Digital Dilemma: The Relationship Between Preservation and Piracy

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Abstract

Digital media preservation and piracy appear to have a lot in common. Both of their end goals are the same. Although, media preservation has more to do with the preservation of culture digitally rather than distributing a product for free. Through careful research done through both pre and post-internet societies, it's been shown that there will always be people who preserve, and there will always be people who pirate. This research was based on many peer reviewed sources that discuss the implications of digital media preservation, piracy and copyright in general. A rich history lies in all of these fronts as the digital age skyrocketed near the end of the twentieth century, with people, companies and lawmakers trying to make heads or tails of the new technology. People are worried about our digital future because of strict copyright laws, but there will always be people who are willing to stick through and preserve almost anything from our history, from storing media on hard drives to using websites like Internet Archive or YouTube.

Chapter 1: Introduction

Media preservation as a whole is no new thing. With the digital age it should be easier than ever to store and hold any kinds of records that we as humans may have, no matter how big or small. However, there have been many issues when it comes to preserving our digital heritage. As computers themselves and consumer use of them only span back a few decades, the laws surrounding them are relatively new as well. There can be blurred lines when it comes to grouping digital media preservation teams with common software pirates.

People would think that larger body efforts like the Government would take more action when it comes to holding onto our digital culture and preserving it, but for a lot of media that isn't the case. There's nothing against people who have certain media, but it's the distribution of it that gets tricky. Companies and corporations argue that media of theirs that's hosted on archiving websites for other people to access is piracy by itself. Which is true by definition, but certain times that media is inaccessible or the company has done such a bad job of preserving it that the only way to access it is through an archiving service. There are people and companies who care so little about their work that it's up to both amateur and professional archivists to pick up the slack.

The problem comes in where these lines are blurred, as the removal of some of these archiving efforts might mean that certain pieces of media can be lost. Where does the line draw when it comes to media preservation? Is piracy such a cut and dry issue as companies say it is? What could happen to our digital future and footprint as a result of tense litigation and companies who don't want to preserve their history? Questions like these are all relevant and important to a certain group of people whose numbers only grow as time goes on.

Chapter 2: Literature Review

Piracy in the software industry has existed for decades, and has become more accessible to consumers. You don't need machines that cost thousands or tens of thousands of dollars to copy media anymore. Now, you just need a computer with an internet connection. This has led to different industries in the software market to be cracked; music, shows, movies, games, many different types of media. What's the morality behind piracy in the digital age? What if the only way to get something is to pirate it? Is it ultimately hurting sales? Why do people do it instead of paying?

This source introduces the topic well. While music only takes up a certain amount of piracy, it's arguably one of the largest pirating ventures in history. People have been pirating and stealing music for decades. This article was written by Reebee Garafolo, who is a professor at UMass Boston, primarily teaching the inner workings of the music industry. It mainly goes into the history of music in the 20th century, While piracy methods like home tapings and online music sharing are only at the tail end, I think this summarization could prove invaluable. This article comes right before the turn of the millennium, which is incredibly striking as online digital piracy was just starting to pick up significantly.

This second source could bounce off the first one nicely. It goes more in depth on the facets of digital music piracy, even mentioning file sharing sites like Napster. The article aims to show that the recording industry has lost sales with the advent of these file sharing sites and with at home recording.It talks about how piracy was very difficult until the digital age, considering there were only large plants that could print music up until rewritable CDs became the norm. This article is from a few years into the new millennium, when the internet was new enough that

people didn't know how to combat file sharing and piracy. The study cited is a comparison of distribution for different music media types in the late 20th century to the early 21st century, and how piracy compares to it.

This source studies and shows how willing people are to pirate music, which is a much more personal topic when it comes to piracy. It could pair smoothly with the last source as the direct studies help give concrete data. The authors are Rajiv K. Sinha and Naomi Mandel, both Associate Marketing Professors. The data presented is multiple studies quantifying the different social aspects of music piracy, from cost, gender, risk, sales, etc.The article talks more about the social aspect of piracy and how social norms affect it. Could the circumstances be that it's more comfortable and socially acceptable to pirate something than it is to pay for it? What kind of circumstances would have to be in place for something like that to happen? How would this kind of piracy compare to other kinds of modern piracy?

An older article that talks about different ways to combat software piracy from a time before the internet was widely utilized. Software piracy did very much exist before the internet, especially with the advent of writable tape, even before CDs became the norm. The authors, Kathleen Reavis Conner and Richard Rumelt are both business professors at The Wharton School and Anderson Graduate School of Management respectively, with Rumelt having a background in electrical engineering. This article studies different ways of combating said piracy. It also goes into how copy protection could end up causing major inconveniences for the end user, which in turn could incentivise them to pirate. This ties into the last source which talks about differing circumstances. Here, it's talking about how to maximize profits and also not throw the end user under the bus.

This article talks about software piracy internationally, not just in a domestic market. It bounces off the previous source nicely.Their hypothesis is that countries with bigger software industries have smaller amounts of piracy than those that don't. The evidence provided was from different studies discussing sales and pirating rates in different countries. It might be because there's less incentive to pirate because you have options and you don't have to claw at software that isn't available to you or because you don't have any other alternative. The authors are Ram Gopal, a professor of Information Systems Management at Warwick Business School, and G. Lawserence Sanders, a Management Science and Systems professor at SUNY Buffalo. This article also talks about copyright and rights holdings, which is a huge part of the digital and software age.

Kind of continuing from the last source, this source goes into the different factors of software piracy and why people would do it. This provides reasoning to how people (particularly businesses and governments) should combat piracy, and could potentially tie into the idea of morality in piracy, and whether or not it's "right" to do it. The authors are business majors and current professors at different schools, with Deli Yang earning a PhD in Intellectual Property Management, Makmut Sonmez having a PhD in Decision and management Studies, Derek Bosworth having a PhD in Economics and Gerald Fryxell having a PhD in Business Policy and Strategy. This article shows that people who are more well off tend not to pirate as much, and that piracy can be a part of cultural norms (also tying into the whole morality of it) and an increase in resources can increase demand for legitimate software. People who have access to more money and software are usually more expected to purchase rather than pirate. The shown study displays this over a 6 year period with data collected from countries all around the world.

This article talks about how copyright itself has changed over the last few decades. When it came out, the Digital Millennium Copyright Act was still “new”. The DMCA is still relatively new, actually. Copyright is a very tricky subject, especially now in a digital age where our copyright laws go back centuries. The author, Shujen Wang, is a film and media studies professor at Emerson College, along with being a research associate at Harvard. The article itself goes into Hollywood’s attempts to combat piracy and the overall impact of new tech in a media based world. The data is sourced from other papers talking about the global market as a whole. Analyzing digital copyright and how it pertains to piracy helps explain piracy itself.

Bouncing off of digital copyright, this source comes from a time when YouTube was in its infancy. YouTube was likely not being viewed as a digital preservation source at the time, but as time’s gone on that mentality has changed. Youtube is a great, free way to host content. But, copyright can get in the way and internet copyright has been pretty cut throat since its infancy. Many big companies don’t know how to work with it or are able to get away with certain things.The article itself talks about the early days of YouTube and “Online Regulation”, with companies still scrambling for copyright control to this day. The data shown is a collection of “classic” YouTube videos, both serious and silly in tone, reflecting that kind of media hosting. The author, Lucas Hilderbrand, was an assistant professor of film and media studies at the University of California, at the time this was written.

This article goes over the state of digital preservation at a time before Y2K. Digital preservation adds a whole new layer to piracy, to the point that sometimes it’s the only way to preserve something today. The author is Margaret Hedstorm, a Professor at the University of Michigan who teaches digital preservation, electronic records management and general archival information. This article talks about the different methods of digital preservation, particularly

mass storage through hard drives, which is a kind of juxtaposition because mass storage can fail quickly, especially with old HDDs that have been running since the 90s. It also talks about the limitations of preservation, and how digital preservation is more apparent in software preservation. The main data used is information from other sources on the whole of digital preservation.

This article is more recent and talks about the troubles of digital preservation, continuing from the last piece. It talks of a "digital dark age" where technology was moving so fast that differing file formats and other such things led to data and preservation efforts being lost. This is another issue that piracy could potentially solve, especially when the thing you're trying to preserve is so hard to find. This article talks of a second digital dark age, which we might already be in, considering the state of digital copyright. The data and references are of articles and sources of the state of digital copyright at the time. Author Stuart Jeffery works with the Archaeology Data Service based in the University of York, located in the United Kingdom. Looking back and thinking about where we are now as a society in the digital age, a lot has changed in just the last few decades or so.

Our final source takes us to a "what if?" situation, where upon societal collapse, our very way of digital culture would be at risk. The author, Abigail De Kosnik, is an associate professor at Berkeley, and argues that people deemed "pirates" today are rather amateur archivists. Particularly, people who exchange digital information on a peer to peer connection. Sources in the article discuss torrenting and other methods of piracy popular today. This piece is mainly a discussion about how pirates are helping digital preservation and we as a society might owe some of our future preservation to them. This sends off our question quite nicely.

These sources are diverse and will provide ample detail and help contextualize the question at hand. They will help string along the different aspects of piracy and software preservation while using peer reviewed data to reinforce the facts and research. This will tie everything together with appropriate information, while making everything connect. These sources will also help get a good look at multiple angles when it comes to piracy, which will help the opinionated nature of the topic.

Chapter 3: Methods

Introduction: research design

Discussing a topic like morality when it comes to piracy will be incredibly opinionated. Differences in opinion will likely come from where the person stands in society; their social values, their wealth, etc. Corporations would also have different views from the average individual, as they want to protect their product much more than a consumer would. The views of the culture and society that surrounds the individual will come into effect as well. People from different wealth statuses will more than likely have differing opinions and views; sometimes piracy is a result of a consumer not wanting to pay, be it because the software costs too much or they just don't want to part with their money.

Age is another aspect that will likely come into account. While software piracy is a relatively recent form of media theft, there are key differences from someone illegally downloading a show in their basement versus someone forty years ago making cassette copies of a new game. The research will reflect these different walks of life.

Selection criteria

The data collected will be mostly qualitative. Quantitative data will be taken from other peer reviewed sources, with it being used as a sort of backdrop for everything else. The qualitative data will be people's thoughts and opinions on the matter, coming from different backgrounds and relations to software and software piracy.

Opinions from people who are passionate about media preservation and people on the opposite side of the coin are a must, as they'll balance out and show both perspectives. Then, we'll be able to get a true look at the morality of piracy when it comes to media, its preservation and media today as a whole.

Search terms

Search terms for potential sources and other information will be:

- Piracy (Digital piracy, Piracy throughout the world, Piracy over time, Piracy through cultures, Piracy through different mediums)
- Media Preservation (Media Preservation and Piracy, Media Preservation for the future, Media Preservation in a digital age)

Data collection and analysis methods

The quantitative data collected will be from other outside sources with a much greater reach. Through them, comparing the amount of piracy standings of the people who do it (wealth, country of origin, etc.) will make everything easy to digest and understand. The quantitative data will lend itself well to the qualitative data (opinions on piracy, morality, software preservation,

etc.) and will add nuance and personal experience to the numbers. Having both will help explain the nuances of piracy and digital preservation as a whole.

Piracy in the United States is a lot easier to analyze than say a country that doesn't have as big of a population or one that doesn't have as much access to technology, which is an interesting case for piracy, as less access can sometimes mean more piracy. The qualitative data will be used interchangeably if not in tandem with the quantitative data. People from different backgrounds will have different opinions on the matter and different perspectives will be really important in this study.

Study quality and risk of bias

The study quality will vary, considering that it will more than likely have many different types of people. Some data and opinions will be more formal and conclusive than others, as the sources will vary. This will provide great insight from many different perspectives, which will help the overall study and question at hand.

Bias is an inevitability a lot of the time when it comes to opinion based topics, but the quantitative data will help either back up or prove wrong the opinions of the people involved. This will make the research more nuanced and will make potential biases easier to spot and point out.

Conclusion: brief recap

While there are many different aspects of piracy and media preservation, having people from all sides and getting their thoughts and opinions will help tie the two together. The data will do a great job of that as well, helping the opinionated pieces and giving them at least a little bit of context. Opinionated parts will depend heavily on who is studied, and while it'd be impossible

to come up with a clear, definitive answer, it will be insightful and telling of where digital preservation and piracy is going in the future, especially now that we're in an internet age.

Chapter 4: Findings

While piracy itself isn't a new thing by any means, its accessibility and ease of use has made it more than welcome to a lot of people all over the world as an easy, cost effective way to enjoy media. This should be called into question, as there are a lot of different dependencies for piracy itself and why people would consider not paying for something they want to enjoy. Is it not available anywhere? Is it hard to access legitimately or too expensive? Is there a certain morality behind it and is there a line as to how far someone would go in order to illegally download something rather than just pay for it? How does it affect preservation of said media?

Piracy on the individual scale goes back decades, with people on personal computers of the 80s and 90s starting the bandwagon. Computers themselves were new and quite expensive, and some of the software for said computers reflected the same thing. People were always looking for workarounds to not have to pay for a piece of software. Back then, piracy was in some ways easier and more difficult than it is now, with publishers implementing more difficult copy protection that more often than not hurt the end user.

That's one of the reasons many people turned to piracy in the first place, because said copy protection only hurt genuine buyers since pirates could circumvent it most of the time. It turns consumers away from the product and only encourages people to pirate. "Increased

protection acts to raise the cost of pirating, causing some pirates to buy and others to do without the product. Those who decide to do without represent a reduction in the user base." (Conner & Rumelt p.136) Increased protection (also known as DRM) can potentially be anti-consumer and hurt everyone involved, except for pirates.

The morality behind piracy is different for a lot of people. It can depend on many different aspects of a person's life and social standing, wealth, etc. "A consumer's choice to participate in a risky behavior, such as illegal file sharing, depends on the perceived risk associated with that behavior, which can be broken down into two dimensions: uncertainty (e.g., the probability of getting caught) and adverse consequences (e.g., the punishment)" (Sinha and Mandel p.2)

It's difficult to enforce piracy but the sentiment itself keeps a lot of people away from it. There's likely always going to be people who either will never pirate in their whole life and just buy whatever's available, or people who will pirate no matter what. Despite risks of social ostracization or embarrassment, some people will always pirate.

People who would never even think of pirating could start, if the opportunity was incentivised enough and was a viable alternative, which could be the case for people who just aren't as well off and can't afford the software and media they want or need. "Improvements to the standard of living tend to reduce the rate of purchase of pirated products. Thus, economic development amongst the less developed countries will be an important factor in decreasing the demand for pirated goods, and as the demand diminishes, the incentive to supply pirated products will be reduced." (Yang, Sonmez, Bosworth and Fryxell pg. 280) Piracy is a money issue for a lot of people: publishers want as little of it as possible so they can maximize profits

and recoup development costs and pirates want the software and/or media for no cost so they can save money. It's been a constant push and pull battle.

This reliance on different cultures for profits has always been present, especially with larger pieces of media like films. Larger companies and studios have to properly account for different cultures, pirating rates, and other such statistics. "To recoup the high costs, the major studios have to rely on markets overseas." (Wang pg.29) This has made piracy a huge concern in all types of media, since companies all over the world have to be mindful over who does and doesn't consume their content legally.

This might be the reason why major publishers and studios are really uptight when it comes to copyright, as one exploit could mean major losses for them. A potential solution for companies is to work with companies in foreign markets, thus strengthening bonds between cultures and lowering piracy in the process. "By encouraging and promoting alliances between foreign and domestic publishers, and by undertaking increased copyright enforcement, the government can increase the net welfare of the country and help establish a strong domestic software industry." (Gopal & Sanders pg.396)

Physical piracy has existed ever since the advent of physical media, but that brings a whole different perspective into light. People would be more than willing to spend less money on something rather than getting the real, genuine product, but more than likely wouldn't want to spend a penny on something digital. Pirated films, music, and games are mostly digital now, there isn't really any middleman trying to sell it and profit off of it. The sudden ease of use has made it a large concern for companies and people trying to release works, which brings in the whole issue of copyright when it comes to digital media. It should be noted that digital media must be stored somewhere, physically.

Music was one of the first big breaks when it came to piracy in an online and digital age. Sites like Napster were really popular in the late 90s and provided the average person with easy access to free music, rather than paying for physical music, as music streaming itself was relatively new, so physical cassettes, CDs and records were still the preferred method by companies.

Piracy is often pointed to as the leading cause of why record sales were falling during that time, but that might not be entirely true. “Economic downturns, competition from electronic games and DVD’s and changes in consumer patterns of identifying and obtaining music (shifts in the exposure of new music to the Internet from the radio, digital purchases of single songs) may also contribute to the decline of record sales.” (Cusik, Faulk, Lambert p.22)

While social standing and wealth may affect whether a person would pirate or not, the ease of use of sites like Napster certainly can’t be ignored. If something is easier to access and more convenient for the end user, they might just use it rather than any alternative, regardless of any moral or legal thought. “As of this writing, the industry is far from implementing standardized security protocols that work, and new technologies like MP3 show no signs of abatement.” (Garofalo p.351)

Video sharing sites like YouTube have been a smorgasbord when it comes to digital content, as not only is it an excellent way to store video and audio, they’re used by billions of people all over the world. Since digital video sharing is relatively new, rules are still somewhat limited when it comes to what you can and can’t post. YouTube itself has become a lot clearer over the last decade and a half when it comes to copyright, but the occasional false claim can still slip through the cracks. “To be clear, I am suggesting that YouTube does not promote willy-nilly

piracy but rather enables access to culturally significant texts that would otherwise be elusive and the ability to repurpose videos in the creation of new derivative works." (Hilderbrand pg.56)

Big companies can have sort of an edge, since copyright is pretty stingy on YouTube, which makes it a somewhat unreliable place to archive things, unless they're clear for certain from any such litigation. YouTube isn't the wild west it used to be, and while there's still copyright issues that are very rampant, you can't exactly find too much pirated material without it being taken down quickly, even if the definition of "piracy" seems to keep changing in the shareholder's minds. YouTube is a big platform, and because of that it makes it difficult to pirate.

An issue combining both piracy and preservation is that since a lot of releases are digital now, it's gotten a lot more difficult to preserve things. Back when things were physical, consumers didn't have to worry about publishers taking away media, and preservation was relatively easy. Both copyright and data being stored physically does affect digital media preservation, making it a lot more difficult. Such a disparity between physical and digital media caused a "digital dark age" (Jeffrey p.554) several decades ago, where the pace of technology was going faster than it could be properly archived.

Worries of a second 'digital dark age' today have been prevalent but for different reasons, with copyright being at the forefront. Stuart Jeffrey talks about how since the first dark age was temporary, so would any future ones. "Good data management and archival practices are catching up with the digital technologies being employed." (Jeffrey p.566) Concerns about a second dark age aren't all for nothing however, as while archiving methods have improved, the copyright that goes with it is still very flimsy, even in the name of preservation.

To continue, others are worrying about this potential collapse, which would mean that many different kinds of media and culture would be lost. “A great deal of digital culture that will remain intact and accessible throughout Collapse will be preserved by amateurs, by non-LIS (Library and Information Science) professionals.” (Kosnik pg.3) This sentiment has only become more apparent as the line between piracy and archiving has become even more blurred. Publisher houses filing lawsuits against professional archiving efforts like Internet Archive mean that a smaller scale archival effort might be more effective, as amateurish as that may sound.

There is a fine line though, as online archives are more centralized whereas pirating sites are more peer-to-peer based. Companies keep pushing and a significant amount of culture is being lost as a result. The cost of not only potential lawsuits from copyright holders but also the cost of storage space and hard drives is a lot for most amateurs. Care must be taken to make sure that said drives and media don’t either die or become unusable. “To prevent these problems, it is imperative to store magnetic and optical media under strict environmental controls that are not always available, affordable, or convenient.” (Hedstrom pg.197) That makes storage on physical drives easier and more convenient than having the media physically on disk or tape, but having it stored on someone’s hard drive can be seen by certain groups and companies as piracy by itself

Chapter 5: Conclusions

Digital culture is important to almost everyone on the planet now, as we’re in a very tech-oriented society. The media and heritage that people leave behind is now mostly in the

hands of our digital counterparts, which is both exciting and downright worrisome. The amount that can be taken away in an instant is nothing like a piece of physical media being destroyed.

Digital data can disappear in the blink of an eye. A lot of people don't pay any mind to this fact, since humanity is so used to having everything at our fingertips, even though that whole notion is only a few decades old. If it takes that little time to set up something as vast as an interconnected system of computers and data centers all over the world, imagine how quickly it could be taken away or destroyed.

Our digital footprint is very fragile, and the populus should know that, lest we find ourselves in another digital dark age where even the most passionate archivist or preservationist can't get any footing. Throughout the trends seen through this research though, it's safe to assume that while the majority of people don't pay any mind to preservation efforts, there are more people than ever that are willing to give up time and resources to help hold onto our digital memory. With recent lawsuits that we saw like with Internet Archive especially, attention is going to be drawn to digital archiving and preservation as a whole. That extent of passion and knowledge will only help future efforts.

Preservationists and casual pirates will always have the resolve to find and host files. That's the main relationship between the two, as archivists are more concerned about whether or not something is going to exist and trying to maintain its longevity rather than not paying for a product because it's something you want. The line is muddied between the two, especially by big companies but it can be quite clear.

They have quite a bit in common, including the fact that they're both done kind of out of this kind of necessity, only the reasons are different. Pirates will go through a lot of trouble to not

pay for something, while archivists and preservationists will go through a lot in order to not see something die.

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