

UNIVERSIDAD POLITECNICA DE VALENCIA

ESCUELA POLITECNICA SUPERIOR DE GANDIA

Grado en Comunicación Audiovisual



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“Digital Piracy: How the media industry is being transformed”

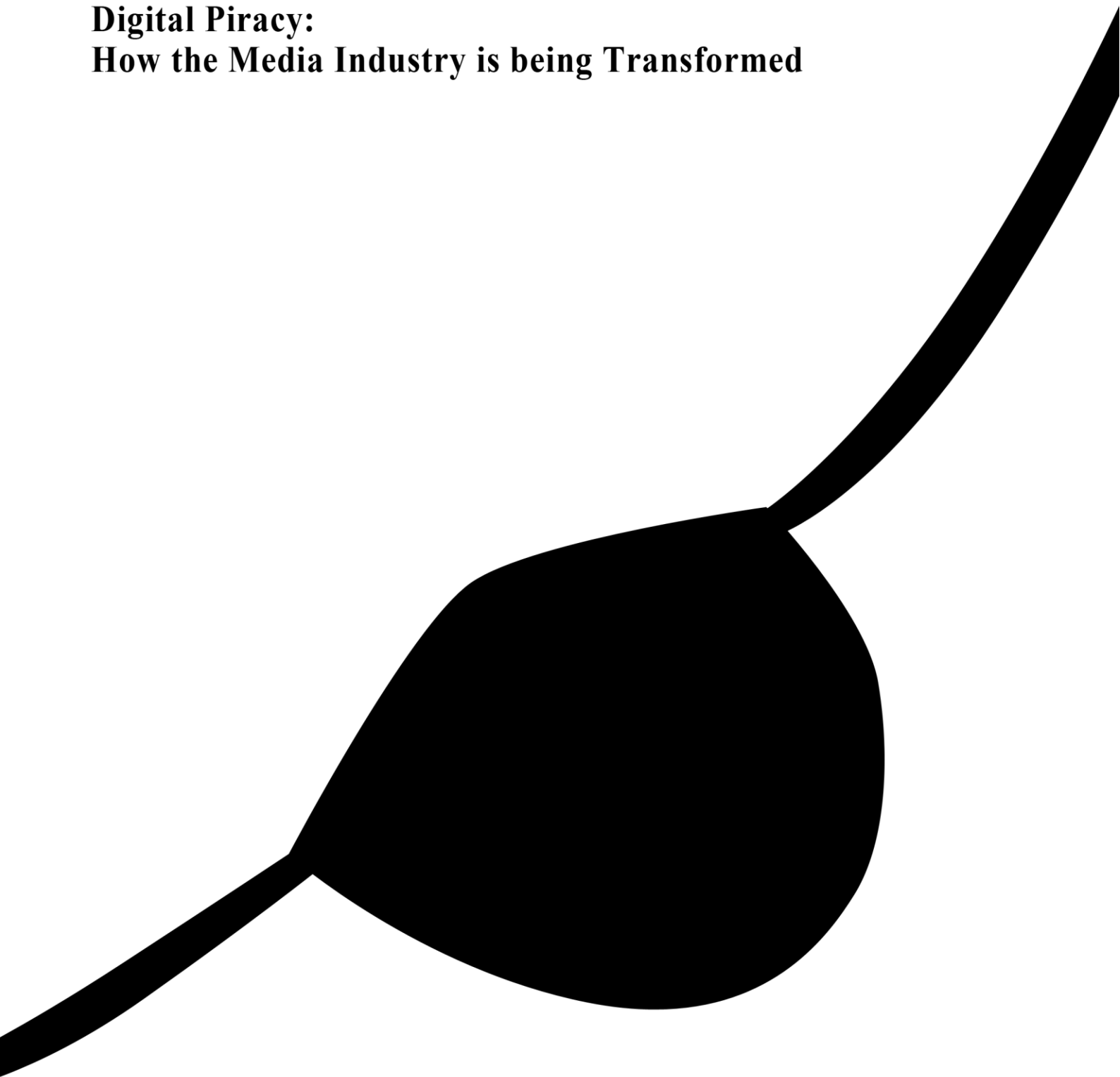
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**Digital Piracy:
How the Media Industry is being Transformed**



Abstract

Piracy is not just a modern phenomenon, but it is a controversial issue in today's society. Debate is fierce between those who are against it and those who are for it. There is, however, no doubt that it is changing the media industry forever. There are many causes, from the availability of the product or lack thereof, to the many misconceptions people have on its effects. All of these causes have to be carefully considered along with the effects, which can vary from job losses in the sector to increased sales.

The industry has fought back, but the methods are not always effective. This often results from a lack of understanding, however some companies are embracing the change and adapting to a new market, becoming very successful in doing so.

This project discusses the causes and effects of piracy and explains the methods that are being used to fight or adapt to it. The conclusion is that piracy is here to stay, and a multitude of tactics are required to overcome it.

Keywords: digital piracy, copyright, intellectual property, availability, media industry

Resumen

La piratería no es sólo un fenómeno moderno sino que es un problema controvertido. El debate es intenso entre los que están en contra y los que están a su favor. Sin duda, la industria audiovisual está cambiando de manera continua. Hay muchas causas, desde la disponibilidad de producto, o la falta de ello, hasta las ideas equivocadas que tiene la gente sobre sus efectos. Debe considerarse todas estas causas y sus efectos, que pueden variar desde la pérdida de puestos de trabajo hasta el incremento de ventas.

La industria ha luchado contra la piratería, pero los métodos no siempre son eficaces. Frecuentemente se debe a una falta de comprensión del problema. Sin embargo, algunas empresas están aprovechando el cambio y están adaptándose al nuevo mercado con gran éxito al hacerlo.

Este proyecto analiza las causas y los efectos de la piratería y explica los métodos que se están utilizando para combatirla. La conclusión es que la piratería no va a desaparecer y una multitud de tácticas son necesarias para disminuir sus efectos.

Palabras claves: piratería digital, derechos de autor, propiedad intelectual, accesibilidad, industria de los medios de comunicación

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1. Introduction

‘Digital piracy’ is a term used to refer to the act of copyright infringement via digital means. The word “piracy” used in this context dates further back than one would think. As a reference, the term first appeared in the year 1603 to label those who violated a Royal Charter given to the Stationers’ Company of London in 1557.¹

To understand exactly what digital piracy means, one must first look at the definition of copyright. Copyright is a legal concept that aims to protect original creations from unauthorised uses. These original creations are usually owned by the author or their authorised associates. Violating copyrights includes copying and using materials without accreditation or without permission, amongst many other abuses. According to the World Intellectual Property Organisation (WIPO) “Copyright legislation is part of the wider body of law known as intellectual property. The term *intellectual property* refers broadly to the creations of the human mind. Intellectual property rights protect the interests of creators by giving them property rights over their creations.”²

Copyright infringement, therefore, is the breaking of copyright law. This can take many forms, but piracy generally refers to the unauthorised copying and distribution (freely or for financial gain) of protected works.³

Although it is not a modern phenomenon, the advent of digital technology, such as the internet, has greatly facilitated the practice, enabling many more people to copy and distribute protected creations. This means that today, more than ever, piracy is a problem artists and creators have to face. However, it is also an opportunity to learn from and adapt to a rapidly changing industry reliant upon digital technology and a wiser audience.

This project will look at a brief history of piracy in media, outlining the causes, and discuss what methods are being used to combat it or adapt to it, evaluate these based on their advantages and disadvantages and propose better solutions in the case that they can be found.

¹ Dekker, 1603.

² WIPO Publication 909 (E).

³ Panethiere, 2005.

1.1. Objectives

Primary Objective:

The primary objective of this project is to explore how and why digital piracy is affecting and transforming the media industry.

Secondary Objectives:

- Investigate the origins of piracy using digital technology, starting with a definition and the history of copyright.
- Present a brief history of the evolution of piracy from its beginning to the present day.
- Examine the causes of piracy and explain why it is a big problem for the media industry.
- List the different strategies and methods that have been developed to deal with piracy, how they work and what results they provide, positive or otherwise.
- Finish with a conclusion on the changes that digital piracy has caused and a view on the future of the relation between digital piracy and the media industry.

1.2. Reason for choosing this topic

For someone involved in the audio visual process, piracy is an interesting and ever-present topic. It is a problem that affects the whole industry from stock photography through music and film to videogames. On top of that, there is no easy or clear solution to deal with it. It is a practice that everyone in society partakes in, even sometimes those whose job it is to fight it. It can also be done relatively innocently without realising one is doing wrong. Because of these reasons, I believe it is an important topic to discuss, not only from the point of view of the artists and creators though, but also from the point of view of the uses and consumers of media. Because, after all, media is a commodity created to fulfil the entertainment requirements of people who have already met their essential needs and have a choice on what to do with their free time. If they are resorting to piracy, why are they? Are they not getting what they want? Does the problem lay with the consumers or the creators? Or both? There are many interesting questions in regard to piracy. This project will investigate them.

2. History of Piracy in Media

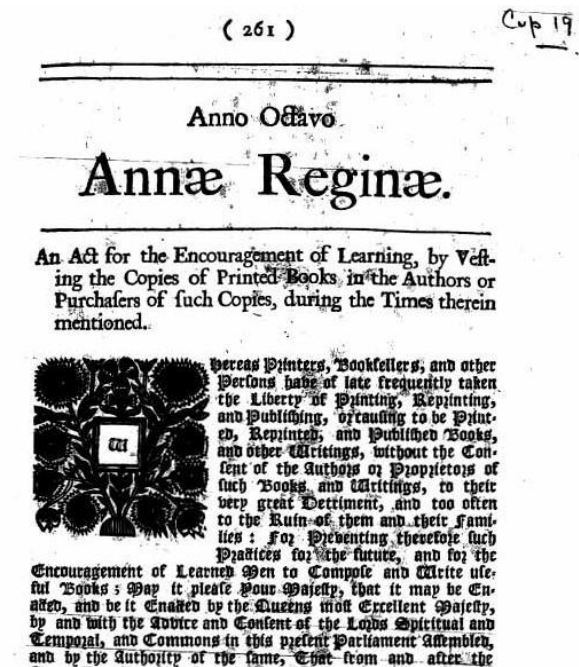
2.1. Brief History of Copyright Law

The concept of copyright first appeared in Great Britain in the 17th century, when the Stationers' Company of London, amongst other publishers, was given a Royal Charter granting them a monopoly on publishing.

This was confirmed in 1662 with the Licensing Act, which established a register of licensed books for the Stationers' Company to administer. However, it was not copyright exactly as it is known today, as the right did not belong to the authors, but instead to the publishers, and only applied to books accepted and published by the Company.⁴ Later, in 1710, the so-called Statute of Anne⁵ was given Royal Assent. This established the principles of modern copyright by granting the ownership of copyright to the author for a

fixed term of 14 years, renewable for another 14 more if the author was still alive, during which only the author and their chosen printers could publish their works. After that stipulated period, their work would be in the public domain.⁶

Since the Statute of Anne there have been various amendments and international agreements regarding copyrights and intellectual property ownership. In France, after different variations of copyright existed, a new law was passed in 1793 that awarded authors of original content the exclusive rights to sell and distribute their creations, a right which continued for 10 years after the author's death that benefited their heirs.⁷



Statute of Anne. Source: [The History of Copyright: A Critical Overview With Source Texts in Five Languages.](#)

⁴ Streibich, 1976.

⁵ The statute was named after the then-reigning Queen Anne of Great Britain.

⁶ Feather, 1980.

⁷ Yu, 2007.

It must be noted that the Statute of Anne did not apply to British Colonies, resulting that the United States only had three private copyright acts until 1783, at which point various authors petitioned the Continental Congress to enact some kind of copyright protection. The Continental Congress did not have the authority to create a law, however they urged the individual States to: “secure to the authors or publishers of any new book not hitherto printed... the copy right of such books for a certain time not less than fourteen years from the first publication; and to secure to the said authors, if they shall survive the term first mentioned,... the copy right of such books for another term of time no less than fourteen years.”⁸ Subsequently, each State enacted a form of copyright law, some based on the Statute of Anne, others with similar attributes.

Copyright protection was introduced to Spain with the Law of 10th of January 1879 (ley de 10 de enero de 1879), inspired by copyright laws established in France and followed the already existing laws in other countries. Current Spanish copyright law is detailed in the Royal Legislative Decree 1/1996 of 12 April 1996.⁹

An international milestone was reached in 1886 with the signing of the Berne Convention. Until then, copyright laws typically only covered an author’s works in the country they were created in, meaning that one could copy and print an original creation protected in one country in another country without falling afoul of the law. The Berne Convention stated that the author need not register to receive ownership of the rights, rather they are automatically granted upon the recording of any original creation. Not only that, but the rights applied in all of the countries that signed, meaning effectively that the nationality of the author made no difference as to his rights depending on the location.¹⁰ Currently, 167 countries are signed up to the Berne Convention.¹¹

Since the Berne Convention, many other international treaties have been created, such as the World Intellectual Property Organization Copyright Treaty in 1996, which is especially important due to its purpose being provisions for greater protections necessary due to advances in technology.

⁸ Ibid. Yu.

⁹ Real Decreto Legislativo 1/1996, de 12 de abril, por el que se aprueba el texto refundido de la Ley de Propiedad Intelectual, regularizando, aclarando y armonizando las disposiciones legales vigentes sobre la materia.

¹⁰ Berne Convention for the Protection of Literary and Artistic Works of September 9, 1886

¹¹ Current signatories of the Berne Convention, date on which States became party to the Convention and latest Act of the Convention to which individual States are party can be consulted on WIPO's website: <http://www.wipo.int/export/sites/www/treaties/en/documents/pdf/berne.pdf>

2.2. Digital Copyright Infringement

It is a fact that since the existence of copyright there has been copyright infringement. At the time it would amount to printing or selling a book that one was unauthorised to publish, as in the beginning the law only covered literary works. However, new technology, while making the distribution of more types of media more accessible, made the infringement of copyright easier. Inventions such as the VCR recorder, the computer and the internet have changed piracy immensely. Technological innovations such as these are what prompted the World Intellectual Property Organization Copyright Treaty (1996).¹²

The origins of modern Digital Piracy can be traced back to 1975, with the Homebrew Computer Club. The Homebrew Computer Club was a group of computer hobbyists who met to discuss and trade computer parts and information, from which many successful people in information technology emerged, including the founders of Apple.¹³ When MITS (Micro Instrumentation and Telemetry Systems) released the BASIC interpreter software created by Bill Gates and Paul Allen, issues with hardware caused groups of users like the Homebrew Computer Club to replace parts of the computer with more reliable third-party ones. Due to price of new BASIC software, they would make copies of it on the custom chips. These copies of course were not the official ones and are the first example of piracy becoming a problem with new technology and software. Bill Gates expressed his frustration in an open letter to hobbyists of the time.¹⁴

In the 1980s, internet groups such as Usenet, IRC and Bulletin Boards popped up enabling users to send and share files, and in 1993 a very popular site called *Rusty n Edie's BBS* was raided by the FBI over software piracy. The *BBB* (Bulletin Board System) had at one point 14,000 subscribers, who each paid \$89 a year to access thousands of files.¹⁵

Piracy really took off in the 1990s when methods for copying and recording CDs became more readily available. By this time, the technology was more widespread and

¹² World Intellectual Property Organization Copyright Treaty, 1996.

¹³ Markoff, 2005.

¹⁴ The original letter from 1976, now famous, is available online:
http://www.digibarn.com/collections/newsletters/homebrew/V2_01/gatesletter.html

¹⁵ Wolf, 2012.

people could easily copy and create their own music CDs. Piracy on physical media became a massive industry and still is today. The IFPI (International Federation of the Phonographic Industry) estimates that one in three of all CDs sold over the world in 2003 were pirated copies. If cassettes are also considered, that piracy accounted for 40% of worldwide music sales.¹⁶ And that only accounts for sales of music, not other instances of piracy where no sale is made.

With the rapid increases in internet speed, the sizes of storage devices and the amount of tech savvy computer users, the ability to pirate media has exploded and will continue to do so.¹⁷ Publishers and distributors are constantly in battle with hackers since immediately after a new method to prevent piracy appears it is neutralised and worked around.

3. Causes of Digital Piracy

Why do people pirate media? It seems like a simple question to answer, but it is not. Of course cost is one major reason, but it is far from being the only one. Availability plays an important role, as do other factors such as the presence of unwanted software – such as DRM (Digital rights management) software – or, in some cases, a form of protest.

3.1. Cost

Poverty and increasing costs of entertainment are certainly one cause of piracy. In the United States, cinema ticket prices are at an all-time high as of early 2013.¹⁸ Prices have also increased in Spain, and an increase of 13% of the VAT on price of a cinema entrance exasperates the problem.¹⁹ These increases, coupled with real wage drops and the recent economic crisis, certainly contribute to the problem of piracy. This trend on increasing cinema tickets price in the last few years is mirrored world-wide.

¹⁶ Ibid. Panethiere, page

¹⁷ Ibid. Panethiere, page

¹⁸ Variety Magazine, 19th July 2013.

¹⁹ Screen Daily, 18th July 2013

The issue of cost is not a simple one, because there are many additional factors which come into play regarding the price. Eight dollars doesn't sound like much, but for something that lasts for two hours and can easily be found for free elsewhere it can seem like an unnecessary expense for a person who is being careful with their budget. This however relates to another of the causes – misconceptions – whereby the customer does not recognise the value of the product nor sees piracy as a completely illegal or detrimental activity.

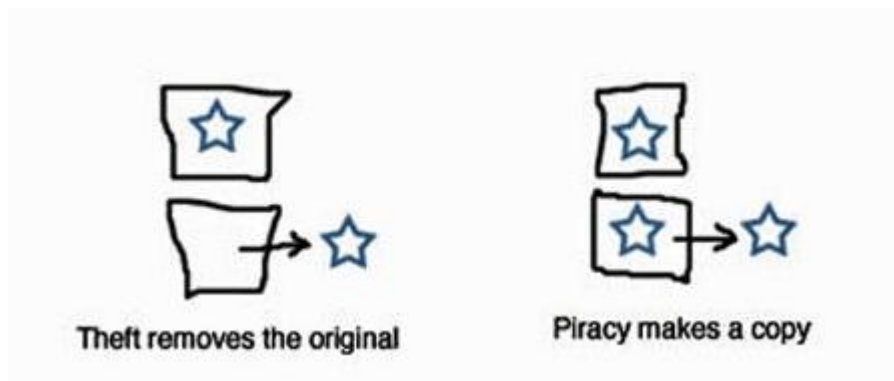
3.2. Misconceptions

Misconceptions about piracy are probably one of the biggest causes, and arguably the hardest case to overcome when trying to reduce copyright infringement. Costs can be reduced, availability increased and laws enforced more strongly – but changing the public's opinion and knowledge about piracy would take considerable time. On top of that, generations now grow up in a world where the internet and downloading is an integral part of every day life. It would be easier to convince someone who was born before the computer that piracy is bad than young people born in the late 20th century, because now even more so there is much less of a physical element. A downloaded song is effectively nothing more than some bits of information on a computer. There is no sense of taking without permission, especially as one generally feels anonymous on the internet.

In addition, there may also be disagreement on whether piracy is theft. The origin of the word is of course traced back to robbery and kidnapping at sea, but when referring to copyright infringement, piracy may not be considered theft as the author or publisher is not being deprived of the original physical copy. Digital copying leaves the original intact, only creating an identical version in another location. In fact, in a case that came to the United States Supreme Court, it was ruled that copyrighted copies could not be considered stolen property for legal purposes: “The United States National Stolen Property Act 18 USC § 2314 (1993)²⁰ provides for criminal sanctions to be imposed in respect of any person who ‘transports, transmits, or transfers in interstate or foreign commerce any goods, wares, merchandise, securities or money, of the value of US\$5000 or more, knowing the same to have been stolen, converted or taken by fraud’.

²⁰ “The United States National Stolen Property Act 18 USC § 2314” (1993).

(...) Federal courts, however, have held that the Act applies to the theft of trade secrets but not to copyright of patents because there is no physical removal or theft of property (Cream 1994; *Dowling v United States* 473 US 207 (1985)).”²¹



Source: TorrentFreak.com "MPAA Piracy is not theft after all" 20th May

Copyright holders still refer to illegal downloading as theft however, because they consider the loss of sale to be theft. It is important to note that in some cases it has been decided that not every instance of piracy is a loss of a sale, due to the fact that the original would not have been bought anyway, because of the cost, inability to access it or other reasons.²² A Spanish Judge stated that: "...it is not possible to determine the damage and corresponding compensation due to loss of benefits to the rights holder, for the simple reason that customers of pirated copies of music and movies, when making the purchase of pirated copies, externalize their decision not to be customers of music and movies as originals, so there is no profit that could have been gained.”²³

Because piracy is technically not considered theft, and not every downloaded song, film or game equates to a lost sale it is reasonable to assume that public perception of piracy isn't as inappropriate as say, physical theft or fraud.

3.3. Availability

The availability of certain media is undoubtedly also one of the biggest causes of piracy. In essence, it is quite simply the lack of available legal means that will cause someone

²¹Federal Office of Legal Education (USA), 2013).

²² Freakonomics, 1st December 2012.

²³ Sentencia del Juzgado de lo penal número 1 de Logroño en un caso de piratería de material multimedia, 17th February 2011.

to look elsewhere. This issue is compounded by release dates, region formats, location blocks, rarity and lack of distribution tools.

The following chart shows a list of top 10 most downloaded films during the week of October 15th along with their availability through different mediums.

Title	Streaming	Digital Rental	Digital Purchase
1. Pacific Rim	✗	✗	✓
2. White house Down	✗	✗	✗
3. Elysium	✗	✗	✗
4. The Internship	✗	✗	✓
5. The Lone Ranger	✗	✓	✓
6. Monsters University	✗	✗	✓
7. The Mortal Instruments City of Bones	✗	✗	✗
8. 2 Guns	✗	✗	✗
9. After Earth	✗	✓	✓
10. This Is The End	✗	✓	✓

Most downloaded films and their availability October 15, 2013, as provided by CanIStreamIt and TorrentFreak. (Piracydata.org)

Of all the films in the list not one was available to stream legally, while only a few were available to purchase or rent digitally. In time, it is likely that these new releases will become accessible via these means, or more, however it is the delay that contributes to the illegal downloads. To put it another way, the more time it is not legally downloadable, the more illegal downloads there will be.

Napster pioneered a new approach to distributing music in 1999 by allowing users to share their digital music files (recorded from CDs for example) though a peer-to-peer network.²⁴ This was a big change because previous to Napster music (along with films, games etc) were not easily available through the internet. One would have to physically buy a CD in a shop. With Napster, a huge amount of songs (four million by October of the same year²⁵) were suddenly instantly accessible from home for free. Napster ran until 2001 when it was shutdown after receiving a number of lawsuits from artists and organisations including the RIAA (Recording Industry Association of America).²⁶ ²⁷

²⁴ Todd, D. 2011.

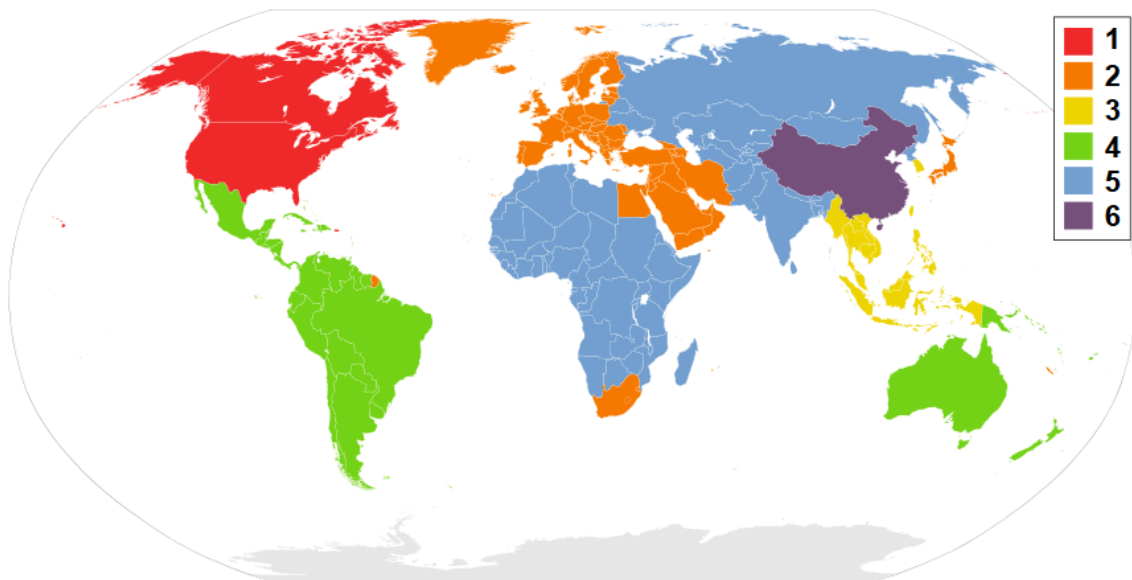
²⁵ The Guardian, 24th February 2013.

²⁶ Ibid. Todd.

²⁷ ABC News, 27th July 2013.

The impact Napster had for the future of piracy and media distribution is undoubtedly huge.

The problem started before the internet however, as to control prices, release dates and locations, publishers introduced region codes. Region codes are a form of DRM, or Digital Rights Management, and they prevent DVDs locked to a certain region from playing in DVD players from another. For DVDs there are a total of nine regions, while the newer Blu-ray format only uses three.



Source: Wikimedia Commons (by user David Levy), 8th July 2006.

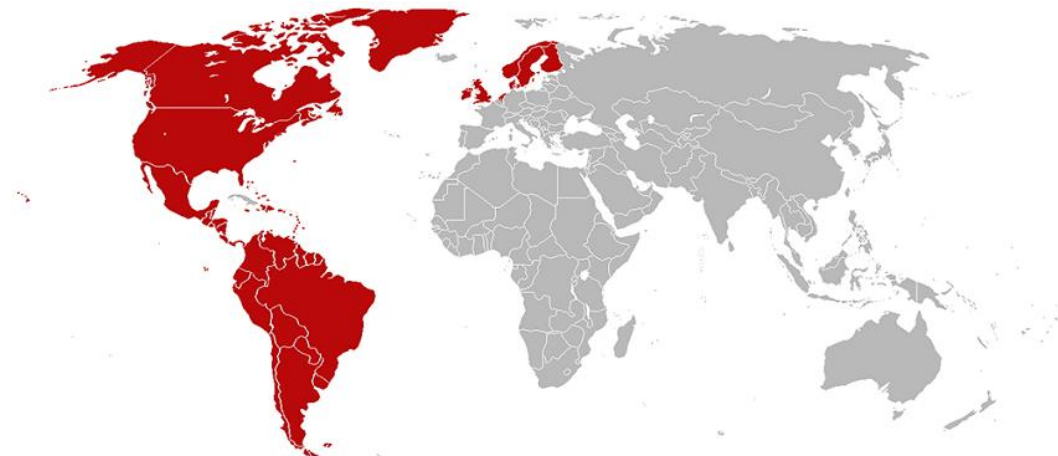
Although the region locking is successful at allowing the publishers to closely control how much they charge for their product in different markets and when they release it, it does nothing to help the consumer, who may find piracy a much more convenient way of sourcing the media. Region locking prevents tourists from buying films or other media to take back with them and expats from obtaining media in their native language amongst other things. In fact, DVD region codes have been labelled as a possible violation of the free trade agreements by the World Trade Organisation and some

countries, for example Australia and New Zealand have criticised the practice, stating that it may be a breach of their consumer laws.²⁸

This means that despite a negative view on piracy one might find it a more attractive option to download the film from the internet, after which you can guarantee it will work everywhere you play it, rather than go for the legal option and buy a DVD that may not work if you move or buy it from somewhere else.²⁹

Similar region blocking is done on the internet; however it is easier to bypass. Services such as Netflix, Lovefilm and a new Spanish start-up called Youzee amongst others provide an online streaming service allowing instant access to a large range of titles for a small monthly fee. Pandora, Spotify and Last.fm allow music streaming while iTunes is an example of an online store from which customers can pay for and download music files. This business model also exists for videogames, for which Steam, Origin and similar software permit direct downloads of PC games.

The advantage of these distribution methods is apparent and is a good example of the industry adapting to a changing market, however even though the technology is there and the distribution channels are in place they still have some issues which relate to availability. For example, Netflix, arguably one of the most famous streaming services and a pioneer in the field, is only accessible in 41 countries. That sounds like a lot, but when one looks at the map, a huge part (and one of the biggest markets) of the world is left out.



In red: countries where Netflix has a presence. Source: thebestofnetflix.com, "A Great Map of Countries Where Netflix is Available" 31st July 2013

²⁸ Fitzsimons, C. 2001.

²⁹ "DVD Regions and why pirating survives", 2011.

Furthermore, the content varies depending on the users' location. Netflix in Argentina for example doesn't have the same content as Netflix in North America - moreover, there is often less content.

In a comparison of various streaming services in the US, out of the top 250 films listed by IMDB, Netflix only has 37 ready to stream and Amazon, with the second highest amount available has 23.³⁰ On a list of the biggest box office hits from 2000 to 2013, Netflix still only reaches 21 films, while Amazon has 12.³¹ Again, that is in the United States so other countries may have even less. Only 10% of the 250 film long list is available for streaming.³² When one compares this to the amount that is accessible through alternate means (torrent websites such as The Pirate Bay and others), it really is no wonder that illegal downloads are so common.

Related to region codes and distribution availability, one of the main issues is the release date. Often, films are premiered on different dates depending on the country and the difference can be as much as a few months to a year. There are many valid reasons for why studios choose to release films differently.

Andrew Cripps, the President and Chief Operating Officer of United International Pictures explains it well³³:

Studios split the International market into three main areas: Europe, the Far East (including Australasia) and Latin America. Interestingly, he doesn't seem to mention the African market.

Between 25% and 30% of their total Worldwide business is done in Europe, where (in order of admission numbers) the major markets are France, UK, Germany and Spain. Per capita attendance in Europe is much lower than in North America, with an average of just 2 visits per person in 2002.

The major markets in the Far East sector are Japan and Australia, with South Korea growing fast. In Latin America, the two main markets are Mexico and Brazil.

Distributors will consider their strategies from (at least) four perspectives:

³⁰ Johnstone, D. 2013.

³¹ Ibid. Johnstone.

³² Ibid. Johnstone.

³³ Cripps, A. 2003.

- Global: where will the film work?
- Regional: how will we make it work in (say) Europe?
- National: how should we release it in each country?
- Local: are there any particular local conditions that need to be taken into account within each country?

Within each of these perspectives, the distributor will consider their films' prospects by taking into account some or all of the following factors:

- Should the film be released in this market at all?
- How big could it be?
- Is the genre popular in this territory?
- What might it cost to achieve different levels of gross Box office?
- Who is the target audience?
- What is the likely shape of the revenue flows – a big opening weekend or slow-burner?
- How have the critics in this territory reacted to the film? And the exhibitors?
- Are there any local connections within the cast and crew that could be useful to the campaign?
- What is the running time of the film? Could that cause any complications?

After assessing all of these factors, the distributor will prepare a Territory Contribution Report identifying the revenue estimates for each market. The views of senior studio bosses and regional and local managers will also be sought, with screenings held as early as possible to help build up a picture of the film's estimated International performance.

For most films, almost 40% of total Box Office will be taken in the first week, with the majority of that arriving in the first weekend. Takings tend to fall to about 5% of the total by the sixth week of release (if the film has lasted that long). Oscar winning films have tended recently to gross more internationally than at the Domestic Box Office, partly because the release pattern means that their Academy Award success can be used in the International marketing campaigns.

Campaigns for each title are planned well in advance, taking into account such factors as:

- US release dates
- Competitors' release schedules (information is generally shared between the majors to avoid clashes wherever possible)
- The distributors' annual budget and the rest of their slate for the year seasonal positioning (to take account of holiday periods, relevant awards ceremonies, other local factors)

These factors are also taken into account in developing the detailed release strategy for each film. The strategy and timing of the release will also take into account:

- censorship issues – when and how must the film be submitted for classification?
- translation for sub-titling and dubbing.
- publicity screenings.
- availability of key talent for promotional purposes.
- availability of key media in each territory.
- any promotional tie-ins and when the partners will be spending their money.
- any additional local factors.

Because of the Internet, the strategy of staggering release dates no longer provides as much benefits due to the disadvantages it has. The Internet allows people from across the world to communicate and share information instantly, so when a show is released in the US and grows in popularity the rest of the world wants to follow it. Add in to the mix a delayed release date and the ease of downloading it illegally from a website or network that isn't region blocked and you have a recipe for piracy. Then when the show is finally released in other areas, it has already been watched.

Again, Andrew Cripps states that: “With the various exploitation windows closing, there is an increasing trend towards films being released internationally on the same day as (or close to) their North American release. This has the advantages of reducing the opportunities for piracy; enabling marketing campaigns from the US to roll over into other territories; and allowing earlier exploitation of other windows.”³⁴ Jeff Bawkes, the CEO of Time Warner, agrees saying that “Everyone in the business, including theatre owners, has an interest in making films available closer to the main release date.”³⁵

³⁴ Ibid. Cripps.

³⁵ The Guardian. “Time Warner CEO predicts release date shift to combat piracy”, May 2011.

3.4. DRM

DRM stands for Digital Rights Management, which represents a collection of technologies with the purpose of controlling the use of digital media and devices after they have been purchased.³⁶ There are two generations of DRM technologies: the first, which aims to control copying, and the second, which is used not only to limit copying but also viewing and altering the content.

The use of DRM is controversial because the results of using DRM software with products are not clear. Some providers believe that it is needed to maintain control over their content and prevent unauthorised copying of it, while others opposed to its use claim that DRM does not prevent illegal acts while only inconveniencing users who legitimately purchase content as well as suffocating competition.

Those who support the use of DRM do so primarily because they consider it necessary to control alteration and duplication of the original product. With analogue copies, quality often degrades with each subsequent copy and therefore extensive duplication is not such a big issue. Altering the original product is also harder for similar reasons. With digital media however, each copy is often an exact replica of the original, maintaining the originals' high level of quality. It is also much easier to modify original content with computer software and it is substantially easier to distribute through the internet and other digital mediums.

DRM can also be used for other reasons that don't include copy protecting, as Danielle Parr of the Entertainment Software Association of Canada explains: "digital locks don't exist just for copy protection, but are also needed to create features that consumers want. For example, they can be used for parental controls to stop children from viewing racy or violent images, or for time-limited trials that let people sample products before buying them."³⁷

Michael Burke, the project manager in charge of Microsoft's Windows Vista operating system, said about its plentiful DRM that: "without digital locking restrictions, content

³⁶ Anderson, R. 2008.

³⁷ CBC News. "The pros, cons and future of DRM". 7th August 2009.

makers would have little incentive to make or let people play music, movies or other materials on their computers.”³⁸

On the other hand, opponents of DRM state that there are many disadvantages.

First of all, DRM can impede legal uses of media that do not infringe copyright - for example; making backup copies of DVDs and CDs (legal explicitly in some countries such as Spain, and permitted by EU law), accessing media in the public domain and using works for investigation and study under fair use laws.

Consumers may also complain about privacy, as using a DRM locked product may signify a transfer of the customers’ details and information, enabling them to be tracked.³⁹

Furthermore, for the customer, there are security implications with products that are protected by DRM. For example, in 2009 Amazon remotely deleted copies of two books from Kindles without notifying the users. Although it was done because the publisher who released them didn’t have the permission to do so, it angered many Kindle owners because they didn’t know or think Amazon had the right or authorisation to remove already-purchased content.⁴⁰

Another issue is the potential future loss of the purchased product with changes in technology. Content with DRM is frequently locked to a specific platform, software which may (almost certainly in most cases) become obsolete over time. Technology updates very quickly so it is not unreasonable to assume that within even a few years a customer could lose access to their content, certainly in their lifetime. This also is stated as an issue for historians, who may be unable to access historic (now present) media for research and investigation.

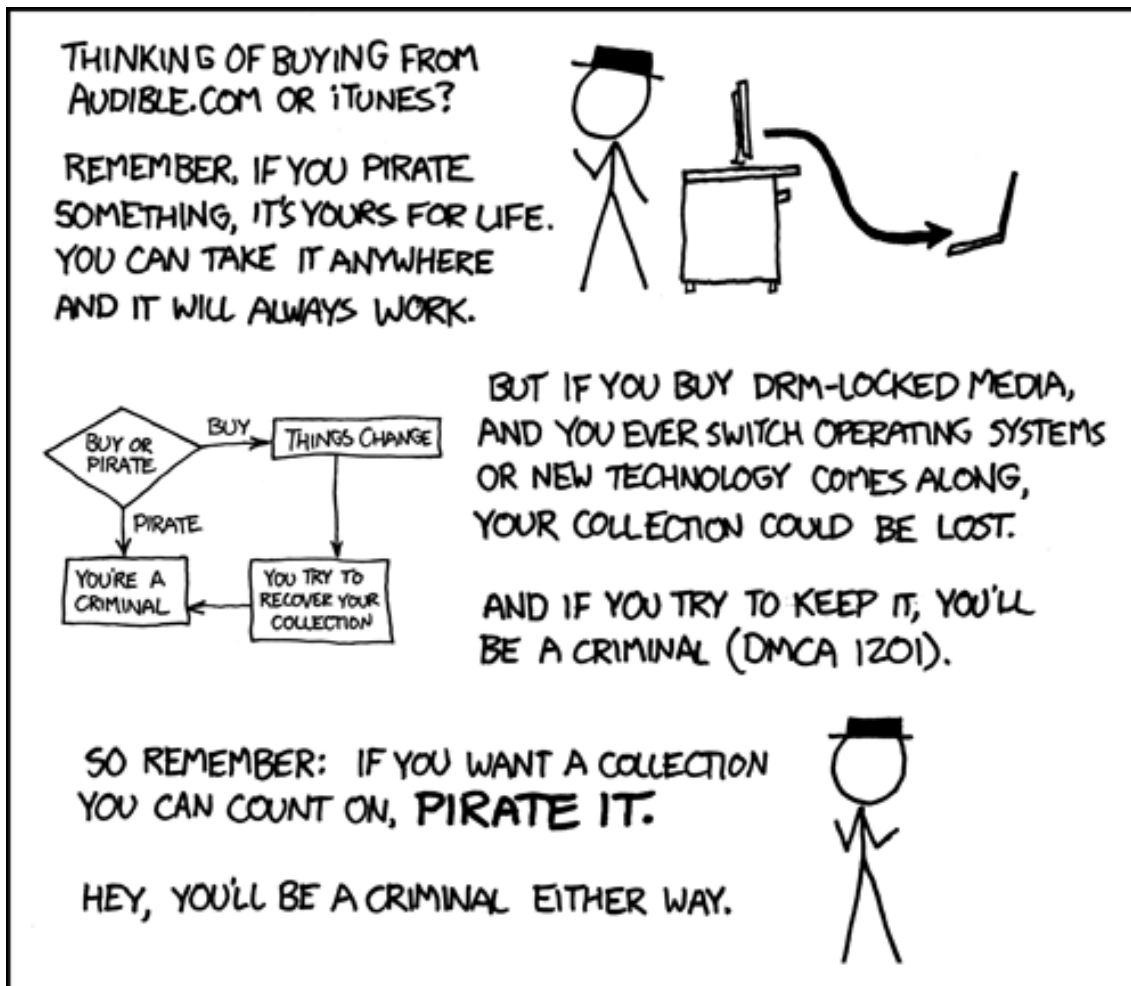
The popular technology orientated webcomic XKCD characterises the problem referencing the DMCA act passed in the United States of America in 1998 which makes it illegal to break or bypass DRM, therefore restricting the ability to recover DRM protected content.⁴¹

³⁸ Ibid. reference 37.

³⁹ Ibid. reference 37.

⁴⁰ CBC News. “Amazon erases Orwell books from Kindle service.”, 19th July 2009.

⁴¹ United States Code - Circumvention of copyright protection systems. 2012.



(IF YOU DON'T LIKE THIS, DEMAND DRM-FREE FILES)

Source: xkcd.com, "Steal this Comic"

Additionally, there are arguments that suggest that DRM is effectively useless at its purpose anyway. Bruce Schneier, a writer and expert on computer security and cryptology declared: "What the entertainment industry is trying to do is to use technology to contradict that natural law. They want a practical way to make copying hard enough to save their existing business. But they are doomed to fail."⁴² He notes that while the usual targets of DRM are not likely to bypass it, professional hackers and pirates can and will find a way to break the protection. But not only will they do so,

⁴² Schneier, B. "Crypto-Fram Newsletter", 15th May 2001.

unlike a physical possession or learned skill, they can distribute the original file or the ability to crack it very easily to all those who would have otherwise done nothing.⁴³

In fact, in some cases the addition of protection software can pose a challenge for hackers and pirates that is difficult to resist. Marcin Iwinski, CEO of CD Projekt Red, spoke about DRM at the 2012 Game Developers Conference explaining that: “it's just over-complicating things. We release the game. It's cracked in two hours; it was no time for Witcher 2. What really surprised me is that the pirates didn't use the GOG version, which was not protected. They took the SecuROM⁴⁴ retail version, cracked it and said 'we cracked it' – meanwhile there's a non-secure version with a simultaneous release. You'd think the GOG version would be the one floating around.”⁴⁵ In other words, pirates hacked and distributed version that included DRM just because they could - for a challenge.

For opponents of DRM, it effectively punishes the legitimate user without achieving anything, which in turn becomes counter productive. The latest version of the popular videogame, SimCity had a turbulent release due to its DRM ultimately angering players and pushing others away.⁴⁶

Fortunately for some, DRM is in a slow decline. Apple and Amazon started selling DRM-free music as early as 2007, and since 2009 all of the music available on iTunes comes DRM-free. Recently associations of creators and some developers have also begun to criticise and abandon DRM.⁴⁷

3.5. Financial Gain

If there is a way to make money, there is probably a way to make more illegally, and media distribution is no exception. The average pirate is not a money-maker out to rake in cash, but someone has to provide the infrastructure (such as websites, servers, copied files) to make it possible.

⁴³ Ibid. reference 42.

⁴⁴ A type of DRM.

⁴⁵ Forbes Magazine. “Witcher 2 developer: 'We will never use any DRM anymore'”, 3rd August 2012.

⁴⁶ Ayres-Deets, A. “SimCity DRM: “Always Online” Mode Results in Disaster for Gamers”, 9th March 2013.

⁴⁷ Ibid. reference 37.

Before piracy on the internet took off, pirates could make money by copying media like CDs and selling them for reduced prices. On the internet, pirates can still make money, potentially a lot more.

One of the main sources of income for an internet pirate is the same that many websites use – advertising. Internet advertising is a big business and is most lucrative for websites which receive a large amount of visits. Revenues in the United States alone for the year 2012 amounted to \$36.57 billion, almost surpassing television advertising.⁴⁸ Popular websites offering torrent⁴⁹ downloads can reach millions of hits a day. Exact numbers aren't publically released or easily found, but it is claimed that The Pirate Bay received 12 million more visits than ever the day the UK High Court decided ISPs must block it.⁵⁰ Google Adwords claims that The Pirate Bay gets around 88 million visits a month.⁵¹ In other words, websites hosting pirated content are a prime location for advertising.

Other sources include uploading content to affiliated websites. The pirate collects content (TV shows and films for example) and uploads them to popular file hosting services or streaming sites (such as YouTube or MegaUpload - now closed down). By subsequently sharing the links on websites the pirate can gain even more visits on his content which in turn earns him a greater quantity of cash – effectively a portion of the advertising revenue. This means that owning a website is not even necessary, just an internet connection. In an interview, one pirate explains how he makes a nice living out of the practice, having distributed 200,000 links and uploaded 30,000 files on various sites.⁵²

Other websites earn money by offering subscription based services. A user may follow a link to watch the latest episode of a TV series online and find out half way through that it is necessary to buy a subscription to continue watching. Other methods may include charging for high quality downloads, only making lower quality ones available for free.⁵³

⁴⁸ “Interactive Advertising Bureau (IAB) internet advertising revenue report. 2012 full year results” April 2013.

⁴⁹ A file format which allows users to share files directly.

⁵⁰ “Pirate Bay enjoys 12 Million Traffic Boost, Shares Unblocking Tips”, 2nd May 2012.

⁵¹ Columbia University, 15th July 2013.

⁵² “Making money from movie-streaming sites, an insider's story”.19th October 2013.

⁵³ Cnet News. “How sites like MegaUpload make millions from pirated video”. 10th February 2010.

The feasibility of these models for making a lot of money is disputed however. Megaupload, which was taken down after an important court case, was found to be making less than \$30 million per year.⁵⁴ At first this may sound like a large amount, but not all of it can be attributed to illegal sources and the quantity is miniscule in the compared to other internet giants. Facebook reported revenues of over \$2 billion in the third quarter of 2013 alone (“Facebook Reports 3rd Quarter of 2013 Results”⁵⁵) and Dropbox records around \$500 million (Malik 2012⁵⁶). The Pirate Bay, constantly ranked as one of the number one visited torrent hosting websites (and in the list of the top 100 visited websites in the world), was stated to have an income of only \$170,000 by prosecutors in a Swedish trial in 2009. In addition, it is worth considering that such revenues were offset by alleged \$112,000 a year of server and bandwidth costs, leaving very little in actual profits.⁵⁷

4. Why is it a Problem?

The effects of piracy are often not easily seen and for this reason it is a matter of debate how much the audio-visual industry is actually affected. One would assume that illegal downloading does nothing but harm the media business but some studies have in fact found that the opposite to be true in some cases. However, even if there are some positive outcomes, piracy does have a number of negative effects.

One of the main effects, if not the most important, is economic. The MPAA (Motion Picture Association of America) states losses of \$6.1 billion for its principal member companies – Fox, Paramount, Disney, NBC, Warner Bros. and Sony.⁵⁸ In an annual study, the BSA (Business Software Alliance) estimated that the loss due to software piracy was \$51.4 billion in 2009, adding that the actually figure is likely higher. Later however, the wording was changed from ‘loss’ to ‘commercial value’, the reason being that considering the total figure as a loss may not be quite as accurate. This is because

⁵⁴ Ibid. reference 51.

⁵⁵ Facebook, 2013.

⁵⁶ Malik, O. 2012.

⁵⁷ Ibid. reference 51.

⁵⁸ Houston Press, “Movie Pirates” 10th May 2008.

not every instance of piracy is necessarily a lost sale. One mother, quoted in an article on piracy explains, about counterfeit DVDs: "I buy those movies because they're cheaper and quicker. I can get three movies for \$10 from the guy at the washateria, or I can spend \$70 and my whole afternoon at the movies. I don't really think about it, I guess. I'm just happy my kids get to see the movies they like. They wouldn't get to see them if I didn't buy them from him."⁵⁹

Cases like these are common, especially with illegal online downloads, which for the most part cost no money at all and are even easier and more convenient to obtain, furthermore, the situation is only exasperated by the current economic crisis. The main point to be taken from this is that estimating the figures for commercial and financial losses attributed to piracy is almost guesswork. In one instance, the BSA was exposed for basically making up its figures on Canadian piracy. It stated that: "about 32 per cent of the computer software in Canada is pirated, contributing to losses of \$1.2-billion (U.S.) in 2008 alone, according to a report from the Business Software Alliance." The report also claimed a decline of one per cent, although the chair of the BSA Canada Committee, Michael Murphy, continued saying that: "despite the slight decline, Canada's software piracy rate is nowhere near where it should be compared to other advanced economy countries. We stand a better chance of reducing it significantly with stronger copyright legislation that strikes the appropriate balance between the rights of consumers and copyright holders." In actual fact, it was found that not a single person in Canada had actually been surveyed at all.⁶⁰

In another case, the RIAA (Recording Industry Association of America) demanded a staggering settlement of \$75 trillion from Limewire (a once popular file sharing service) for illegally facilitating the distribution of 11,000 songs, calculating \$150,000 per song and millions of downloads in total. Such a number would mean "more money than the entire music industry has made since Edison's invention of the phonograph in 1877" according to the Judge ruling over the case.⁶¹

It is no doubt that there are monetary losses due to piracy, but the real amount is almost impossible to calculate, and often grossly inflated.

⁵⁹ Ibid. reference 58.

⁶⁰ "BSA's Canadian Piracy Numbers based on hunches, not actual surveys". 27th May 2009.

⁶¹ "Judge rules punitive damages against LimeWire 'absurd'", 28th March 2011.

The effects of piracy on the industry can be seen in more than just pure financial losses however, as piracy can also affect local jobs and businesses. Mexico was rated at number eight in the world for its recorded music market worth \$665 million in 2000. By 2003, sales had fallen by 50% and the number of people working in the industry halved.⁶²

Some forms of piracy can also have a cultural impact. For a ‘professional’ pirate, the greatest amount of money is to be made selling the most popular songs, which in turn affects independent producers and musicians. A pirate will want to sell or distribute the most popular media because it offers the biggest returns, ignoring local or less well known artists. This can hinder investment in new cultural products, as local producers can’t compete legally with all the costs involved.

For example, the BSA reported a piracy rate of 60% in Africa, and a PC software piracy rate of 80%.⁶³ In such conditions, including the dominance of foreign software providers, it is unlikely for local businesses or artists to develop and flourish, in turn negatively affecting the local economy.

The effects of piracy can often be inconclusive, however. As discussed above, there are numbers that suggest a negative affect of revenues and sales, as well as the loss of jobs and cultural product. Undoubtedly, there are adverse affects, but there may also be some positives.

To begin with, file sharing could actually help increase sales. Because the product is made more available and easily obtainable with little to no cost, more people will likely download or copy the film, song for example, which creates increased awareness and discussion, later translating into more sales. In essence, ‘free’ marketing. Of course, there can be little proof in numbers to back this theory up as it is difficult to calculate even lost sales from piracy, so calculating the difference between lost sales and sales made due to increased awareness is virtually impossible.

A further possibility is that illegal downloads allow people to try the product before they buy it. They can listen to a popular song before deciding to buy the album or watch a film, only to buy later the full box set with extras in high quality, although theory is

⁶² Ibid. reference 3.

⁶³ Balancing act Consultancy, Issue no. 392.

more present in the videogame world. The illegal download can serve the purpose of free demos (which are increasingly disappearing) which gives the gamer an opportunity to decide if they like the game or not. It is especially relevant considering that the average videogame is an expensive purchase which may or may not work well. Then, to take advantage of the games full features, they buy the game.

Another perhaps positive outcome of piracy is the effect it has on prices. To gain any chance of competing with the overwhelming amount of content available free on file sharing sites, distributors have to lower prices. Lowering prices increases sales from those who would otherwise not make a purchase due to the cost. Whether this makes up for the drop in price is not clear and probably depends on the product.

Examples exist to prove the benefit that piracy has had for the company. Take Adobe. They produce software that enables professionals to create and edit media for high quality and demanding environments. The software is widely used in the media industry, in businesses and publishing. It is the go-to suite for these applications, but how did it achieve such a monopoly? Part of it, at least, can be attributed to piracy. Adobe is by far the most pirated software company with almost 50,000 illegal downloads at any time, Photoshop being the most pirated program of the collection it offers at almost 17,000 downloads at any given moment.⁶⁴

Photoshop itself used to cost \$699 (about €520) and \$999 (about €740) for the extended version⁶⁵, a significant cost for anyone but the successful professional. In most cases a price this high is way out of reach of the average student or individual (even after student discounts), thus, it is pirated extensively by mostly those who can't afford it. The reason this has a positive effect for Adobe is due to two things. Firstly, the majority of these instances of piracy are not lost sales, because the user in question can't afford it anyway. Secondly, it means that people are learning to use Adobe software instead of the competitors, so when it comes to the point that a business needs to legally purchase a creative suite, it will be the Adobe one. The fact that everyone is using it, pirated or not, helps the software gain its strong position in the market, consequently increasing sales.

⁶⁴ Dye, Eric. 19th September 2011.

⁶⁵ In June 2013 Adobe switched to a subscription only model, no longer offering the program as a one off purchase by instead providing monthly and yearly rates for using the software.

The same is true for Microsoft Windows, which dominates the PC operating system market with a 90% global usage rate.⁶⁶ Part of this can also be attributed to piracy, similarly to Adobes' case. Bill Gates was quoted saying: "Although about 3 million computers get sold every year in China, people don't pay for the software. Someday they will, though. As long as they are going to steal it, we want them to steal ours. They'll get sort of addicted, and then we'll somehow figure out how to collect sometime in the next decade."⁶⁷

Some of the most popular television shows are also the most downloaded, but that isn't only because of their popularity. Their popularity comes in part from illegal downloads. A show which experiences millions of downloads gains a big increase of awareness and can enter mainstream culture, from which extra sales can be made not only in the form of physical media or legal downloads of the programme, but also licensing rights and merchandising.

'Breaking Bad' and 'Game of Thrones' are two examples of massively popular television series whose creators have attributed some success to piracy. The creator of 'Breaking Bad', Vince Gilligan stated that: "I see that there are two sides to this coin. If I'm being honest I see that the illegal downloading led to a lot of people watching the series, becoming aware of the series who otherwise would not have been... I see that in some ways illegal downloading has helped us, certainly in terms of brand awareness, so that's a good side."⁶⁸ Of course, he doesn't condone illegal downloading, but does recognise that they may have benefited somewhat from it, however he adds: "The downside is a lot of folks who worked on the show would have made more money, myself included, if all those downloads had been legal.", although it isn't clear that all of the downloads would have actually been sales.

In 2013 'Game of Thrones' was downloaded on average 3.9 million times each episode, a million more downloads per episode than the second most downloaded TV series.⁶⁹

⁶⁶"Realtime Web Analytics With no Sampling: Desktop operating system market share". October 2013.

⁶⁷ Cnet News. "Gates, Buffet a bit bearish", by Grice, C and Junnarkar, S. 2nd July 1998.

⁶⁸ BBCNews. "Breaking Bad creator says online piracy 'helped' the show", 18th October 2013.

⁶⁹ The Verge. "'Game of Thrones' is most pirated show this season, may be most pirated show of 2012", .9th June 2012.

David Petrarca, the director, claimed that illegal downloads don't matter because the show benefits from the 'cultural buzz', though he remains against piracy.⁷⁰

Not only can large productions potentially benefit, but smaller ones can too. Large productions often have appropriately large marketing budgets, but smaller shows can't afford to market themselves to the same degree and rely more on word of mouth, a lot of which they get through illegal downloads.

Additionally, while piracy can harm local media development it could also be seen to aid it by increasing the culture of the consumption of media in general, and while a lot of it may be through piracy, the overall increase should translate to sales too.

In any case, there are other factors which contribute to figures used for and against piracy. When considering the decline in albums sales for example (there was decline of around 15% between the year 2000 and 2002, from 940 million CDs to 800 million⁷¹), one must take into account other distribution methods and trends. Drops in record sales have happened before and the numbers may have been higher during the 1990s due to the change in technology - that is, buying CDs to cover their collection of music owned on older media formats. Thus the drop in later years was natural, as the demand had dropped. Furthermore, streaming and internet radio services almost certainly began taking away sales that would have belonged to physical media. It is quite possible that overall sales are increasing, at the same time that physical media sales are decreasing and becoming obsolete and new forms of distribution are taking over. The fact that CD or DVD sales decline is not an important figure on its own, considering that as technology advances the format is rendered obsolete in the same way that floppy disks and vinyl are no longer common delivery formats and therefore have low sales figures.⁷²

Additionally, one might also find it important to consider the effect of other forms of entertainment. Videogames for example are relatively new on the leisure scene, compared to music, and even film. Of course, videogame piracy is definitely also a problem, but the presence of videogames as a form of entertainment likely affects the sales of others, in that they dilute figures even more.

⁷⁰ The Verge. "Game of Thrones' director David Petrarca shurfs off piracy, says it doesn't hurt the show", 27th February 2013.

⁷¹ Oberholzer, Felix. 2004.

⁷² Ibid. reference 71.

Finally, piracy can be beneficial with regards to software, especially from a historical point of view. Many old programs would be lost forever by now if it wasn't for piracy (and many are, due to old copy prevention methods). Floppy disks used to be a popular form of delivery for computer software, but there is a catch; they only have a lifespan of 30 years maximum in optimal conditions. They were first used in the 1970s, so as of 2013, they have been in use for well over their lifetime. The first programs released on them would be effectively gone. Early software pirates helped back up copies of early software so that they can be used today. Floppy disks are just one example. Game cartridges from early game consoles share a similar story.

5. Strategies for Combating Piracy

Having discussed the effects of piracy, one can see that it is difficult to really gauge whether it is definitively helping or harming the industry. Most likely it is a bit of both. So to mitigate the problems, publishers, artists, companies and entrepreneurs have come up with a great variety of strategies that vary from defensive measures to embracing change.

5.1. The Law

The first step in countering piracy was the creation of laws to protect copyright, as explained in the introduction of this essay. What began with the Statute of Anne has culminated in a collection of national and international laws and agreements that facilitate copyright protection and piracy prevention worldwide.

The Berne Convention for the Protection of Literary and Artistic Works (1886), the Universal Copyright Convention (1952) and the World Intellectual Property Rights Copyright Treaty (1996) are examples of international agreements that defend copyright. The internet is a worldwide tool, so the importance of these treaties cannot be underestimated.

It is worth mentioning Creative Commons, which is a non-profit organisation that offers free licenses to protect copyright and enables anyone to share creations online with legal protection. Creative Commons provides different levels of licensing to allow for legal sharing, copying and editing depending on the authors choice. This affords the creator protection without hindering distribution.⁷³

Although there are international treaties, many countries still have their own laws specific to copyright and piracy. For example, file sharing is technically legal for personal use in Spain. In other words, one cannot be punished in the eyes of the law for downloading copyrighted material as long as it isn't redistributed or sold for profit.⁷⁴ A new law due to come in to effect in 2014 will punish website owners who make money while permitting downloads but still leaves personal file sharing exempt.⁷⁵ The Netherlands⁷⁶ has similar legal provisions and Canada has not specifically outlawed file sharing, although a decision that considered it legal was repealed and the law remains open.⁷⁷

In the United Kingdom and the United States of America internet users can legally be punished for file sharing. One case in the UK resulted in a woman being fined £2,500 for her daughters' illegal downloads.⁷⁸ In America, the RIAA and MPAA have both filed lawsuits against internet users for file sharing. Around 30,000 individuals have faced litigation since 2003 for sums reaching into the thousands of dollars for single songs.⁷⁹

Recently anti-piracy organisations have steered away from targeting individual users. It can be difficult to find incriminating evidence of illegal activity, or at least definitive proof. In addition, going after individual users is a time and resource intensive process that reaps very little gain. The vast majority of defendants cannot afford to fight large

⁷³ Creativecommons.org.

⁷⁴ Sentencia número 67/10 del Tribunal del Juzgado Mercantil número 7 de Barcelona, 12rd March 2010.

⁷⁵ "Spanish Pirate Site Owners To Get 6 Years of Jail Time, But Users Off the Hook", 21st September 2013.

⁷⁶ "Dutch Parliament: Downloading movies and music will stay legal". 24th December 2011.

⁷⁷ "BMG Canada INC., EMI Music Canada, a division of EMI group Canada, Inc.; Sony Music Entertainment (Canada) Inc., Universal Music Canada Inc.; Warner Music Canada Ltd et al against John Doe, Jane Doe and all those persons who are infringing copyright in the plaintiffs' sound recordings". Federal Court of Appeal, Government of Canada, 19th May 2005.

⁷⁸ BBC News "Mother to settle web music charge". 20th August 2005.

⁷⁹ Wired Mazine. "File sharing lawsuits at a crossroads, after 5 years of RIAA Litigation", 4th September 2008.

organisations and in most cases they are unable to pay the amount they are being sued for. In one case, a mother of three was sued for \$222,000 for sharing 24 songs, an amount that is considerably larger than the average person has at their disposal. This causes many cases to settle out of court (such as the cited case in the UK) for lower amounts. Quantities so low are almost insignificant to companies in a multi-million dollar industry. Furthermore, studies show that lawsuits against individuals do almost nothing to halt the rate of piracy. They simply aren't worth the trouble.

Now, most litigation is focused towards preventing distribution and those who permit it on a large scale. One of the most famous cases of recent times was the takedown of 'Megaupload', a file hosting website owned by Kim Dotcom that had, when it was active, 50,000,000 views a day over its various services and accounted for a staggering four per cent of worldwide internet traffic.⁸⁰ The shutdown was controversial. The legality of it has been contested and in the process many thousands of legally hosted files were also lost. Moreover, the effectiveness of the action is unclear. The successor website, 'Mega', was launched in January 2013. As with any instance of shutting down a website, another will quickly pop up and by the time that one can be dealt with, yet another will have appeared.

5.2. Network Management

Closely related to the legal aspect is the topic of network management. If a user can't be encouraged not to download by the threat of punishment, then another option is to block the user from accessing the means that allow them to do so.

The most common cases involve publishers getting ISPs (Internet Service Providers) to block certain websites and internet addresses so that users are unable to access them. Some governments do this themselves by having a country-wide internet filter. Turkey has one that, as of April 2013, blocks over 29,000 websites.⁸¹ The filter is used to block a number of websites, including certain news sources, websites containing pornography and other controversial material along with many websites that breach copyright infringement. Perhaps the most famously known example is China's "Great Firewall"

⁸⁰ The United States of America against Kim Dotcom, Megaupload Limited et al. United States District Court for the Eastern District of Virginia. 5th January 2012.

⁸¹ Freedom House, 2013.

which started operating in its current state in 2003 and also blocks similar content to Turkey's filter, but on a larger scale.

Even countries that don't have a national internet filter sometimes block access to entire websites. Very recently a court order was issued in the UK ordering that all ISPs must block a list of 21 that provided access to illegal downloads of music.⁸² One of the most popular torrent hosting sites, ThePirateBay.com is blocked in many countries, ranging from the UK and Italy to Malaysia and China.

These blocks are mostly put in place at the request of anti-piracy groups and media organisations via court cases and trials. In some cases, the ISP tries to fight back, as did Telenor in Norway when the IFPI (International Federation of the Phonographic Industry) tried to get them to block The Pirate Bay.⁸³ Telenor stated that it was undemocratic for the entertainment industry to give it orders.⁸⁴ Other common reasons blocking is opposed is claiming that it is a form of censorship and that it will reduce subscribers.

In theory, blocking offending websites is a good strategy. By preventing users from accessing illegal distribution channels, they should be forced to use a legal method to acquire media. In practice however, internet filters rarely work and do almost nothing to stop piracy. They can be bypassed easily by various forms of technology, software and tools readily available to even the least experienced computer user. The Pirate Bay released its own tool for circumventing ISP blocks, called Pirate Browser, in August 2013. It is a stand alone internet browser that requires only simple installation to work and has already been downloaded over one million times.⁸⁵

When the High Court in the UK ruled ISPs to block The Pirate Bay, two interesting things happened. First of all, on the 1st of May, the day after the ban, the website reported having 12 million more hits than usual (probably partly because of the Streisand effect⁸⁶).⁸⁷ Secondly, in the days after the ban, one ISP recorded a reduction of 11 per cent in file sharing traffic (after a rise before the ban) which later returned to

⁸² Wired Magazine. "Pirate cull: UK court orders ISPs to block 21 file-sharing sites". 29th October 2013.

⁸³ "Norwegian ISP Fights Back Against Pirate Bay Ban". 13th July 2009.

⁸⁴ "Pirate Bay block violates democratic principles, ISP says", TorrentFreak. 10th July 2010.

⁸⁵ The Enquirer. 21st October 2013.

⁸⁶ An effect whereby the result of an attempted removal of information is that it becomes more publicised.

⁸⁷ Cnet. "Pirate Bay claims record number of visitors following ISP ban" 4th May 2012.

normal levels.⁸⁸ It is also mentioned that The Pirate Bay fell from its place in the top 50 websites down to number 282.

The conclusion to these events is that although the block reduced somewhat access to the website (while creating more publicity for it), peer-to-peer file sharing traffic remained effectively the same. Blocking one website isn't enough; even blocking 20 has little effect. One would need to block them all, which still doesn't account for the various methods that can bypass it.

5.3. DRM

Digital Rights Management tools are important for the publisher to maintain control over the released product. They aim to hinder copying and illegal use by preventing the user from copying the files without authorisation, using them without the right access code (most commonly used for software and videogames) or using them with third party software.

iTunes initially used DRM to protect music downloads from its store, but transitioned to DRM-free music files in 2009.

The DMCA (Digital Millennium Copyright Act), passed in the USA in 1998 contained provisions for penalising the distribution of methods to circumvent DRM. In 2001 the EU Copyright Directive was passed, concerning similar issues as the DMCA in the US.

The use of DRM is controversial, as discussed earlier. DRM does not always decrease piracy and can even contribute to an increase. Some users are pushed away from buying the legal product because of the inclusion of DRM, when it can be downloaded easily (but illegally) without. The effectiveness of DRM depends on the media it's used with.

5.4. Education

Arguably one of the most effective ways to reduce piracy is to educate people about the harm it can cause and the benefits of buying media legally. The main issue lies with the misconceptions young people have about downloading. The effects of piracy are not as

⁸⁸ BBC News. "Pirate Bay block effectiveness short-lived, data suggests", 16th July 2012.

immediate as stealing from a shop and in fact it isn't always clear if a download is illegal or not. The line blurs even further when sharing between friends is considered, for example, is a teenager letting a friend borrow a CD, who then copies it to his computer illegal? This question may not be clear to them.

There is an issue with anonymity as well. Stealing someone's mobile phone has clear implications. They are being deprived of their phone and the process is very personal. With file sharing however, the user isn't dealing with anyone in particular and most of all isn't taking anything away from a person they have right in front of them. This creates a disconnection from reality.

Public awareness programs aim to deal with these misconceptions. One such example is the sequence initiated at the beginning of DVDs, thought up by the Motion Picture Association, which compares piracy to theft, titled: 'Piracy, It's a Crime'. The campaign features statements such as "You wouldn't steal a car" and "You wouldn't steal a handbag".



Source: Cinema Public Warning

The advert has been parodied many times and criticised as absurd by some. Once popular on DVDs it has now been superseded. Eddy Leviten, the head of communication at the Federation Against Copyright Theft, said: "If you paid for a DVD why should you have to sit through adverts that say you might be a criminal? At the time it was effective. Pretty much everyone has seen it."⁸⁹

⁸⁹ BBC News. "Getting inside a downloader's head", 19th June 2009.

Newer campaigns seek to achieve better results using famous actors and actresses in a bid to show young people why they should pay for legal content.⁹⁰

Now, a non-profit organisation called the Center for Copyright Information, supported by the Motion Picture Association of America, is proposing a school curriculum for kindergarten and young students up to sixth grade centred on teaching children the importance of protecting creativity and copyright.⁹¹

Initiatives like these are not short term solutions, it will take time to educate young ones and subsequently have them grow up with what they have learned, but they probably provide the most effective solution to countering piracy in the future, aside from changing the industry greatly to adapt.

The other problem with this strategy is that it is not reliably predictable. Educating new generations is costly, takes time and may not result in a significant reduction in file sharing. Additionally, technology will definitely change during the time it takes to change public opinion perhaps nullifying the effect. In any case, while it is unlikely to eliminate piracy altogether, it should improve the situation.

5.5. Adapting

It has been demonstrated that it is not an easy task dealing with piracy. Most strategies don't work very well or only have a small effect. Markets and industries change over time, old systems die out or become ineffective, new ones are created. The internet has triggered a massive change in many aspects of society and business, including media, and it is here to stay. The persistence of piracy forces companies to adapt rather than purely fight it.

There are a few ways to adapt. One of them is to reduce prices to encourage more purchases and to allow more people to buy who otherwise would not have due to cost. However, this is not ideal. First of all, lower prices will mean lower revenues to the point at which they may not cover the costs, unless significantly more sales are made.

⁹⁰ The Guardian. "Anti-piracy campaign amis to win over Gneration Y-pay of internet users"., M. 7th September 2009.

⁹¹ Los Angeles Times. "MPAA backs anti-piracy curriculum for elementary school students", November 2013.

Secondly, it doesn't deal with the main problem, which is availability. Lowering prices might increase sales marginally, but not if the customer can't access the product.

Fully utilising the internet and the abilities it offers for distribution is the most successful way of adapting to the changes caused by piracy. These are the stories of iTunes, Netflix, Steam, Spotify and similar services.

iTunes 1.0 was released in January 2001, but it wasn't until 2004 that the iTunes Store was opened and support was added for Microsoft Windows operating systems. Since 2008 the store has been the number one online music store in the United States⁹² and since 2010, the biggest in the world.⁹³ It reached that position having sold 10 billion songs.

iTunes initially started as piece of software that allowed people to manage their audio library and synchronise it with their devices (namely, iPods). The addition of the store gave users access to download albums and single songs over the internet. It was not the first service to offer music downloads, nor was it even the first online store. Napster's success at the turn of the millennium prompted music publishers to create similar services, to compete and control pricing. Sony Music Entertainment tried, but the service eventually failed due to reasons such as the price of individual tracks, which was \$3,50 (compared to iTunes now, which charges \$0,99) and the limited life of the files (they were effectively rented as the files expired after a certain time had passed).

Other early attempts were unsuccessful for similar reasons: high prices and limited usability. iTunes took off because of the affordability of the music and the ability to add it directly to compatible portable music hardware.

Netflix is today's equivalent of the DVD rental store. Users subscribe for a monthly fee, which then permits them to rent via internet streaming (or in some cases via post) TV shows and films. It is a great example of a successful adaptation to the market. DVD rental shops were successful in their day, but the internet was eventually responsible for their decline. Netflix offers a similar service, but over the internet, where people want it. It offers immediate access to a wide range of content for a very low cost. The downsides of Netflix were explained previously; the range of content is wide, but not quite wide

⁹² Apple Press Info. "iTunes store top music retailer in the US". 3rd April 2008.

⁹³ Apple Press Info. "iTunes store tops 10 billion songs sold", 25th February 2010.

enough in some cases and the service is only available in select locations. However, studies have shown that countries with Netflix availability experience reduced rates of piracy, so the model does work.⁹⁴

Other services similar to Netflix have sprung up. Lovefilm is popular in the UK, Hulu is another American streaming service, Amazon has its own called Amazon Prime and iTunes offers film and show rentals in addition to its music downloads.

Spotify is another variant on the legal distribution scene. Rather than provide downloads, it streams music in real time. Users can create a library of music, playlists and include a massive variety of content in them, all of which is not stored on the users computer, but on remote servers. This means that it can be streamed from any device that has access to the internet, forgoing the need to transfer or download files. In effect, it is a customised radio station. Spotify does also offer paid downloads. Premium users pay a monthly subscription fee, while limited free listening is supported by advertising. Currently, Spotify boasts over six million paying users, out of 24 million global subscribers.⁹⁵ Part of the revenues of course goes to the artists, who get paid depending on the amount of times their songs are streamed or downloaded. The topic is controversial, there have been complaints that Spotify doesn't treat artists fairly and pays them too little. However, the success of Spotify is apparent. In Sweden, Spotify now earns more for record labels than any other online or offline music retailer.⁹⁶

Pandora follows a model close to Spotify's, fulfilling the role of online radio, customisable by the user depending on their tastes, supported by the same payment options and advertising.

Finally worth mentioning is Steam. Steam offers the same as the above, but for videogames: a digital distribution service that now claims to have a market share of 75 per cent of legal PC game downloads.⁹⁷ Official figures aren't released to the public by the company, but some publishers have claimed that Steam accounts for the majority of their sales: for example, *Witcher 2* was sold 200,000 times on Steam, out of a total of

⁹⁴ Sturm 3013.

⁹⁵ Cnet News. "Spotify: growing like mad, yet so far to go", 12th March 2013.

⁹⁶ Wired Magazine. "Spotify now top-tier music revenue source in Sweden", 29th October 2010.

⁹⁷ WebCite. "Steam sells 4 times more witcher 2 copies than all competitors combined", 11th November 2011.

250,000 copies sold.⁹⁸ It isn't surprising; a Steam customer can have their game pre-downloaded ready to play on launch day without leaving their home, compared travelling to and from a physical shop to queue, hoping that the game is in stock. Steam offers convenience. Other similar platforms exist. EA (Electronic Arts, a videogame publisher) has Origin and some websites sell digital downloads.

Another way of adapting to piracy is to accept the change it produces and adjust expectations accordingly. Many musicians, instead of fighting piracy, are embracing it. Sales of CDs may decline and music downloads, although successful, might not bring in as much profit, but the real money is to be made on concert tickets and other merchandise, boosted by the spread of the music.

Finally, it is important to mention a new trend, demonstrated by the series *Videogame Highschool*. The creators found funding on Kickstarter, a website where a project is proposed with a budget and the public can pledge money to fund it. In return they receive extras such as DVDs, merchandising, credits or whatever the creator states. The series was then released on the internet via the website *Rocketjump.com* and with a delay on of the co-creators YouTube channels for free. This is an example of a new way to produce media, not bound by the old system.

Ultimately, what the consumer wants is the best and easiest access at the lowest cost. Digital piracy has both of those things, it costs nothing and almost anything is available. It fills a void in the market not satisfied by current distribution models. The internet is what makes this possible and the internet certainly isn't going away. Adapting to the change gives the creator the best chance of surviving.

6. Conclusion

Piracy as we know it is not a new phenomenon - it dates back to the beginning of copyright law. Initially piracy was a big problem but not for completely the same reasons as today. Early copyright law was basic and untested. International cooperation was low and it only covered a small spectrum of media and rights. As technology

⁹⁸ "GOG release The Witcher 2 sales stats. Steam dominates all competitors combined", . 11th November 2011.

progressed allowing for more creative mediums and distribution channels, copyright infringement became an even bigger issue to control. The largest impact, however, has been the technological revolution experienced during the end of the last millennium and the beginning of the current one. The advances happened so fast the legal protection and the industry haven't been able to keep up, and according to some opinions, they still haven't.

The basic causes of piracy can be summed up into two words: customer dissatisfaction. Piracy fills a gap in the market that isn't covered by industry professionals. Or at least it did; now some companies are taking advantage of the situation to flourish. Some of the most successful businesses since the turn of the millennium are those that have embraced head on new technology, that have adapted to the times they work in and ultimately deliver a quality service to the customer. That is not to say that this wasn't the case in the past but the change has been rapid. Selling ice used to be a huge industry, netting its traders a handsome chunk of profits, but that was before the fridge-freezer became a common household appliance and after it did the ice trade was not worth it anymore. The point is; the old system the media industry operated on is becoming obsolete. Physical media is less in demand, people are becoming accustomed to paying less and ultimately the way funding and profits work is changing. Online retailers are more popular than ever, replacing in store sales. Profits may not come from sales of the actual product, but from secondary sources such as concert and event tickets in the case of music or merchandising and license fees for films. Even videogames are changing, some are released as free2play. They cost no money whatsoever to download and install, but if you want to have an advantage over your competitor or possess a certain aesthetic item you must buy it in game, from which the creator makes money.

Sometimes piracy is only exasperated by the industry's attempt to stop it, as is often the case with intrusive DRM tools or region locks. That said, with the right strategy, the industry can fight back. Services like Netflix have proved that if you give the customer an affordable way to reach what they want with great convenience then file sharing will decrease. Customer satisfaction is important. They need to feel good about the service they are using. They need to feel that the company deserves their hard earned money. They don't want to feel like criminals if they are taking the legal route. In fact, peer-to-peer traffic in the US has dropped by 20 per cent in the last six months. Europe however has not seen such a decline. Could this be due to Netflix and its companions,

which are largely unavailable (or at least incomparable in content and popularity) in Europe? Netflix and Youtube traffic accounts for a staggering 50 per cent of internet traffic.⁹⁹

All of this assumes that piracy is doing harm to the industry. Undoubtedly it is doing some harm but the extent is difficult to determine and the figures often aren't accurate. Studies have found occasional benefits to piracy. Does this mean piracy is alright? Not necessarily. It just means that perhaps a different approach and attitude is needed.

There is still a lot of work to be done. The rate of piracy varies greatly across the world. Particularly developing countries suffer excessively high rates of copyright infringement; China and India are good examples. They have an 82 per cent and 69 per cent piracy rate respectively, compared to 20 per cent in the US.¹⁰⁰ Reducing those rates to manageable levels would require big, time consuming cultural and social changes.

Beating piracy requires multiple actions, not only fighting it but adapting to it. It requires embracing change, finding ways to compete with it effectively, educating people properly on the realities and effects of it, and updating legislation as technology develops and society progresses.

This project wasn't meant to take any particular side. The piracy debate can go on all day without a winner. What it does aim to do is ask questions. Why does piracy exist? Is piracy an issue? Why is it? Is it purely a problem or also beneficial? Digital piracy deserves a lot of critical thinking. Younger generations probably accept it as part of daily life and don't realise what the wider implications are, but similarly, some professionals or lawmakers who have are in the business or are related to it often don't completely understand it, as is the case often with new technologies and older generations.

As professionals of the audio-visual industry, it is up to us to really understand piracy and most importantly know how to take advantage of what the market and future offers, rather than get bogged down in the old ways.

The future is hard to predict. Piracy will always be present; there is no doubt about that, but with more content readily available every day and technology fully taken advantage

⁹⁹ BBC News. "Decline in US BitTorrent traffic, says study". 12th November 2013.

¹⁰⁰ Fifth Annual Business Software Alliance and IDC global software, 2007.

of for legal distribution, plus a revised attitude towards the problem, piracy will become less of an issue. The creative industry still thrives, decades after piracy really started threatening it, it just may be a different industry than the one it was before.

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