

2018

## Project 2746

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### Recommended Citation

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*Project 2746*

An Honors College Thesis

By

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Fall, 2018

Film

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12/10/2018

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## **Abstract**

In the 1990s, the world was introduced to the economic threat known as Internet piracy. It affects the copyright owners because they end up losing money that should have been spent on their product. This led to a long battle of online piracy between the pirates themselves, copyright owners, and governments around the world. Some even began to have a moral debate on piracy, asking themselves if it is really as heinous as people make it out to be or if it could help boost that product's popularity and revenue. All of this information was taken and composed into a short narrative film which questions the history and ethics of Internet piracy.

## **Introduction**

There have been several different films with the theme of piracy, but none of them are about modern digital piracy. Digital piracy isn't something that is frequently reported on the news, because there are a lot bigger problems in the world going on, but there should be some form of awareness to online piracy. *Project 2746* was created to educate and inform the viewer of what piracy can and possibly will do as technology gets more and more complex in the coming years. It will utilize documentary-like elements but it will be a feature film. The ideas in mind when it comes to the documentary comparison is an examination of several topics such as artificial intelligence, piracy, and the human-technology connection that has inhabited the world ever since it's dawn. Piracy is the main topic at hand but this film will explore human nature and technology's effects on it. As the Internet was considered a "new frontier" in the 1990s, the world has never been the same since, and this includes piracy. With the Internet, more lanes and opportunities for piracy has arisen and multiplied. It has gone to the point where more and more companies began to encourage people to buy their product instead of installing it from an unauthorized leak. In the early 2000s musicians have suffered from having their albums leaked weeks, even months before the slated release. This is one of many examples on how rampant piracy has become after the Internet's beginning.

This essay will be a commentary on those themes as well as a making of story of the film and how the film connects back to those themes and articles. A history of online piracy will be explored along with further comparisons with non-digital piracy. Along with that, artificial

intelligence and its possible links to internet piracy, the inspirations behind *Project 2746*, and the actions that can be done to fight back against piracy will be discussed. The stories of real world piracy will also be compared and contrasted to the film itself and will also be used as inspiration in order to add more realism to the film. Along with being compared to the elements of the film, it should provide some insight and information of the past, present, and potential future of piracy and what can be done about it now.

*Project 2746* shows piracy at its absolute worst in a fictional yet grounded to reality environment, as an artificial intelligence app grabs files throughout the Internet, reposts them, and multiplies itself. This also shows the abyss the Internet is, as files can be copied and pasted from several different hosts and servers. This is an opportunity that could never physically happen with non-digital piracy, which shows how much the world has changed. Files are easily manipulatable and can be very easily obtained, while physical piracy requires a lot of manpower and resources. All modern digital piracy needs is a device with a web browser, a phone, a computer, or now even a television. It's easier to many people than paying for the content. It has gotten very simple over the years due to new technology coming and the old methods and tech being mostly left in the past. According to a report from Forrester, after the year 2015 there has been over 2 billion computers sold around the world and over 2 billion smartphones according to SMS Global. Nearly a third of the Earth's population owns some kind of computer device. This makes piracy very open for users. If everyone with a smart device or computer decided to pirate copyrighted material, it would be a major financial loss of whichever studio and could possibly cause it to declare bankruptcy. The rise of these devices created more means of communication

but that also means it created more crimes and methods to commit them whether in the real world or the digital one.

## History of Piracy

Before the Internet became the new home for piracy, the Golden Age of Piracy in the 1600s was the biggest pirate event. This kind of piracy is vastly different from the one that is often heard about on the Internet. This time period is when iconic figures in piracy such as Cheng I Sao and Blackbeard were active and when ship piracy was at its most active. Piracy was a very commonplace thing for some parts of the world at this time. Piracy was so commonplace that there were havens for pirates, called pirate utopias which kept the pirates safe from the law enforcement and other sailors coming out to get them. The pirates mainly stole from other ships or collected treasure from islands in order to be more wealthy or powerful. The Golden Age of Piracy created novels such as *Treasure Island*, films such as *Pirates of the Caribbean*, and various other forms of media. After this Golden Age of Piracy, a second Golden Age occurred during the dawn of the Internet. Traditional piracy went on to continue to recent times, but it ended up meeting its end in 2013 due to the increasing anti-piracy operations.

In comparison to the current age of piracy, several elements from the original Golden Age of Piracy wouldn't be possible to happen today. One of these elements that would be impossible are the pirate utopias. They wouldn't be able to be revived on the Internet due to the fact that the government has a complete presence on the Internet. Bills such as George W. Bush's Patriot Act give strength to law enforcement on the Internet in preventing and stopping cyber crimes and potential attacks from happening. Bills like this are enough to make sure no area is safe on the Internet for any type of crimes. The bill was meant for seeking potential terrorists but

ended up being used in scenarios for seeking other kind of criminal activities cyber crimes. Traditional piracy is a form of piracy that is extinct but Internet piracy is one that is rising rapidly. A major difference is that with traditional piracy, goods are taken for the pirates or sold for profits or sometimes to be traded off to somebody else. Internet Piracy has the data taken and reuploaded to another source where people can obtain it free of charge. In the Golden Age of Piracy there was no such thing as hosting and copying and pasting, all of that would defy the laws of physics. The Golden Age of Piracy wasn't able to reach the heights of Internet piracy as it required a lot of manpower as boats needed to be built or taken and navigation around islands required a lot of effort. All it takes to pirate on the Internet is just one person, and a computer or computer-like device. It's less costly and time consuming than stealing from other ships. This is why traditional piracy has went out of fashion for years, as it is much easier to take just files instead of physical materials.

The only resurgence of traditional piracy now is the piracy in the Horn of Africa, but it is decreasing overtime. People are putting in more measures to prevent ship theft and hijacking from occurring in order to protect the sailors and the goods they are delivering. The US Office of Naval Intelligence has reported 0 piracy related attacks and thefts in the Somalia region in the year of 2013. This is the kind of progress and change that wasn't able to occur in the Golden Age of Piracy due to technological limitations and the manpower involved. The modern technology used in the recent days and increased surveillance methods is one of the main causes for the halt of piracy. It would take decades of hard work from the law and copyright protectors to achieve a

goal of 0% piracy in a year for the Internet. It is a hopeful goal to accomplish, but one that will take a lot of effort and dedication in order to get through..

One of the major events from online piracy that is intriguing and influential to this project is the A&M Records vs. Napster case from 2001. Piracy on the Internet was extremely scarce and Napster was the first website to introduce it to the world on a broader scale. It was the first major court case that introduced copyright laws for Internet media and the first major file sharing program on the World Wide Web. Napster is a file sharing website that included a main server with every file on it, which made it very simple for a user to search for a song or album that they wanted to have. Many record companies united against Napster because of unclaimed royalties and copyright infringement. If the trial didn't happen, Napster could be the world's largest file sharing base with any file the user could want. Napster is found that they could be liable for copyright infringement depending on the file. Napster ended up shutting down briefly after the whole lawsuit but was later bought out by Best Buy. This was the first major victory for the entertainment industry in the Internet age, but things only got worse after the fall of Napster. The Napster case is what began the Second Golden Age of Piracy, as many other services such as The Pirate Bay and Megaupload began to appear in its wake.

After the death of Napster as a file sharing service, many others began to follow in its footsteps. The idea that when one website or service shuts down, at least one more takes its place. It influenced the climax of the film 2746 multiplies itself and spreads all throughout the Internet. Sometimes the file hosts are prepared for shutdowns by backing up their files onto a

completely different server for them to repost at another time. The file index Putlocker uses this strategy as it constantly switches domains and edits its address so that it is harder to track down. One of the few ways to stop is if the server is manually shut down from law enforcement or by the host's choice, but even then someone else could have the website and all of its material backed up and ready for relaunch.

Because of the effects of Napster, record companies looked into piracy and began realizing that they were rapidly losing money. The loss in money got worse and worse by the year. Cross section evidence was used in a study in order to show that the music industry is losing money because of illegal downloads. With the record company surveying the activity on download sites, they were able to see their losses and wanted to get the lost amount of money due to piracy. This is what led into the first major internet piracy lawsuit, *A&M Records v. Napster*. After this, other companies looked out for pirates as they also wanted the money to recover from their losses. This led to war between copyright owners and pirates that post content on the Internet. The Internet piracy war currently has no hint of a possible conclusion or way to end it.

The *Recording Industry v. Diamond Multimedia Systems* provides more historical information regarding the rise of piracy, even though it happened long before the Internet became common. The case stemmed from the Rio digital audio player not having a Serial Copyright Management System. They tried to use the Home Recording Act of 1992 to hold Diamond Multimedia Systems accountable, but since it did not have an SCMS (Serial Copyright

Management System), it could not fall under that act. It can be stated that this verdict went on to show that with the digital age, data can be cloned and misused in a variety of ways. This case is not as important or impactful as the landmark Napster trial, but it introduced many people in law to Internet piracy and shows them what can be done with digital files. Before digitalization occurred to music and movies, movies were recorded and copied to many different cassette tapes while music was more or less the same but with records and discs. These methods were a lot more complicated and used a lot more time and resources than a simple download or copy paste from a computer or smartphone.

## Statistics

The research done from the business website BrandonGaille and the numbers and statistics show that piracy is very widespread and very common in the world. Ever since 2000, when the Internet was still in its early stages and had slower connections than today, the bandwidth used for illegally downloading licensed content has increased by over 160%. As of 2017, it is estimated that at least 375,000 jobs are lost annually in the United States because of piracy and sales losses are estimated to be around \$25 Billion. These numbers show the size of the issue at hand.

The Business Software Alliance takes annual studies on software usage and piracy. Research is done on the percent of unlicensed, pirated software compared to the purchased copies with proper licensing and the value of the software in its retrospective year. All of the global software prices are added into a single sum for each year. The information displayed shows that there has been a decrease in piracy from 2011 to 2017. In 2011, both the software price and its rate of piracy were at their highest, with the combined prices of the software at \$63,456 and the rate of piracy at 42%. In 2017, the combined prices of the software is \$46,302 and the rate of piracy was at 37%. The research implies that the higher the price of a file or software, then the more likely a user will pirate it. This scenario is a victory for both the customers and the content creators, as customers end up paying for a reasonable price to them and content creators start seeing more money come in.

The 2018 survey also says that Central and Eastern Europe and the Asia-Pacific are both tied for the highest rate of unlicensed software use at 57%. The commercial value of the unlicensed software in Asia-Pacific is worth \$16.4 Billion, with \$6.8 billion alone coming from China. For Central and Eastern Europe, the commercial value is \$9.5 Billion. The statistics of piracy in the Asia-Pacific implies that countries with many people are more likely to pirate, as China has over one billion people, the largest population in the world.

With these statistics, it may make the future seem bleak and hopeless for people that want to protect their assets from piracy. Piracy will always be a problem as long as the Internet is present, but there can be actions done to decrease piracy as well as slowing it down.

## Actions Against Piracy

Piracy is taken seriously by several unions and copyright owners. They have a plethora of methods and ways to remove their content from the free Internet and pursuing legal action against the perpetrators. It's also possible for copyright owners to hire a cybersecurity force to do all this work for them, but some choose to enforce copyright law by themselves.

Many tend to send cease & desist letters or take the perpetrators to court. Typically the ones that are taken to court are the website hosts or the ones that downloaded a large amount of files in question.

Some websites can detect copyrighted media before upload and immediately shut it down. YouTube is a controversial player in the game, as they can sometimes contradict themselves when it comes to piracy. YouTube has created a program titled "Content ID" that can detect several different copyrighted properties. The Content ID system is even branching out to YouTube users that upload their original content so that no one will infringe on them. This system is the most ideal as no one is getting hurt from this practice and copyright owners don't get to have their media illegally uploaded. The system matches an uploaded video with the copyrighted material and gives the creator options. The only thing is that Content ID is not associated with the DMCA in any way. Even though the Content ID system is the near perfect system for blocking out piracy, YouTube comes off as contradictory because it contains several plagiarized videos and content. Plagiarism is completely different from piracy but it is also

something that should be noticed and discussed more. YouTube users accuse each other of stealing their layouts, video ideas, jokes, and many other ideas. YouTube isn't intensely monitored like Hollywood or the music industry in that aspect, making them more vulnerable. YouTube is similar to the wild west, as almost everyone can get away with plagiarism on the website and there are no harsh repercussions for it. The model of the Content ID is a near perfect one that can truly defend the copyright holders and their properties. The program is also trained to recognize day to day images in order to track down another stream in case the network logo was not enough to warrant a takedown notice.

The YouTube Content ID model is also used by many other sources to block out piracy. Irdeto searches the Internet for illegal streams of sports games and events by using an A.I. program that could recognize and track down logos from cable and satellite TV networks, as the sports events are ripped from the television. If this program begins to takedown original, non-copyrighted content or content that belongs to the copyright owner, that will be very problematic for all parties. This AI has no complaints or conflicts on the record involving the AI accusing the non-guilty people of holding copyrighted property. It would be much preferred if kept this way because as mentioned in *Lo and Behold*, AI can be capable of starting all out cyber-wars depending on its responses to its commands.

## **Shapes and Forms of Online Piracy**

Napster has handled individual lawsuits from the music artists themselves and removed their music from the database entirely after complaints, but Napster wasn't finished until the massive lawsuit it had in 2001. The lawsuit ended up being the nail in the coffin for that company, as Napster failed to gain back its popularity afterwards. Best Buy ended up buying out Napster and converted it into a legal music streaming service like Spotify. Napster's successors are considered to be Limewire and The Pirate Bay, as both services began carrying massive amounts of files that can be shared in between networks like Napster. Limewire has been discontinued completely after multiple legal troubles while The Pirate Bay still continues today after lawsuit after lawsuit. The Pirate Bay is also one of the heavyweight, if not the biggest piracy network for music, movie, and other files on the Internet and of all time.

Out of all of the piracy websites, The Pirate Bay is the one website that lasted the longest and got the most attention, mainly due to the controversies. The Pirate Bay is blocked in many countries such as China, Germany, the United Kingdom, and Russia. Facebook has even blocked the links that take users to The Pirate Bay from their website. The Pirate Bay has even been raided by law enforcement and had their servers and computers confiscated. Even after that, The Pirate Bay quickly reopened with everything intact. The Pirate Bay is possibly the most well known of the file sharing websites due to its controversies and vast amount of files where users could obtain just about anything. Websites like Megaupload also were famous but they ended up

shutting down while The Pirate Bay is able to maintain their servers dodging controversy after controversy. Its sister websites such as Megaupload fail to last as long as The Pirate Bay does.

Along with file sharing websites, there are also indexes. Indexes are massive libraries that hold several files and their sources. In case one source doesn't work, there is always a secondary or third source to retrieve or stream the file. One example is the website Putlocker, which has been rising in the amount of users and files over the years up to the point where the MPAA considers it to be a major threat for cinema. The original Putlocker website was put offline, but multiple clones have been created that contain all of the same files and more. Not only can the original host create backups, but so could the regular user that accesses those websites and has the knowledge of cloning websites. One of the reasons why they were able to get away with this website without controversy is more because it is an index that directs people where to go to retrieve a certain file and not a website that hosts the files. These websites are mainly used for streaming and watching illegal versions of films, not only downloading them. Putlocker is like Netflix but it hosts pirated movies and television shows.

Those are the many different varieties of pirate websites and their impact on the Internet and culture itself. As time went by, piracy just started getting more and more rampant. *Project 2746* uses the history and websites in order to create the lead antagonist, 2746 itself. 2746 is a hybrid of The Pirate Bay, Putlocker and Limewire. It starts off as an application like Limewire but once it reaches self-consciousness, it introduces itself to the Internet and becomes the biggest file service there just like The Pirate Bay. Compared to Putlocker, it creates several clones of

itself after getting shut down. It takes the strengths of all of these websites in order to create a monster of its own. Another piracy source that can inflict a lot of damage on the industry is YouTube download websites. These websites are damaging because the user can download YouTube videos in any audio and video format. The people that get hurt the most from this are the ones involved in the music industry, since YouTube is beginning to come a big source for music.

Not only is YouTube getting hit but also other websites such as Soundcloud have illegal MP3 conversion websites available for them. A website like Soundcloud is more vulnerable than YouTube because it is where many people go to post their original music in hopes of getting publicity or the attention of record deals. The downloads hurt them because they lose the publicity by missing the streams, and royalty payments. The current reality of piracy for up and coming musicians is one that is bleak from poor streaming sales and their music being taken from various forms of piracy.

The video game industry is also one that has been hit with a large amount of piracy and had to make their copyright policies incredibly strict for the individual companies. Files of games for older systems such as the Super Nintendo Entertainment System and the Sega Genesis were put online for download, as they were called read only memory files (ROMs). These ROMs were played on emulators that could emulate the console in mind. The hosting of ROM files on websites were problematic for companies as they lost their share. The people that upload and download the ROMs double down on their decisions by saying things such as “These games are

very hard to find and expensive” or “The original creators wouldn’t get their fair share if I purchased the same game digitally). These are all valid points, and makes the situation for gaming more difficult than the one for films and movies. Downloading and uploading ROMs is undoubtedly piracy but for older games, the people that worked on them possibly could not be paid as overtime companies shut down and had new employees over the years. Select titles from before can also be sold for unreasonable prices as those games have become collectors items for over the years. The prices are especially high if the games are unavailable for recent game platforms.

Another side of the gaming industry is their overprotection of copyrighted assets. Some fans of certain games want to do a fan version or remake of it but the companies are quick to shut them down. Sometimes these projects are not-for-profit and purely made as modern recreations of their favorite titles. In copyright law, it is illegal to use a property without the company’s permission. What the fans were doing was harmless, but it still causes conflict among them. This debate is the most polarizing of all of the ethic related debates on media, copyright, and piracy. It can be argued that there was no ill will in using the images but it also goes against a company’s piracy law.

## Copyright Holders & Law Enforcement Against Piracy

When it comes to the fight against piracy, many governments and ISPs are taking very drastic actions. Australia managed to take it as far as shutting down certain parts of the Internet. With net neutrality down, ISPs can be able to decide which websites their customers can visit and which ones they cannot. Some call this censorship but it could potentially help in the long run. A way it could help is that copyright owners could contact ISPs and tell them to block out websites that host the pirated files. Others may think that it could help stop not just piracy but other cyber crimes in the process. Also in Australia, they intend on suing “any individual that continues to download pirated content”. This would make some users uncomfortable enough to avoid piracy altogether, as they’ll face a lawsuit against entertainment industry producers that will most likely win the lawsuit. The thing that can be problematic about these aspects is the approach. It seems that the companies don’t appreciate it when the fans and players want to express their gratitude. In rare situations, they recruit the people that build the edits for the games into working for them.

What studios are doing to combat piracy is also something that should be looked at. Several film and television studios have created unions to protect each others licensed files from theft and that they could potential earn back some of the money. One that comes to mind is the *Alliance for Creativity and Entertainment*. Netflix and Amazon teamed up to further enforce the copyright laws. If these unions were created in the mid 2000s, a lot more progress would have been made. It is a step in the right direction for copyright law and the entertainment industry as it

combines the biggest powers for a common goal. The continent of Asia has done the same thing but it is called the Asia Video Industry Association (AVIA) A movement like the *Alliance for Creativity and Entertainment* will instill fear in those that pirate and can and will dish out major consequences. What can make movements like these even stronger is if they united with major websites such as Google and YouTube. in order to fully stop piracy. Google is able to prevent certain websites and domains from showing up in their searches. This would make it a lot more difficult for would be pirates to obtain the pirated content and also shuts out potential future options. If this were to happen, it can cause controversy as people would accuse Google of “censorship”, as a controversial but failed bill tried to do something very similar.

A controversial proposal, the Stop Online Piracy Act (SOPA) was suggested in 2012 in order to be a full on halt for internet piracy and illegal downloads and uploads. It went the extra mile and decided that streamers should also be punished, facing potentially 5 years in prison. Those in favor of the bill at the time said that it would do well when it comes to protecting copyrighted content and gave more power to law enforcement and copyright law. Those that opposed the bill stated that SOPA would be capable of censoring the Internet as a whole and it would delete domain names from all of the major search engines. This bill never went through. China completely controls their Internet banning things such as Facebook, Google, and even the beloved Disney character *Winnie the Pooh*. What is currently happening on China’s Internet could have possibly been America if SOPA was passed. Only the illegal websites should be blocked off, but the rest of the Internet should remain free as it is.

After the failure of SOPA, there have been many other applications to fill its shoes, and they turned out to be exactly what Internet users feared what SOPA would end up doing. The Association of Independent Music (AIM) is an organization that features over 700 independent music labels from the UK. They formed an alliance with MUSO, which tracks down illegal pirate links and file distributors. On the first month of their collaboration, MUSO claimed to have taken down over 5 million links from Google search engines. It turns out that the “removed” results were not in Google’s search index. The fears come from a service removing search results from Google rather than actual pages of piracy. Another reason for the failure is that MUSO failed to find actual piracy in their supposed takedowns. The MUSO program is a model of what anti-piracy organizations and applications should avoid being.

Out of all of these strategies being listed, mega-company Apple has the right idea on what to do in order to prevent content from being pirated. They add a DRM (digital rights management) code to purchased movies and television shows from iTunes. This prevents the files from being edited and uploaded anywhere. If they can apply this to music files, then this can be history in the making for those that seek to protect their content. Similar to how cassette players can only play cassettes and how CD players can only play CDs, this will make content only being allowed to be played on whatever marketplace or stream it was purchased from. This would revolutionize the entertainment industry as it could block out files that aren’t detected in their database as purchased material. There are loopholes to DRM-encoded files but they require a lot of time and money in order to fully work. One of the few downsides that can come from this idea is physical media. Several media players allow music from CDs to be uploaded onto

them and even DVDs with the right software. If a system were to strictly abide by their file formats, then there would be no room for those kind of files. If the system did allow from legally ripped CDs and DVDs, then there would also be ways to get illegally obtained music and movie through there. The best solution from this is to have whatever CD or DVD is in the disc drive, scan through the files, and then give them their version of the media in question. All parties would be on equal footing if this were to happen, and it would effectively slow down or even decimate Internet piracy as a whole.

In recent times, strategies have gotten more and more drastic. One article by *Vice* reports that entertainment industries are seeking to team up with ISPs to ban users that download pirated files off the Internet. This practice would be unfair as non-pirates would also get hurt from this practice. If there's a household that has three people in them, and one of them downloads a few albums or a movie, then the whole house's Internet would shut down. Websites such as BitTorrent have investigators hired by the entertainment industry to stop the illegal sharing of the company's assets. Some investigators for the company RightsCorp even threatened that downloaders pay a fine or else they would face a lawsuit. RightsCorp has faced negative press in the past over this. Some people think that these practices are very excessive and harmful. RightsCorp uses the "if one person did it, then everyone is automatically guilty" argument that a middle school teacher would use if someone caused a distraction in class and they couldn't identify who it was.

Recently, the US Court of Appeals ruled that just an IP address was not enough to identify a pirate. This ruling makes it illegal for ISPs or third party companies such as RightsCorp to ban entire households from the Internet after one or more incidents of piracy. This ruling occurred after an incident where a man was sued because a film was illegally downloaded from his IP. He happened to be running an adult foster care that had many people there at that time period. The Court of Appeals needs more evidence than the IP address to discover the perpetrator. The ruling in this case was right and just as innocent people won't be held accountable for crimes they did not do. This ruling can protect businesses and households with a lot of Internet users from false accusations leading them to end up paying big legal fees.

## **Morality of Online Piracy**

One fact about the Internet is that once something goes on there, it will be there forever. This even applies to piracy, as there are many ways to find cached websites and files. We live in a mortal world, but the internet is a place of immortality as nothing can truly die. The film ends with 2746 rapidly cloning itself throughout the Internet. Even though the movie is fiction, it is a reflection of the reality we live in as well as a prediction of what this reality can become. The Internet is essentially a digital library but the material they have for borrowing stays there even though one person already downloaded it. To have the Internet to be featured as a “library” visually will be an absolute challenge as 2746 looks around for data and websites to take for its programmed job and its own research and leisure. The Internet will be represented as a bottomless pit of information whether it is trivial or not. The Internet is a surplus of information. People can learn all about a new topic in less than a day because of the vast resources the Internet acquired from over the years.

Some people believe that there is nothing wrong with piracy that all and that it is “fair use”. Other defenders say that pirated .mp3 files were able to get MP3 players, phones, computers, and media players sold. Some even go as far as blaming the companies for letting the piracy happen, saying that they did it to themselves. Their claim is that they had years to create more security and preventative measures to protect their assets from theft and piracy. Some people can’t afford to buy albums or go to the movies every weekend, and those that can’t choose to pirate. It is semi-understandable why people would want to pirate, as not everyone has

a large amount of money to treat themselves to a movie or album on a consistent basis.

Companies are working on more security measures but if more security measures were done before, then there would be a lot less piracy around. Website security is a very important factor currently as websites are getting hacked with confidential information stolen such as email addresses and credit card information. Companies that carry sensitive information such as unreleased music or media should best use a VPN (Virtual Private Network) to protect themselves from Internet threats. The VPNs encrypt online activity to protect user data from hackers, viruses, and other malicious content. This would be ideal for content creators and distributors to defend their media from potentially being hacked.

Other people that defend piracy tend to say that it encourages people to go out and actually purchase the media in question. A study was conducted by Michael D. Smith and Rahul Telang and they noticed that the more broadband usage a user has, then the more they tend to buy DVDs. They also pointed out that movies and television shows were very difficult to pirate around 2000-2003, but music piracy was rampant. The source article in 2010 was written before music and television went digital, meaning that more people were willing to buy instead of subscribing to a service where it is only there for a limited amount of time. It is stated that through exposure to the pirated media, if the user enjoys it that much they will end up purchasing it. This shows that some people are willing to support content creators even though they took advantage of them beforehand. An example of this working was with the highly anticipated *X-Men Origins: Wolverine* film. A rough cut of the film ended up leaking onto the Internet a month before the film was released but it managed to make \$85 million in the box office on its

opening weekend, being the highest grossing movie of that weekend and month. The original uploader purchased a bootleg copy of the movie and uploaded it onto the Internet from there. It is still unknown how the rough cut ended up in the hands of a illegal DVD seller. The movies have very high anticipation and people want to experience the movie in the best way possible. If it would have been a smaller scale, lower budget film then perhaps it could have been through more financial troubles than what *X-Men Origins: Wolverine* had to go through.

## Who's to Blame?

The MPAA claims that films are losing at least \$3 billion due to online piracy. Outside of that 2017 has been an aggressive year for the film industry as ticket prices got higher and alternatives such as Netflix have subscriptions that cost as much as a premium format movie ticket. The MPAA even went as far as criticizing Google for harboring websites that host illegally obtained files. Piracy isn't something that should be blamed on the ones against it, even though sometimes they may not do enough to protect their assets. Victim blaming excuses for piracy such as "the companies did it to themselves" is completely inappropriate. In order for piracy to slow down, there should be teamwork from all of the companies that seek out to protect copyright material. The group mentioned previously, *Alliance for Creativity and Entertainment* is what all forces should take as inspiration to give them more strength in the Internet War on Piracy. Unions in Hollywood such as the Screen Actors Guild and Writers Guild help united everyone in a department for a common cause. They've been very well known over the years and very vocal whenever there would be conflicts in the industry.

Again with companies blaming other companies for piracy, RightsCorp as mentioned previously went after the ISPs themselves. They think that the ISPs should ban the users for piracy instead of them. If the ISPs don't kick off the users from their broadband then RightsCorp threatens them with legal action. Sometimes ISPs view the warning as nothing too important and ignore them. ISPs can get hurt for not implementing a good system for piracy. All of these stories show that even though piracy is rampant, the companies that try to fight it end up

disagreeing with each other with serious consequences as a result of the arguing. Teamwork is what should be used to function against the issue of piracy, but to take aggressive action against each other for disagreements on fundamental issues, is absolutely inappropriate and can cause more division. RightsCorp's concern and desire to protect property is understandable but their methods are very unorthodox and brutal. They can easily be considered the most ambitious when it comes to fighting piracy as the company was created for that and they dish out severe consequences for the pirates in question.

Regarding movie piracy in the 1990s, it was incredibly difficult as those files were normally around 700 megabytes or even went to gigabytes and internet speed in 2000 were 69.2 kbits. Computers were not household items yet and piracy was a rare occurrence. It took 30 minutes for a low quality, 3.5 megabyte song to download while it took 28 hours for a low quality, 700 megabyte movie to download on a dial-up network. Piracy didn't catch up to speed until around the time broadband connections were introduced to homes and businesses.

Broadband was introduced to Canada in 1996 and came to the United States a few years later. After broadband, all of the major piracy incidents began to occur, such as the success and decline of Napster. and the rise of The Pirate Bay. Introducing broadband Internet was a gift and a curse. A gift in giving businesses and individuals faster Internet that doesn't need the same connection as telephones and a curse in introducing a quicker new way to take pirated material. Broadband is an indirect cause of piracy growth, as it provided a new means of Internet that everyone could benefit from. The piracy multiplied even more in the current decade as more people turned to

streaming services such as Netflix. There are certain programs that are only streamed on one certain networks, so the people that can't afford or don't have that one would end up pirating it in order to watch it. This digital growth is one that many people would consider a gift but for copyright and legal organizations, it is a nightmare to have all of these illegal uploads and downloads coming at a very consistent pace.

Around the time the Internet was still in its early days and we didn't evolve into a digital world, there was often a practice done by pirates titled "cam ripping". Cam Ripping is when one would illegally record a movie in a cinema and watch it for their own leisure afterwards or upload it onto the Internet. These were the movies where the bootleg DVDs are sold in various urban communities. This method is a lot less popular than the screener or DVD/Blu-Ray rips but people tend to jump to it in order to see films that are already in the theater. The law managed to catch up to the cam rips by creating a new technology. The method titled Coded Anti-Piracy (CAP) labels the film prints with a certain code to determine which theater the recording occurred in. The marking isn't placed on the original film negative, but it is printed on the film print itself. This whole method is used to trace down the individual bootleggers and charge or fine them. It is not known if digitally projected films use the Coded Anti-Piracy method or a different one. With it being digital, it can be even more difficult to track down if recorded, since the film prints had different markings to determine which one went to which theater. Along with this, people tend to stick to the screener and DVD rips which makes this form of bootlegging somewhat obscure as people can get better quality.

In the Werner Herzog documentary *Lo and Behold*, there is a portion of it dedicated to studying artificial intelligence. In the stretch, robots are being built and programmed to perform jobs that are too dangerous for humans to do. They also discuss that AI could also be on the Internet already and work on its own from there. An example that connects directly to the film is when one of the programmers discuss how a poorly managed AI could cause chaos. He says if someone working at a hedge fund wants their portfolio maximized by the AI, then the AI could possibly choose to short consumer stocks and go long defense stocks, starting a financial war and causing panic in the company. Watching this documentary was one of the lead inspirations for the short film, as computer programs with brains of their own can weaponize themselves by their own free will. Businesses would have to moderate, or even place limits on their AI programs in order to prevent all out financial crises or business trouble.

Recently, Hollywood has developed a bot in an attempt to spot piracy. A news website that has a concentration on piracy called TorrentFreak claims that Hollywood executives sent out many bots to search for paths to pirated content. After the content is discovered, it is immediately reported. It then sent takedown notices to Google. This shows another example of an AI acting on its own instead of having a strict code. *Lo and Behold* explores this concept with the program that was developed to maximize portfolios but this one connects directly to the point of the film. This shows that like the portfolio program, a program that can be used to contain and limit piracy is capable of inflicting harm upon sources that are innocent. This can also potentially damage smaller run websites with the false accusations of piracy as they would have to pay hefty fines or go to court and have their time wasted on a charge that they didn't do. This is also a waste of

resources and time for those that work in the same company the program originated from, as they would have to settle with the accused and would have to further modify the program to prevent anymore incidents like this from repeating.

In the story the 2746 application lacks a long history such as The Pirate Bay, as the data hoarding just keeps ramping up over time. 2746's progression is a lot quicker, yet a lot more dangerous as everything was suddenly available. If 2746 were to become reality, it would shift the Internet and piracy as a whole as well as groundbreaking for artificial intelligence. To have an application with a mind of it's own that can be able to retrieve any file throughout the Internet and any network would be to have too much power. Outside of piracy, the scariest part of having something like that would be if it ended up retrieving confidential files from networks it shouldn't be looking in. 2746 can be a massive security breach and frightening for governments and website hosts if it were to be a reality. Nothing like that is nowhere near possible in today's age, but if the use and development of artificial intelligence keeps increasing, then people have to be really careful of what they create or else they will end up building a monster such as Project 2746. Fortunately, there wasn't any major cyber attack or data incidents due to the mishandling of an artificial intelligence program, but the possibility of one happening gets higher every day with new inventions and applications being created. The late Stephen Hawking has said in an interview with BBC that "The development of full artificial intelligence could spell the end of the human race."

## Making of the Film

The philosophical question the film asks is “What can one do if they created something with free will and an immense amount of power?”. The protagonist of the story is essentially playing god in a sense where he created something with so much power that it ends up controlling the environment it was raised in. Similar to *Frankenstein*, it’s a tale of one man’s creation that turns against its will and sets off to do what it wants to do instead of what its creator wants it to. Along with the creation vs creator conflict, it shares another philosophical concept shared in several other films. Werner Herzog’s *Aguirre: The Wrath of God* was specifically chosen as an influence for *Project 2746*’s protagonist because of the massive amount of ambition they have and what they do in order to get what makes them the happiest. In *Aguirre*’s case it was to discover El Dorado, while in *2746* the character wanted to create something that could help him with his job. Both characters are hard workers that want to make their lives simpler, but through nearly impossible means. At the end of both, the protagonist ultimately fails because they discover that they went too far in trying to achieve this dream that wouldn’t come true. This goes back to the “tragic hero” trope as well as the “overly ambitious” character one.

Outside of the topic of a worker’s desire to get more in life, it will also explore the philosophy of piracy as a whole and debate on whether it is ethical or not. In the climax of the film, the *2746* program delivers a monologue explaining what it steals content from around the web and why it does it. Its reasoning is that art was made for all to see and that corporate greed has dominated the globe for far too long. The main protagonist will be used as a median between

his greedy boss and the rebellious 2746 to show a moral dilemma that he has created. The protagonist can also be considered a “tragic hero” as he was the one that created the application which led to his professional downfall. It can be viewed as a modern and even digital retelling of *Macbeth*, as a promising career falls apart right in front of him. *Project 2746* is a movie about an app created to committing the felony cyber crime of mass piracy and distribution. Like Macbeth, Paul wants massive amounts of power and they succeed at getting the power but the power ends up destroying who they originally were.

Along with a tragic hero arc, an interpretation for this film is the legend of Prometheus, the Greek god that gave fire to man. The story tells the original link and connection between man and technology. The myth continued to be used in famous literature such as the *Frankenstein* stories and recently in Marvel Comics’ books and films. *Project 2746* pulls Prometheus’ link between man and technology even further with the modern twist. Paul is the “Prometheus” in this story and he decides to build a powerful resource which changes the entire landscape of technology and the world. 2746 would be the fire that was being held back by the Greeks (or Paul’s higher ups) that ends up being handed down to the people and used for generations and generations and even evolving into something bigger overtime. The only difference is that 2746 chooses to work on its own instead of Paul passing it down by himself in order to change the digital and physical worlds. By doing this, it shows the dangers of what an unguarded experiment can do to an entire community and even the world.

Another topic that influenced the creation of *Project 2746* is the rise of artificial intelligence. The Werner Herzog documentary *Lo and Behold, Reveries of the Connected World*, shows some of the different possibilities in which AI can be utilized.. In the documentary, there was a section that specifically talked about AI. It goes over the AI doing assembly line tasks such as putting machinery together. Through several works of fiction such as *Ghost in the Shell* and *Metal Gear Solid 2: Sons of Liberty* specifically, were the driving factors for the AI character in *Project 2746*. The two have more fictionalized versions of AI for their time, but my idea is to make the AI as realistic as possible for the modern time period. The AI was also inspired off Siri in how it can interact with the user. Siri was a groundbreaking form of AI as it was the first to hear and respond to the user's voice with her own. To have it in a more Siri like form outside of something straight out of a science fiction epic also takes liberties from the realism aspect of the film. Thanks to applications like Siri and the more recent Amazon Alexa, AI is becoming a more and more common thing around the world thanks to the push of modern technology. It is also a very timely topic and discussion as we are seeing growth within Internet piracy and AI.

When it comes to the artistic influences of the film, several come in mind to create a down to earth realistic world but with cyberpunk-like sci-fi elements. When it comes to blending in with the realism, there will be only diegetic sound, bar the end credits. By having no soundtrack, it creates a mirror of the real world, which is a diegetic one. Similar to documentaries, Blending character monologues with shots of the outside and digital worlds which gives the impression that the film is taking a documentary-like approach and could grasp viewers this way. How documentaries pan out to a different location while one of the

interviewees or the narrator is speaking for a while is effective as it switches it up and doesn't leave the viewer too bored. If a movie didn't have anything to say back to the viewer, then it would be simply entertainment. Film has shown throughout its first years that it can be a lot more than just a distraction for however long the film is. Films with social and societal messages tend to have the greatest impact and are often the ones that are most remembered. If a film is able to educate a viewer on a topic as well as entertain, then this film has succeeded. If it doesn't inform the viewers effectively or at all, then the film is at best passable. These films encourage people to think, compare, and contrast to outside and real world issues. It could also provide strong stances towards issues and make the viewer more passionate about them.

The physical form of 2746 is something that should be carefully done. The documentary *Lo and Behold* disappointingly did not show the AI program it had been worked on. It shows the AI in action on a robot built for manual labor and labor too dangerous for a human to do. Another key film in this process is Spike Jonze's *Her*. The way it was able to humanize and bring a computer application to life is something that has to be done in the film or else the audience won't believe the story. The computer in *Her*, Samantha is shown as a computer background but with an audio wavelength to show that it is speaking to the main character Theodore. *Her*'s minimalist and realistic approach for a talking and interactive program is one that is best suited for the world 2746 is set in, as it leans more towards realism than fantasy and science-fiction. The realism is used because this world is meant to represent a believable one in which things like these can happen as technology gets more and more advanced.

Its sound representation would be akin to the Puppet Master in *Ghost in the Shell* and The Colonel and Rose's AI in *Metal Gear Solid 2: Sons of Liberty*. Both have a human, yet very distorted quality to their voice that makes them seem machine and human at the same time, almost like a distorted music disc in that aspect. Their mix of machine and humanity in the sound of their voices and in the voice actors' performances reflect the balance between man and machine and how machine can possibly replicate man. When 2746 came into the picture, this was the perfect opportunity to use this. The last scene in the film also is inspired off *Ghost in the Shell* as both programs ended up explaining their motives, history, course of action and their own opinion of all of these matters to a then clueless protagonist. 2746 begins to break down the history of piracy and what exactly lead up to his entire crusade against corporate America. In the film it establishes 2746 researching the world he is in by having it in shots throughout the film where it browses around the Internet and discovers the pages whether it is for the protagonist's project research or for his own curiosity of the world. Strong monologues like this one elevate good movies into amazing ones.

The main character takes some traits of Elliot from the TV series *Mr Robot* as well as Aguirre in *Aguirre: The Wrath of God*. Elliot is a hacker in the series that was trying to find his purpose in the world of technology and Aguirre is an overly ambitious man that wanted to conquer a nation that turned out to be a fictional one. Both the lead and Aguirre are over-achievers and the lead wants to find his meaning and purpose in the world like Elliot. Combining the 2 characters create the cocky yet confident protagonist we see in *Project 2746* before he goes to face his biggest professional task yet.

Paul relates to the audience because he has to deal with a miserable dead-end job that he would prefer to do anything but that. Paul's boss also doesn't help him either as he seems to only care about what the higher ups think and which new practice could earn him more money. This is the sad truth behind some business places, as some people are not passionate about what they do and only do it to see how much money they can earn in their lifetimes. Paul's character is also made to match the financial situation many people have ended up being in on the way to chasing their dreams or if they end up being sidetracked to a job like this. Paul can be used as a character to represent a sidetrack or even failure of the pursuit of happiness.

The lead character's boss is modelled from the leaders in *Metropolis* as he only cares about the progress and not the art. Instead of being heartless like them, he'd have some empathy in him in order to make him feel more human instead of a cold hearted CEO. Adding human characteristics to characters is to make them feel more human instead of robotic and monotonous is an important step in making believable characters. Along with the *Metropolis* leaders, the band teacher from *Whiplash* also plays a major influence for Robert. While not as sadistic, he carries the same overconfidence and belief that the workers can do an absurd amount of work and practice in a very little time frame. The unrealistic desires of the bosses lead to trouble for the protagonist as they have become a major source of stress for them.

Not only is Paul relatable to the audience, but Robert is as well. While Robert may be calling all of the shots for the company, he really is a pawn as the higher ups demand him to do

certain things for the business. For this case Robert doesn't want to escape, he wants to make as much money as possible for himself and to run the company smoothly. Other than the conflict of freedom from him and Paul, there is a conflict between doing what is best for the company and doing what is best for oneself. This is a very commonplace dilemma that can have the audience reflect on their own life and experiences during the film. A choice has to be made in the course of the film.

Outside of the films and other media seen and studied over the years, the character inspirations were taken from from real life situations. There have been countless power struggles between people that wanted their voice heard and their authorities that wanted what would benefit them the most. People argue until they got the last word on their views. By this, the film can essentially be a metaphor for power. This is a story about gaining power, using it, having it fall into the wrong hands and the project having more power than both the creator and the creator's boss. Film professors always wanted to avoid complete fiction in their films and teach their students that some of the best movies come from real life experiences.

In the movie *Whiplash*, there is a lot of over ambition that consumes the character. Once that over-ambition hits and the character takes action, they have to be in the face of several adversaries, both being people that are overly confident in the protagonist's ability and expect them to do more in so little time. Both protagonists break down from the stress of the experience but manage to get the job done in the face of adversity. *Whiplash* was purposefully left ambiguous while *2746* has a less happy, but more concrete ending.

*Metropolis* isn't only an influence for character work, but for the world the film is in. Another film, based on the 2007 Housing Crisis, *The Big Short* presents the reality of the situation starting in 2005 and ending in 2008. Even though this film is based on a true story, it contains a world like in the film *Metropolis* where the poor have a difficult time making ends meet and the one percent is living lavish lifestyles. In *Project 2746*, the working class is represented the main protagonist, who lives in a one bedroom apartment and has to take public transport in order to get to work or where ever else he needs to be. His boss is the one percent, as he runs a massive data firm and is always seen controlling things from his office, rarely going outside to interact with the working class. *Metropolis* and *The Big Short* was commentary for their time periods and today. *Metropolis* came out years before The Great Depression which shows that there was rising tensions between the working class and the upper class. *The Big Short* even though it took place in the middle of the 2000s decade, applies to the current day as the lower class suffers because of the actions of the 1% and Wall Street elites and that it is possible for America to go under another recession. Both of these films are timeless and very relevant today as the working class still struggles with being underpaid and under poor working conditions. The film isn't about the privileged against the working, but it will take these undertones and worlds in order to show the positions of power.

Along with the Fritz Lang classic *Metropolis*, the David Fincher film *Fight Club* explores a rebellion that occurs because of the wealth gap. Paul from *Project 2746* is inspired from The Narrator in *Fight Club*, as both of them are hard workers that desire something more fulfilling

which leads them to cause a revolution in their fields. *Fight Club*'s revolution takes place in the 1990s, which had a lot more resources that were analog and home computers were just starting to become popular among households. *Project 2746* takes place in a world where everything became a file over the years and most things that weren't done on a computer are now done on computers. Outside of the theme of rebellion, *Fight Club* explores themes about class and wealth. The wealthy are always shown as bosses of companies or visiting luxurious locations while the working class is shown working for these bosses. It takes a more nihilistic approach than my film but both are alike when it comes to forces uniting to bring down the higher class for their misdeeds and greed. *Fight Club* isn't the only David Fincher film that involves an uprising in which many different people find involvement within.

Another David Fincher film that *Project 2746* connects to is *The Social Network*. *The Social Network* is about the creation of the website Facebook by its founder Mark Zuckerberg. The protagonist of *Project 2746* has created an application that ends up becoming bigger and bigger in size by the day and must face the consequences of it, like how Zuckerberg did in *The Social Network*. Both characters end up accepting the consequences of what they have created, as both of them took over the Internet and began to affect the world in a bigger way that they initially thought that they would. Their social circles also change because of their new ideas and inventions appearing on the Internet. They went from characters that didn't have a care in the world to ones that found meaning but it all ends with the characters losing something special or important to them. *The Social Network* is a modern interpretation of *Fight Club*. Both films have a lonely character that decides to cause an uprising in the business and social world. These

uprisings grow to include many people in the country and even in the world. *Fight Club* was made before the world went digital and *The Social Network* was made when everyone had some kind of computer or smartphone in their household. Both films play off each other very well because of this aspect.

## Epilogue

The background information and settings from these films will seamlessly blend to create a brief analysis on class, and a big break down on digital media and piracy. Outside of some documentaries, There really hasn't been a film that covered cybercrime well enough. There's been films that use hackers as characters or plot devices, but they aren't explored in depth. *Project 2746* will take this subject matter and create an effective story with it, without it becoming too much like a public service announcement. To blend these real stories with documentary-like aspects and an intriguing fiction plot is the key in making a film like this. With a combination of those three elements, it would bring the film to the best that it can possibly be storywise. The stories of other media that's pirated in the essay such as music and video games also had a very influential effect on the film. Digital piracy has changed the Internet and laws in such a distinct way that the world and entertainment industry will never be the same. The goal of this film is to be informative on this situation in a very theatrical yet documentary-like fashion. Digital and online piracy is a major threat that is underrepresented in literature and film and that is rarely discussed in news media and publications, as it is contributing to a lot of financial losses for many people. Piracy is an issue in the world that may not be as important as some others, but it needs to be studied further and have more action taken against it.

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