ripping rate is 31.3%.

Furthermore, it reports that in just a single month of July 2019, Ed Sheeran's album *Divide*, released in 2017, had over 612K downloads whereas Kanye West's album *The Life of Pablo*, released in 2016, had 280K and Lady Gaga's debut album *The Fame Monster* released in 2019 had 202K downloads. Also, three albums that were picked at random were illegally downloaded over a million times a month, which is if based on iTunes or Amazon's download retail price makes approximately \$10M of revenue lost to the music business. The report also shows that old music released many years ago are also being illegally downloaded.

Johnson (2020) states that the music industry has been hit by online piracy facing a revenue drop from a high of \$14.6 billion in 1999 to \$9.8 billion in 2018, even after fully adopting new business models like iTunes and Spotify. A report by MusicWatch Annual Music Study 2018 shows that 17 million of those stream rippers live in the U.S., up from 15 million in 2017.

All these reports and data clearly show that the stream-ripping is evolving stronger with the facilities of such sites and services. From the beginning of 2020, COVID-19 hit the whole world, which made millions of people jobless, quarantined at home, and most notably the lockdowns around the globe, restrictions in travels and transports led to a different world of fear, sadness, and sedentary lifestyle. The report published by *RollingStone.com* on 4th May 2020 shows that there are some significant trends emerged in the situation of the current Pandemic. The online news portal reported by Tin Ingham shows that there seemed some trends of music piracy as '*Old School Piracy*' The visits to Torrent sites grew by 15.62% in the U.S. alone, between the last week of February and last week of March, having 1.308 million visits and approximately 1.513 million visits, respectively. Besides, there were similar trends recorded globally, having growth of Torrent visits in India 23.43%, in the UK 18.53%, in Canada 17.54% and across the E.U. it was recorded at 7.61%. Furthermore, the most significant number was recorded in Spain, showing 26.40% growth.

4.4.5 Stream Manipulation – A New Form of Piracy?

Stream manipulation is an act of making false streaming numbers of particular songs or albums on streaming services, leading to false reports for revenue payment. Houghton (2019) on *hypebot.com*, an online site, writes that this is an artificially boosting stream counts that improve chart positioning, increase market share and royalty payments, and other ono-legitimate purposes, which is a real problem for the entire music industries.

Further, he describes four distinct forms of streaming manipulation with examples.

1. Album Stuffing:

For example: in 2017, Chris Brown released a 45 album song, 'Heartbreak On A Full Moon,' which was certified as 'Gold' in less than ten days even though none of the songs from it made it to the top 40.

2. Playlist Stuffing

Example: A playlist Thunderstorms: Sleep and Mindfulness, made up of 330 tracks all over a minute long, produced by Filtr Sony's playlist brand. The songs were produced by a production house presumably paid by Sony and at 1 minute each calibrated to earn maximum revenue.

3. Fake Streams

Manipulated by uses of bots and other methods to rack up large streams.

Example: MyMusicViral, one of many sites that offer 100,000 Spotify plays for under \$200. Another service offers 100,000 YouTube views for \$500, and likewise, for \$100 or less, Spotify bot also could be purchased.

4. Streaming Data Inflation

Tidal, accused of streaming data inflation so far.

Example: (as cited by Markus Tobiassen), Beyoncé's and Kanye West's streams on Tidal were manipulated to several hundred million plays, generating massive royalty payouts at the expense of other artists.

IFPI (2020) reports that with the German national group the Bundesverband Musikindustrie (BVMI), Federal Music Industry Association, they have succeeded in an injunction which Berlin District Court issued against Germany based stream manipulation service provider Followerschmiede.de. Moreover, IFPI, its member companies, and national groups, including

BVMI, joined a broad industry coalition in signing a voluntary code of best practice to detect and prevent stream manipulation and its effects in the marketplace.

There are still many of the sites emerging behind the scene, offering such illicit services and also providing tutorials through YouTube. Though these actions are traceable and accountable for now, the future might bring lots of other issues related to stream manipulation, which in many ways seems like a form of digital piracy.

4.4.6 The psychology behind The Piracy

'*Techniques of Neutralization: A Theory of Delinquency*' published in 1957, by the authors David Matza and Gresham Sykes explained that people are always aware of their moral obligation to abide by the law have the same moral obligation within themselves to avoid unlawful acts. Thus, they reasoned when a person commits illegitimate acts, they must employ some sorting mechanism to silence the urge to follow these moral obligations.

The theory of Sykes and Matza explains how criminal behavior can be justified prior to the behavior itself using techniques that allow criminals to convince themselves that their behavior is acceptable and justifiable.

Brown (2016) explains the techniques of neutralization connecting to music piracy. He gives each example that resembles Sykes and Matza's theory in relation to music piracies, produced by ethnographic observation and content analysis, obtained from observation of 90 days the microblogging service Twitter following hashtags #piracy, #torrent, and #piratebay and also YouTube comments. The most common techniques among the participants (deviants or the pirates) are denial of responsibility, denial of injury, and denial of the victim.

Also, Brown puts those five techniques which are associated with neutralizing the guilt related to deviant behavior as:

- a. Denial of Responsibility: Individuals refuse to accept responsibility for their actions.

Example: Jesus. You try your hardest to watch films legally, and it still is not possible. #PirateBay, anyone?

Example: If there were a legal alternative to The Pirate Bay, I would use it. There isn't, so I don't.

- b. Denial of Injury: Individuals believe that there is no harm caused to the person affected by the deviant behavior.

Example: I was under the impression that musicians made most of their earnings via concerts, not from record sales.

- c. Denial of Victim: Individuals believe that the victim deserves the punishment. *Assumptions that artists, rappers are wealthy, have an affluent lifestyle, do not need more money, and are not harmed anymore.*
- d. Condemnation of Condemners: Individuals believe that the victims are not real victims; they are rather hypocrites claiming that they would have engaged in the same behavior if given the opportunity.
- e. Appeal to higher loyalties: Even though the act was considered inappropriate, it is justified because the immediate social group needs the behavior to occur (p. 24).

Out of these standard neutralization techniques, he further adds that another technique is 'Denial of Motives' as observed by Smallridge and Roberts (2013), which is also related closely to these techniques of Sykes and Matza, which the following comment was taken from YouTube resembles:

- *I would be proud to see my album on #TPB. You can pay to be on iTunes, but you're only on Pirate Bay if people want your music.*
- *Thoughts on Music piracy: If you are a true artist, you care more about your music being heard than how many copies you shift* (p. 27-28).

Condry (2004) also presents a similar theory as Brown, which is related to psychology in justifying the act of piracy. The discussion-based on 70 essay questions surveyed in October 2003 shows quite an antipathy of students to the record industries.

- C.D.s are too expensive:

Making a CD for record companies costs under \$1, so students feel that the C.D.s are overpriced, especially when it turns out there are just a few good songs. (Vogel, 2001, as cited in Condry, 2004).

- Marketing is deceptive:

'Preventing downloads is just trying to trick me into buying rubbish!' and, 'Downloading makes up for all the music I got tricked into buying.'

- Where is the money for the purchase price going?

I am not stealing from artists but the greedy middleman. 'Courtney Love (2000, as cited in Condry, 2004) gives a hypothetical example such as *a band gets \$1 million advance and sells two million albums can still end up with no money, while the record company walks away with \$11 million.*

- Musicians make enough money already:

Students' conceptualizing such as superstar celebrities like Jay Z, Britney Spears and Justin Timberlake should use recorded songs for promotion and then make their money through performances.

- Downloaded music is free promotion for record companies:

Some students believe that they are members of the target demographic as corporations rely on viral marketing, street promotion, coolhunting, and p2p branding. So, the students are aware that they are integral to the entertainment industries (Lindstrom et al., 2003; Quart, 2003, as cited in Condry, 2004).

4.4.7 Culture of Music Piracy: Is it Even Possible to Stop?

Music piracy is everywhere around the world, including developed countries, developing countries, to underdeveloped countries. The psychology of people involved in such illicit works is almost the same worldwide, as mentioned above. Only the difference is that a developed country's pirate

might think and do it differently as he would be facilitated with advanced technologies and services, and the third world country's pirate might do it differently as he would have limited facilities and resources in doing so. Moreover, different national laws, regulations, and perceptions about copyright infringements, piracy, and actions against these, also make a huge difference in such illegal acts.

Roche et al. (2004) explain that according to 112 students at a small state university were surveyed, six months after RIAA began filing lawsuits against people for illegal sharing, it impacted their p2p downloading. In comparison, 83.7% of students were aware that the music industry had filed lawsuits against 1977 people, and 9.8% knew someone who had been sued or received a *cease-and-desist* order. Becoming aware of lawsuits, 43% were more hesitant about downloading, and 35% of students who previously did so refrained from doing so. Of the students who knew someone who had been sued, 40% of students discontinued doing while 92% changed their downloading habits, becoming more selective, or more hesitant to swap files. Another national survey by the Pew Internet Project poll conducted on phone interviews observed that among 1371 adult internet users, 33% of users who had downloaded music in the past stopped illegally downloading, and 38% still download music files even after knowing the RIAA lawsuits (Rainie et al., as cite in Roche, 2004).

Furthermore, they conclude that internet customers want easy, convenient, one-stop-shopping, which shows that downloading music would stay. Lawsuits are somewhat effective in discouraging illegal downloading; they are not enough to eliminate p2p file sharing. Furthermore, it is time for the music industries to adopt a new business model (p. 5, 10).

Condry (2004) in his international journal of cultural science, presents an ethnographic perspective as an example that is useful and should be taken into account while we discuss copyright infringement and piracy? Giving an imaginary situation here:

- Student A: 'I got the new KRS-1 album. It's great. '
- Student B: 'Cool. Could I borrow it sometime? I'd like to hear it. '
- Student A: 'No, I think we need to protect the copyrights of artists, record companies, and publishers. Please buy the CD yourself. '
- Student B: 'Loser! '

However, in reality, it would turn to be just the opposite, as we can guess easily. The pleasure of turning a friend or family member to music they do not know is valuable that creates a social bond, so an album recommended by someone known, our desire to get the album would impatiently increase whether bought, borrowed, or stolen. Further, he adds that the file-sharers, in some ways, are doing exactly what consumers are supposed to do.

The system of p2p follows the principles of network economics, which is not only on supply-side but on demand-side economies of networks (Shapiro and Varian, 1998, as cited in Condry, 2004) and the more participants, more sharing, more distributed users, and the contents, which forms the more valuable the network (P. 347-348).

Also, he writes:

- Can technology stop piracy?
 - No one is certain, but the trends to date make it seem unlikely.

He further states some examples, how Secure Digital Music Initiative (SDMI), which was prepared to spend several years by the U.S. recording industry, with the purpose of digital music lock-up but took only two weeks to identify fundamental weaknesses. Another example is of four workers, or Microsoft (not representing the company) describe why technology alone probably cannot find a magic bullet to prevent online file-sharing referring to a term 'Darknet'- a collection of networks and technologies used to share digital contents (Biddle et al., 2000, as cited in Condry, 2004). As they assume:

- The users will copy objects as long as it is possible and exciting to do so and,
- The darknet elements such as storage, search, transmission, input, and output offer a few points of attack; the digital content will remain available to a fraction of people in a form that allows copying.
- However, it only takes a few copies with the broadband before such reproducible digital content is easily accessible worldwide. Further, he adds that DMCA's provision for distributing information on circumventing copy controls is technically illegal. However, the lawsuits against people who leaked the code publicly related to DVD decoding software Macrovision, DVD region encoding, and CSS encryption in the US were dropped. So, he suggests that DRM is not fit for the purpose (p.350).

A UK-based research company, Muso (2020), states a different perspective on piracy: it is a high-intent activity by its nature, reasoning that people visit piracy sites because they are a fan and want a specific release or title. Further, he suggests that by understanding demand, data, trends, and behaviors, piracy could be managed effectively and use it to create real measurable value rather than just taking piracy as *breakage*. It could even be used to monitor geographic content trends and city-level demand and data that is vital for marketing, touring, and wider release strategies.

Further, the report says that approximately 3.5 billion people are connected to the internet globally, and only around 10% of them are paying for subscriptions to music streaming services; there are enormous opportunities for converting more people to paid services, and piracy is a place to find them. Further, it emphasizes the data-led understanding of what, how, and why people illegally download music, giving a significant insight as important as the antipiracy and content protection technologies, which would create value, growth, and revenue.

The psychological factor is one of the most important factors that should be studied in more depth to control or minimize piracy. Human behavior and thinking patterns are almost identical worldwide in many ways, so if these factors are taken into account and done more research, this could help to effective and ideal antipiracy plans in the future.

4.5 Digital Technologies and Music Industries?

A statement was given by Steve Jobs, CEO of Apple, back in 2003 when iTunes first launched, would be more relevant to present here:

'This has been the birth of legal downloading. We are going to fight illegal downloading by competing with it. We are not going to sue it. We are not going to ignore it. We are going to compete with it. With iTunes, you are supporting artists. You are not stealing. It's good karma.'

The advancements in technology are taking their place faster than we ever imagined. Looking back from the birth of the internet to the date, there has been massive progress in the digital world, giving hope to many possibilities of the near future of the digital business world.

Some of the latest technologies which could be a boon for music industries or copyright industries are discussed further.

4.5.1 Blockchain Technology Vs. Copyright Issues

After rumbling with many of these issues and complexities, music industries and related bodies have been looking forward to practical solutions to fix them. So, here are some of the promising technologies that could be of great use to control, if not eliminate, music piracy.

Savelyev (2018) explains blockchain as one of the most promising technologies of the new economy, also called distributed ledger technology. He puts forward a definition by Klaus Schwab, Founder and Executive Chairman of World Economic Forum as: *in essence, blockchain is a shared, programmable, cryptographically secure and therefore, trusted ledger which no single user controls and which can be inspected by anyone* (Schwab, 2016, as cited in Savelyev, 2018). In this technology, value exchange transactions are sequentially grouped into blocks chained to the previous one and immutably recorded across the p2p network, using cryptographic trust and assurance mechanisms. Blockchain Technology provides a trust agreed upon by all participants without requiring intermediaries based on the principal decentralization.

Furthermore, he puts its main features as:

- Transparency: Since all the blockchain data is public, it cannot be tempered and audited easily.
- Redundancy: Every user of the blockchain network holds a copy of the data. Thus it cannot cause a system malfunction or malicious actions of third parties.
- Immutability: Changing records in the blockchain are prohibitively difficult since it requires consensus, approval from the majority of blockchain users; hence the integrity of records is ensured by intrinsic properties of the underlying code rather than from the identities of system operators.
- Disintermediation: The absence of middlemen such as banks or collective societies from transactions decreases transaction costs and risks associated with such intermediaries' presence. It may lead to the rise of new intermediaries who would control the blockchain network system (p. 551).

Lyons et al. (2019) state that blockchain may play a role within the music industry to track and trace an artist's claim to royalty payments on the blockchain, which would allow greater transparency in royalty payments with faster resolution of claims for end-users, reduced fraud for CMOs and reduction in the cost of delivery. To deploy the permissioned blockchain most applicable, a public permissioned ledger could be used for which it needs to have a finite number of trusted parties who must be included in the blockchain, e.g., for artists payments to be verified and carried out. If PROs are integrated into the blockchain, they will have full control over the asset and are responsible for managing and maintaining the state of that asset digitally, as well as the historical record.

Further, they explain that a smart contract is a computer protocol intended to digitally facilitate, verify, or enforce the negotiation or performance, which allows the performance of credible transactions without third parties. The smart contract aims to provide superior security compared to the traditional contract law, which reduces the transaction cost associated with contracting (p. 119-120).

Savelyev (2019) gives the best example of successful implementation of blockchain-based distributed ledger technology is Bitcoin, whereas other cryptocurrencies such as Ether and Litecoin are emerging in the same way. So, the current business sectors already have an eye on it, and WEF estimates that more than 25 countries adopt blockchain technology investing more than \$1.3 billion, filing 2500 patents (World Economic Forum, 2016, as cited in Savelyev, 2018, p. 551). Also, some CMOs such as SACEM and PRS have been looking forward to the use of blockchain, whether it will hopefully improve their systems rather than eliminating their roles as intermediaries. Some examples of blockchain integrated companies and working in the music related field are One Click Licensing (OCL), Mycelia, JAAK, SingularDTV, Coinsensys, dotBlockchain, Custos, Blokur, and Musicoin (Lyons et al., 2019, p. 113-119).

The challenges to consider:

Lyons et al. (2019) further explain the possible challenges to consider:

- Since the blockchain transactions are immutable and irreversible: thus, they cannot be changed; there will be issues in the cases of misidentified artists, contractual changes.

- Confusion can occur between the artists at the time of creation, such as roles of their contribution and classifications.
- It is unclear whether blockchain can work with songwriting complexities, especially for hit records and catalogs, such as what happens if the song within the blockchain infringes another song and samples from another song a song is simply a cover. Blockchains may not merely work in songwriting and music publishing (p. 118 & 119).

Further, they suggest that to make blockchain network effective, it is necessary to bring together the representatives of the music value chain, from individual to multinationals, covering all stages of music-making such as composition, performance, production, metadata capture, registration, archiving, contracts, distribution, merchandising, accounting and collection of royalties, and legal issues. That means the entire global music business model needs to be remodeled (p.119).

Rose (2020), Associate and Co-Lead of Blockchain Group, also suggests that blockchain technology can also create a register of unregistered I.P. rights such as copyrights by easily providing evidence time of creation and rights management. It could only be useful when an authoritative and trusted third party such as the I.P. office or CMO is involved. The registry in the blockchain does not just record but also facilitates the transaction of I.P. rights so, to implement the full potential of a new blockchain-based copyright management system needs to cover a sufficient amount of copyrighted works.

In conclusion, blockchain is a technology that can contribute to enabling the data management system of current copyright issues. Blockchain technology is not a solution for piracy issues since it is just a decentralized distributed ledger system that keeps data more disintermediated, transparent, and immutable. However, the integration of blockchain in the copyright industries could bring new ways of possibilities for solving content creators, rightsholders, and even metadata security issues.

4.5.2 Artificial Intelligence Vs. Digital Piracy Issues

'A.I. is the new electricity. I can hardly imagine an industry which is not going to be transformed by A.I.'

- Andrew NG, Landing A.I., and deeplearning.ai

Artificial Intelligence, shortly as A.I., is the latest progress in computer science that we ever have today. Though A.I. does not have a fixed definition yet, many scientists and academics put their different opinions. Artificial Intelligence was first coined at a Dartmouth conference in 1956, and A.I. was founded as an academic discipline.

Haugeland (1985, as cited in Russell and Norvig, 1995) states that '*A.I. is the new effort to make computers think...machines with minds, in the full and literal sense.*'

Another definition is '*the automation of activities that we associate with human thinking, activities such as decision-making, problem-solving, learning...*' (Bellman, 1978, as cited in Russell and Norvig, 1995).

Furthermore, the last but not the least one: *A.I. is a well-established discipline of computer science focused on making computers perform tasks that would normally require human Intelligence* (Russell and Norvig, 1995, as cited in Sturm et al., 2019, p. 1).

WIPO (2019) Technology and Trends reports that since A.I. emerged in the 1950s, innovators and researchers have filed close to 340,000 applications of AI-related inventions and published over 1.6 million scientific publications. AI-related patenting is proliferating, where companies from Japan, the U.S., and China are dominating in patenting activity, and IBM and Microsoft are leaders in A.I. patenting across different AI-related areas (p.13 and 15).

A.I. is based mainly on two categories, such as:

- **Narrow Artificial Intelligence:** This type of A.I. is often focused on performing a single task extremely well but with far more constraints and limitations than the most basic human Intelligence, also called 'Weak A.I.'

Some examples are Google search, Image recognition software, Siri, Alexa and other personal assistants, Self-driving cars, IBM's Watson.

Further, Narrow A.I. is powered through *Machine Learning* and *Deep Learning* processes. Where, Machine learning is known as learning through computer data and statistical techniques progressively to get better at a task, without being programmed or coded for that task. Machine learning consists of supervised learnings that use labeled data sets and unsupervised learning, which uses unlabeled data sets.

On the other hand, Deep learning is a type of Machine learning that runs through a biologically inspired neural network architecture, where neural networks contain several hidden layers through which the data is processed, providing deep machine learning through connections and evaluating results.

- **Artificial General Intelligence:** AGI is known as the machine with general Intelligence and much like a human being, which can apply its Intelligence to solve any problem (builtin.com, 2019).

Sturm et al. (2019) state that A.I. has impacted today's music industry from its creation to its distribution. The latest progress among these are A.I. integrated music streaming services such as Spotify and Shazam, which retrieve users' information, give recommendations, and Amazon, which shows product suggestions for online retailers. Another advancement is that A.I. is being widely used in creating, composing music. Some examples are the album *I AM AI* in 2017 and *Hello World* in 2018 are known as the first music album composed by A.I. and artists (p. 2).

Reynolds et al. (2020) explain that Sony's Computer Science Laboratories (CSL) built an A.I. called *Flow Machines* in 2016 that collaborated with songwriter Benoît Carré to write a song titled *Daddy's Car* in the style of Beatles. Furthermore, SKYGGGE's single hit *Hello Shadow*, one of A.I. composed music, appeared on Spotify's New Music Friday playlist in December 2017 and on NMF playlists U.K., Norway, and Scandinavia (p. 121).

Besides, they add that the listening habits of 120 million active Shazam users can be viewed in real-time, by geographic location. From such data, the music industry can learn how many people, when they heard a particular song, wanted to know the singer and artist's name, which would help decide who and how songs should be marketed. The streaming services have already incorporated

the A.I.-based technologies such as Spotify acquired the music analytics firm The Echo Nest; Apple Music acquired Symmetric, known for its Musicmetric (p. 123).

Artificial Intelligence, in many ways, can function in a way better in analysis, prediction, and even with blocking if necessary, the unauthorized users for illicit performance, with the help of big data such as geographical location, user's behavior, patterns of consumption, and activities. This is significant for music industries or streaming services, particularly for detecting, warning, and blocking the users before the act of copyright infringements and piracy. There are even more possibilities of A.I. that is unanticipated yet, which the future machine learning could bring.

Challenges for the implementation:

The barrier for A.I. technology to foster is all about the legislative complications of A.I. generated contents saying that the U.S. law does not allow A.I. to own copyright yet, and the legal complexity lies in figuring out whether the human artists who produce songs using A.I. tools are the authors of the end works created or not (Reynolds et al., 2020). Sturm et al. (2019) add that continental copyright legislation depends on human-centered concepts regarding originality and economic and moral rights. Moreover, according to the Court of Justice of the European Union (CJEU), work is considered original when expressing the author's intellectual creation and free creative choices (p. 4).

There are many things to be considered with the implementation of Artificial Intelligence. While some fear human replacements by machines in the future, some fear that human existence would be challenged or in danger. The upcoming legislation should address all these issues and the possible outcomes of this technology properly. Furthermore, those possible issues should be addressed right in time to get the benefits of such technologies in our future.

4.6 Summary

The rise of electronic technologies gave birth to home-taping as a new form of piracy but on a small scale that did not affect the record industries. Later, digital technologies and the invention of MP3 took the music industries' production and economy on another level and started impacting a measurable scale of piracies worldwide. Then the arrival of the internet for the general public

started making massive trouble to the music business, after the introduction of Napster – p2p file sharing. Even though Napster was shut down for its illegal file-sharing service, several other file-sharing software was on the rise. Since then, piracy vs. lawsuits game became quite common and complicated.

The digital advancements have led the music industry to the streaming age already. Along with iTunes' birth, there are several promising music streaming services on the rise, and one of them is Spotify. Nevertheless, recent reports show that stream-ripping is taking place as the major piracy form that severely impacts the current music industries' economy. At the same time, stream manipulation is another problem for streaming services.

Researches show that psychological factors are also major ones that contribute to piracy, especially among college students. The theory of neutralization and antipathy towards the record industries is a major psychological factor resulting in cultivating the piracy culture. Moreover, they are the ones who are the real fans and consumers of music.

While many researches and discussions have been done on stopping piracy, no one is certain yet. However, recent developments in digital technologies such as blockchain and Artificial Intelligence show a vast potential that could be implemented to maintain transparency, secure metadata protection, and fight piracy in the near future.

Chapter 5

Analysis

5.1 Revisit to the Beginning

From the enactment of copyright laws in the U.K. as the Statute of Anne in 1710, to the recent copyright Acts such as E.U. Copyright Directive's Article 17 and Music Modernization Act in the U.S. in 2018, the copyright laws have been reformed several times. Furthermore, during these periods, academics, critics, copyright experts, and policymakers have found sufficient loopholes and criticized these provisions, which in many ways are believed responsible for today's unbalanced eco-system of the music industries, legislations, and their implementation.

On the other hand, advancements in electronic technologies from the 1960s to advanced digital technologies that took music consumption culture from physical to streaming, and later modern piracy such as stream-ripping have created many tensions in the current music industries.

Here, one could argue whether it results from insufficient copyright provisions addressing those areas or technological advancements, making these provisions inferior and incompetent.

The primary objectives of this research are as follows.

- To find the relevance of traditional copyright values in the digital age.
- To find possibilities on how music industries should cope with the piracy culture.

So, this thesis explores the copyright laws and digital piracy in music industries while finding the relation between these two, while supporting the research hypothesis, which is stated as:

'The piracy culture in music industries still does exist due to the lack of adaptations to new emerging technologies.'

Furthermore, the research questions as below:

- What is the relevance of traditional copyright laws in the digital age?
- How should music industries cope with the culture of digital piracy?

Further, let us evaluate and find the answers from central themes of the literature reviewed in the previous chapters 3 and 4, for both of the R.Q.s, respectively.

5.2 The Relevance of Traditional Copyright Laws in the Digital Age

Some key themes from previous Chapter 3 are presented here to discuss the First Research Question of the thesis.

- Background of copyright from the Statute of Anne in 1710 to recent progress as E.U.'s Article 17 and Article 11, and Music Modernization Act in 2018, were overviewed for copyright developments.
- Digital Millennium Copyright Act (DMCA) was passed and enacted in 1996. However, it was soon criticized by many academics and critics due to its insufficient clauses, which was not enough to address issues related to digital technologies and the internet.
- Nordgård (2018) explains that three major issues on copyrights are:
Issues on general public approval rate,
Issues on the economics of copyright, and
Issues on Digital Licensing

He cites several academics, such as Menell (2013), Drew (2014), Towse (2003), and Lavine (2011), about these issues in their academic works.

- Frith (1988) presents the copyright issues related to public performance rights illustrating the Carwardine case and problem in Copyright Act 1911, which was interpreted differently by the different bodies.
- Roche et al. (2011) state that the Copyright Law 1909 was passed long before the radio era began, so there were issues in broadcasting rights when radio was popular. They also present the famous case of ASCAP Vs. Jewel LaSalle Realty Co. in 1931, where the court decided that the copyright infringement was held in the form of public performance.
- Jenner and Brown (2006) explain that the WIPO Phonogram Treaties provision of *making available* was insufficient and confusing. Furthermore, he illustrates the case of The Chip Trick Allman Brothers Vs. Sony BMG, where the latter was challenged to justify why they

were treating the digital download as the physical sales if so, done by other record companies, would lead to more severe issues.

- Frith (1988) argues that there are issues with the sampling from that time when it was introduced to the music industries. He presents the two major issues on sampling as:
First: credits to original authors, which is a copyright problem and,
Second: redundancy of studio musicians.

He further claims that the copyright law is restricting the expansion of knowledge.

- Rostama (2015) presents her ideas as the remixing has the significance on which the cultures around the world are based. Giving some examples of the U.S. cultures, traditional Persian song called *Radif* and Cento, the famous literary form in medieval Europe is some best examples of remixing the cultures.
- Baldwin (2020) states that split between Sixth Circuit and Ninth Circuit on *de minimis* of copying and sampling, the US copyright law has created confusion and thus is misinterpreted for unauthorized uses.
- Li (2020) argues that due to the lack of addressing about remixing in copyright laws, it has failed to protect the importance of this age of remix.
- Tschmuck (2017) suggests that the copyright term extension, which is also called monopoly power, is unnecessarily more extended than it needs, creating a decrease in economic and social welfare. So, he presents Pollock's (2009) theory of Probability Density Function and proposes it to be the author's life plus 15 years, making economic sense.
- Also, Jenner and Brown (2016) express that the big four companies' monopoly has created substantial economic problems with the other competing independent, emerging companies and especially performers, who do not get any economic benefits afterward to support themselves. Furthermore, they suggest that the ideal extension should be 25 years from the origination and 50 years after that it should be returned to performers and their estates.
- Towse (2002) explains that due to the overuse of copying machines' video records, photocopies, and music downloading, *fair use* is threatened. This would lead to many severe problems which harm the artists as well as cultural industries together.

The arguments of different scholars above are significant reviews that are significant in considering the relevance of traditional copyright laws. Which explained that the copyright legislations were working correctly in the publishing age when books, music sheets were only the medium of reproduction, but when it entered the internet age, then the issues started grabbing the attention of everybody, which led many academics and even policymakers to rethink over again about its relevance.

Though the amendments are made several times to date, there is still a lack of proper and sufficient copyright laws that would address the digital sphere's issues. This is also the reason why there are ongoing debates, criticisms, confusions more than ever. This shows that the current copyright laws are less relevant in the digital age, and should be reformed, amended adequately to address all these issues without any confusion and loopholes.

5.3 How should Music Industries cope with Digital Piracy?

Some key themes from previous Chapter 4 are presented here to discuss this thesis's Second Research Question.

- Physical piracy was introduced in the form of home-taping in the 1980s when consumers felt the necessity of portability of musical contents for their cars and others. Since it was in low scale production, it did not impact the music industries at that time.
- The digital age evolution began in the 1980s when C.D.s were introduced to the music market and later MP3 in 1989 revolutionized the traditional music business model. Though album production on C.D.s was a boon for music industries, copying MP3 format music files on CD using computers made way much easier to the users, making the piracy grow on a large scale worldwide.
- Soon, DRM technology was introduced to control piracy, which restricted the use of the purchased C.D.s and DVDs regionally providing anti-circumvention technologies and security. However, it was not popular due to its too many restrictions, rather than ease of use. Public and many authors, critics soon started defining it as Digital Restrictions Management, satirically.
- Michael Robertson launched MP3.com in 1997, which is also known as the pioneer of the digital download services. This provided music consumers a service to purchase albums and

burn the songs uploaded in the MyMP3 database. Nevertheless, due to copyright infringement cases by music companies like UMG, EMI, BMG, Sony, and Warner Music, it was shut down soon, compensating vast sums of money.

- In 1999, a college student Shawn Fanning launched p2p file-sharing software called Napster, which revolutionized music consumption through the digital network. This threatened the traditional music business models and also created tension between record companies and consumers. It was shut down in 2001, having several lawsuits of copyright infringement by music companies and even artists.
- From the era of Napster, there were several p2p based networks on the rise, such as Limewire, Morpheus, KaZaA, Gnutella, Pirate Bay, and BitTorrent, which still does exist, today.
- After the long battles and ups and downs between music industries and digital piracy, piracy has changed its form as *Stream-Ripping*, one of the major issues today. This form of piracy is provided by using available ripping services on the internet such as *y2mate.com*, *mpgun.com*, and *youtube2mp3.com* makes a substantial economic loss for record companies even today.
- Johnson (2020) states that the music industry faces a considerable loss by online piracy, revenue drop from a high of \$14.6 billion in 1999 to \$9.8 billion in 2018 in the age of Spotify and iTunes.
- IFPI reports in *Music Listening 2019*, which was conducted across 21 countries in April-May: within the age group (16-64), 27% use unlicensed methods for listening and obtaining music, and 23% use illegal stream-ripping services.
- MUSO states that an unlicensed streaming rate for August 2019 is 33.6%, and the stream-ripping rate is 31.3%, which is comparatively high and does not show any sign of decreasing.
- Another recent report published by Tin Ingham is an online news portal, shows that in this current pandemic sedentary lifestyle, people are visiting back to torrent sites to download illegal files, which shows 23.43% growth in India, 18.53% in the U.K., 17.54% in Canada and across the E.U. it was recorded 7.61%. Furthermore, the most significant number was recorded in Spain, showing 26.40% growth.
- Stream manipulation is another challenge for popular streaming services today. This impacts the actual streaming numbers and revenue generated by it, manipulating fake stream

numbers. Album stuffing, playlist stuffing, and fake streams are significant issues the streaming service like Spotify has today, which affects the actual rightsholders.

- Authors Brown (2016) and Condry (2004) researched piracy's *psychological perspectives* in the digital age. Brown relates his survey on a popular theory called *the theory of neutralization* produced by Sykes and Matza in 1957 to justify illicit behavior done by the deviants, only as users. Several students were surveyed and found that the theory of neutralization was found in many, and also, antipathy towards music industries was the primary reason for today's digital piracy.
- To eliminate digital piracy seems to be impossible until now. However, to control this with the use of new technologies carries the possibilities in the near future. Digital advancements such as *blockchain technology* and *Artificial Intelligence* are the two recent signs of progress today's technology has provided us. Many researchers and scientists believe that these computer science developments would be a boon for all the fields. Many of the companies around the world are already adopting such technologies and benefiting from them.
- Blockchain can revolutionize and fix the current issues of digital licensing and transparency of revenue distribution works. In contrast, A.I. technology carries possibilities of changing the music streaming services models, music listening, music creation, and even controlling music piracy through its AGI technology and use of big data, which can locate users geographically, keep records of such activities, send alerts, warnings and block them if necessary.

This thesis is hypothesized as:

'The piracy culture in music industries still does exist due to the lack of adaptations to new emerging technologies.'

Emerging technologies such as blockchain and A.I. carry colossal potential and possibilities in controlling today's ongoing digital piracy. The evidence to date shows that laws and restrictions were/are not the perfect choice to stop piracy ever. Thousands of lawsuits are yet to be resolved in the courts, and the decisions sometimes come in very illogical and unexpected ways. The primary reason is the improper wordings and misinterpretation of the existing laws differently from what it was meant to be. It also creates tensions between the record labels - consumers and also, artists

- consumers. The research also shows that those users who are tagged as pirates are the ones who are the real fans, avid listeners, and consumers of the music.

The research also shows that psychological factors are the primary role player contributing to piracy, especially among students. Theory of neutralization and antipathy towards record industries are some examples of such psychological considerations. Another prevalent factor is the lack of public awareness of copyrights and the general public's copyrighted content interests. Nevertheless, due to the lack of such activities by the related bodies like CMOs and record industries globally, this is one of the most abdicated factors.

So, the better choice to solve issues of today's music industries of the digital era while maintaining the balance between record industries-artists-fans would be adopting emerging new technologies. Both blockchain technology and the emerging A.I. technology are the promising ones that can secure the future of music industries or copyright industries. The music industries should look forward to adopting such technologies without delay, so it would save the industries from experiencing future economic losses again. It is always better and wise to maintain the relation with consumers or fans without whom creative industries are nothing. So, now is the time for choosing digital technologies rather than seeking the traditional ways of solutions.

Chapter 6

CONCLUSION

6.1 Final Thoughts

The primary objectives of this research were to find the relevance of copyright laws in the digital age, its relation to digital piracy, and to provide a possible suggestion to control the music industries' ongoing piracies.

From the analysis of several theories, issues on copyright laws from past to present, the result has shown that the relevance of traditional copyright is questionable in today's digital age, which is partly because of the unmatched pace of progressions compared to digital advancements and partly due to the lack of interest of related bodies, authorities for upgrades of such laws on time. Besides, the relevance of copyright laws is found to be indirectly related to music piracy. Insufficient and inappropriate wording in the clauses is considered the significant loopholes of today's copyright laws by which today's music industries are still facing the hit of digital piracy, and so many lawsuits are pending in the courts, confused and unresolved.

On the other hand, digital technologies are progressing rapidly, unmatched by copyright laws' progress. In return, this results in a new form of piracies such as stream ripping and stream manipulation, even in the streaming age. However, digital advancements have also been delivering some promising future, a boon for today's music industries. Blockchain Technology and Artificial Intelligence are the two main attractions of this generation. The use of blockchain by several companies has already proved its potential to solve the current issues related to revenue distribution, transparency, metadata records of songs, digital licensing, cross-border licensing by smart contracts, etc. Furthermore, A.I., on the other hand, is another limitless technology that is even anticipated as the future of every industry globally. By accessing big data such as geographical location, user behaviors, consumption patterns, Artificial Intelligence through machine learning can control and solve many issues even related to this generation's piracies.

The research also studied the psychological factors that impacted piracies, but the primary data produced from ethnographic research were on a small scale of participants, including college

students. Though the neutralization theory was justified with the limited sampling, it was both reliable and reflexive, reflecting other parts of the world.

This research showed that filing lawsuits to the general public who violates copyright infringement are a never-ending process. Moreover, this only leads to damaging the relationship between artist-fan or music industries-consumers. Copyright laws were meant to motivate and inspire rightsholders and users to promote and accept the rights, but it has been changing its motive, which could threaten future generations' copyright industries.

This research was purely based on the Qualitative Secondary Method, also popularly known as Desk Research. Furthermore, the data analysis was executed as Documentary Analysis, which was significantly useful for the research objectives. All the documents were accessible as physical copies such as textbooks, mostly from the websites through internet access, though it was a time-consuming process for gathering related data and relevant and reliable theories. Another major obstacle was finding the structures and format of desk research methods quite different from the primary research formats.

6.2 Future Recommendations

This research showed that technology is the better option by which the evolving piracy could be controlled, at least, if not eliminated. Further, more researches could be done on how the current emerging technologies such as blockchain and Artificial Intelligence could be used in the music industries and piracies. How the related bodies, such as CMOs, Streaming services, music industries, should be adopting and promoting these technologies to see what it would bring for the future and keep them relevant and dynamic.

This research has also shown that copyright laws are insufficient to address all the issues related to this generation's digital eco-system. Future research could be done on how the copyright laws could address all these issues related to the digital system and what could be done to implement such provisions.

Summing up this thesis, I hope this research has found its objectives on finding the relevance of copyright laws and its relationship with the digital technologies and piracy issues in the music industries. The music industry has come a long way in fighting against piracies. Nevertheless, it is

unsuccessful in controlling it by filing lawsuits and threatening the infringers, it is still going the same way to control over the piracy issues. So, the right solution for the music industries to control emerging piracy is to adapt to these emerging technologies, adopt the strategy like *technology Vs technology*, and it is always right to say *better late than never*.

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