

How to Combat Music Piracy:

The Music Industry Problem We Can't Shake

Berklee Online

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Abstract

In this paper, the author will explore concerns around combating music piracy, review attempts that have been made in the past, and make suggestions as to where we might be able to make bigger strides in education, monitoring and enforcement to be fair to various parties who might be impacted.

The Problem

Piracy is “the unauthorized use or reproduction of another's work”. The authorization doesn't have to be expressly given by the copyright or master recording owner. In a world with sampling, parodies, and other fair use cases -- especially when legal precedent seems a bit shifty case by case -- it gets easier to see how one could make a mistake that brings about an infringement claim. One might say, we just need to have a more bright line test developed. The legal process is cumbersome and pirates know that some may not want to jump through all the hoops necessary to proceed with a case.

We learn a lot about piracy trends not just from the music industry, but also the film industry -- which in some cases has involved equal, if not more, cases of pirating. As seen with cyberlockers like Megaupload, when the U.S. Department of Justice shut down the site and seized their assets, there were many other pirated sites that had the same content. Countries with high Megaupload penetration rate like Belgium and Spain had greater increases in digital movie sales after the shutdown than those with lower penetration rate like Australia and Canada. Global digital music sales and rentals increases 6.5% to 8.5%, but who knows if piracy remained at a lowered state after the 18-week review (Danaher et al, 2017).

Part of the problem is once the content is accessible on the web, it spreads like wildfire at a pace we don't have the proper resources to control. So, while an authority might shut down an access point,

they're less likely to be able to remove the content completely. Now, with streaming, we're making that accessibility even more convenient -- which, as the author will illustrate, can either work for or against us.

Piracy in the Age of Streaming

The digitization of media goods effectively weakened copyright laws across the globe by making it easy for ordinary consumers to illegally share media files from computer to computer (Danaher et al., 2017). The International Federation of the Phonographic Industry (IFPI) 2019 report showed 27% (with 38% being between ages 16-24) of worldwide music consumers listened to or accessed unlicensed music in the last month. In 2018, 38% were accessing pirated platforms, so at first it seems like piracy has gone down (Resnikoff, 2019). Ten years ago, torrents were a mainstay and as of August 2019, MUSO's data shows it accounts for only 6.7% of all music piracy worldwide (Chatterley, 2019).

But let's keep in mind that stream ripping -- which refers to the conversion of a music stream into a download that can be shared without restriction or payment -- often happens on platforms like YouTube (e.g. with the use of FLTVO.biz) that aren't developed with the intent of allowing piracy, so this doesn't mean we're out of the dark yet with those stats. In fact, with the advent of music streaming, it gave wings for stream ripping to take flight as another form of piracy.

According to the same IFPI report, 23% of music consumers (with 34% ages 16-24) engaged in spite of the availability of low-cost and ad-supported free services that stream properly licensed music (Resnikoff, 2019). From the latest MusicWatch Annual Music Study, it was estimated that there are 17 million stream rippers in the U.S. during 2018, up from 15 million in 2017. The top 30 percent of stream rippers are copying 112 files, on average -- the equivalent of more than 10 full music albums (Crupnick,

2019). Further stats of total number of music-related piracy visits that MUSO saw within a month show unlicensed streaming makes up 33.6% and stream-ripping sites 31.3% (Chatterley, 2019).

In playing Devil's advocate, we should beware getting overzealous with negative numbers. After the IFPI report came out, it was mentioned that 27% of Internet users classify themselves as music pirates in 2019 compared to 38% the year before. Similarly, the percentage of stream rippers dropped from 32% to 23% from 2018 to 2019 (Masnick, 2019). Still, stream ripping numbers are at a level content creators don't feel comfortable, and this needs to be addressed.

Even with discussion of a small claims court to increase speedy enforcement, there's concern that this might bring an explosion of frivolous claims, having made the process much easier for anyone to file. But it's also clear that takedown notices such as those on YouTube and Facebook only provide temporary means of solace as it doesn't prevent all future uploads after initial notice is served.

This is in part due to the lack of technology being able to determine context -- something we hope machine learning will get better at doing -- and therefore, not wanting to incorrectly take down music that falls under fair use as well as in part due to providers wanting to earn on ads from pirated content that's uploaded. And while Content ID may give various options to mute audio, track, block or even monetize when someone pirates, it doesn't prevent the initial illegal action itself from happening. Some might say that additional ways to earn from that pirated exposure fuels some creators into being more lenient with piracy -- thinking more of individual gain than mass negative impact. So what do we do?

Previous Attempts & Proposed Solutions

A Universal Database

Once a work is expressed in a tangible medium, which is paper, electronic, recording or anything that can be seen, read or heard, you actually have copyright protection (Juetten, 2015). That being said, if you're claiming you own a work because it was first written by you on a napkin 20 years ago that can no longer be recovered, one can imagine how burden of proof can lead to many unsatisfied content creators.

Copyright does not have to be registered with the USCO unless you wish to bring legal action when someone else infringes on your work (Juetten, 2015), and the author believes it should be mandatory if the Copyright Office can figure out how to speed up the process of doling out protection. As of now, it would simply stifle innovation and creativity as one would have to wait potentially 4-6 months for work to be approved by the Copyright Office to get that extra layer of protection. If I found that aforementioned napkin, I'd have to wait 4-6 months to search for who to contact for permission.

But once a work is protected, the other side of the coin is making it widely known that it is. Ideally, the Copyright Office would be fully digitized on a universal database for which any approved API can connect and an automated (or manual) search can take place upon any upload via distributor or content provider before allowing for a new piece of content to be placed.

If piracy was lessened when VHS tapes had a prominently placed warning about infringement, it seems that at least some form of notification would assist in doing the same when it comes to music. If more individuals were able to note their work is copyright protected and what that means either in a music video or artist profile descriptions, perhaps it might deter some of the unintentional pirating without being too intrusive to consumption. But even better if upon that aforementioned database search, a warning

could automatically be served on a content creator's behalf. Hard to ignore what's in your face, so maybe there's a level of disruption that's acceptable.

Being our universal databases are far from being realized in a way that truly supports the digital landscape and all its fractional licensing, so we have to turn to other solutions in the interim.

More Proactive Approach

It's important to separate out approaches for tackling piracy for those who do it intentionally vs. those who do not. The first may require a heavier hand, and the author will cover enforcement attempts later in this piece. But the latter might be resolved simply through better education across platforms where piracy is more rampant -- like making sure it's known that disclaiming rights on content being uploaded doesn't matter, because one didn't have the right to reproduce or copy the performance in the first place.

A global survey by Irdeto showed that 48 percent of consumers across 30 countries were willing to stop watching or watch less illegal content after understanding the damage piracy causes the media industry (Koh, 2017). One might think it's enough to simply have an area of a website for people who have an interest in copyright law -- but this exists on sites like YouTube and Facebook already, and it doesn't seem to be making a large enough dent.

Rather than target a music consumer, targeting the content provider -- to clarify, not the content platform itself -- before content makes it to an area where it can be consumed seems like a better strategy. The author sees three early stage points for which action can be taken: 1) when one signs up to use a

platform, 2) when one uploads original content, and 3) when one uploads adapted content or someone else's original content for platform consumption.

The author believes if content platforms want to continue to play the card of Safe Harbor, the education needs to be more proactive -- for instance, before one can even utilize the service, he or she has to go through a quick video training session. Let's face it, no one really reads the terms and conditions before they click the checkbox to continue. But if a user is forced to engage to get a passing quiz score, then he or she has to pay more close attention. However, in order for this to work, it would need to be mandated for all platforms of this kind -- because if there's an option that doesn't offer it, we'll just see a movement of user base to the unabiding platform. They only go through the process once, so the author doesn't think it's too much to ask especially on platforms like YouTube where content is mostly free.

Some content creators might not even be against their works being used in certain cases and rather than being reactive, the platforms can also have an area upon sign-up for content creators to check if their works can be used in Creative Commons or perhaps under certain use cases -- where only those free to use can be downloaded or ripped. The reason the author believes many users don't go to a Commons area is because they feel it might be limited in diversity or relevance to specific content they're seeking. And a lot of times, creators don't even think about adding to it as it's not top of mind. Perhaps, if there was some incentive to do so, like free subscription to YouTube Red or a partnership outside like the bundle that was created with Spotify and Hulu, creators would be more willing to participate. Another option may be to give them more share of the ad revenue to participate in building a pool of free content. This is one example of providing value to suppliers to further provide value to end users -- a sneak peak into value building as a solution, to be discussed later in this paper.

Then, when a user goes to upload, he or she should be asked whether the content is original, taken from Creative Commons or elsewhere. Each answer has its own flow for tracking. One is held accountable for clearly stating he or she is uploading a content owned, free to use, or may require additional notification to be sent to the content owner to approve. Maybe the trade off is that original works are still freely distributed quickly, but there may be some additional steps for those who choose to sample or otherwise adapt someone else's content.

The author thinks if one is sampling or sourcing someone else's material, the burden should be put on them to make sure its free to use -- and having those extra steps is just a friendly reminder. One either has to enter the creator's information for the notice to be sent to that creator to approve, or the system will try to source it through algorithms.

But there's one problem with this approach, as mentioned earlier, the chances of finding someone are a bit rough given the fractionality across various platforms with different standards. And who knows if the original is even on YouTube to find. The detection software will have to scour the known web, and in the meantime, your creative efforts are on standstill. This probably wouldn't go over well. So, we're on to the next solution.

Providing Greater Value

The aforementioned IFPI report found that 62% of those listening to or buying unlicensed music would use a legitimate music streaming service if they could no longer get music illegally (Resnikoff, 2019). In the past, rights holders tried an approach of making pirated content less appealing and available by filling file sharing networks with decoy files to manipulate consumer perceptions, but then piracy technologies were enhanced to safeguard against that (Danaher et al, 2017). And unfortunately, the

government can only try to crack down little by little, starting with the biggest piracy offenders it can detect and going from there -- because it's often not worth it to go after individuals. Legal enforcement in the past has not been shown to bring long-lasting effects on piracy as the author will elaborate on later in this paper.

So, the alternative to making something desirable less obtainable may be to offer even more value in what we wish to be desirable. This is not to negate that streaming has helped decrease piracy, but it's not yet enough on its own to eliminate it. What one can do is assess the value streaming has provided in correlation with decreases in piracy, and determine if there are opportunities to provide additional value.

If the author thinks about the two things piracy provides: 1) convenience and 2) cost savings. So if any approach can cover both, it takes some of the incentive away from the desire to pirate. Using streaming as an example, it has given the following:

- 1) users have a way to listen to music for free if willing to bear with ads and even if they pay, it's not as much as an album or several individual downloads would have cost them before;
- 2) and the technology was built with the end-user in mind, making it easy to access and consume.

Here are a few examples that support the idea that increases in convenience can convert pirates to legal consumption:

- NBC's decision to remove its television content from the iTunes video store on December 1, 2007 caused piracy of that content to increase by 11% relative to a control group of content from other television networks (Danaher et al., 2017).

- ABC's decision to add some of its television programs to Hulu caused a 20% decrease in piracy of that content, implying that offering content in a convenient way (Danaher et al., 2017).
- The removal of digital rights management (DRM) protection from the catalog of EMI Music increased their digital music sales related to changes in other labels' sales, and that increase was larger for less-popular content -- which leads one to believe increased appeal and utility of DRM-free content was a value proposition (Danaher et al., 2017).
- Reducing time between U.S. release of film and international releases in theaters or DVDs can decrease piracy and increase sales (Danaher et al., 2017)

But this still doesn't quite tackle the new problem of stream rippers. Stream rippers tend to be better educated and from higher income households, negating the excuse that piracy is driven by lack of financial resources. MusicWatch consumer research shows that the main reasons cited by people who use stream rippers are often to substitute for features offered by subscription music streaming services such as the ability to load files on their device for access to songs offline where they don't have to use up their data plan, and not having to pay for songs individually. Perhaps not surprising, these individuals tend to be more likely to download songs from unlicensed mobile apps or share on digital lockers (Crupnick, 2019).

The problem is when we discourage the building or downloading of apps for stream ripping, we're getting in the way of the innovation of the free market. However, when the app is developed specifically with YouTube in mind, the author thinks YouTube should have a say if it impacts their content creators' income or at least produce some kind of blocker -- because it would seem these apps do more harm than good. They're like the next "Napsters," facilitating illegal activity.

But what we find throughout history is there will always be a new technology that will offer avenues around legal consumption -- so is it about suppressing these gateway services or more about addressing the needs that take people to them in the first place? We'll soon learn that suppressing can often stifle innovation, and bring about opposition even from copyright owners.

Advanced Tracking and Enforcement

Enforcement Severity is Crucial to Longevity.

As mentioned, our tactics for catching those who try to evade the law takes a slightly different approach. There will always be those who even if they see the negative impact on artists and simply pirate because, well, they can. However, the tactics previously used have either not been forceful enough or have been forceful in the wrong areas.

Policy makers, music and tech giants have tried to find less costly ways of enforcing and suppressing. One example of an attempt to combat peer to peer file sharing on the demand side is the Copyright Alert System in the U.S. in which many ISPs had voluntarily agreed to a graduated response system of warnings and penalties when they detect copyright infringement by their users, which in some cases led to throttling of Internet speed for the supposed offender but never complete disconnect from the Internet. However, this then gets into conversations about Net Neutrality. The system was put to rest on January 27, 2017, lasting only four years. A few reasons why it didn't see much success was the greatest offenders were a select few unlikely to be deterred by toothless consequences (Seidenberg, 2017).

In a different plan of attack, France passed a law called High Authority for Transmission of Creative Works and Copyright Protection on the Internet (HADOPI), mandating account termination once

an ISP's customer received a third notice of infringement. But with a heavy reliance on the Internet, this did not seem like the punishment fit the crime. France's Constitutional Court struck down the penalty in 2009 when it held Internet access is a right protected by the Declaration of Human Rights, in the preamble to the France's Constitution (Seidenberg, 2017).

While removing the account termination diminished some of the effectiveness, the continued awareness and education still helped. A study showed it caused digital music sales to increase approximately 25% relative to a control group with larger increases for the most-heavily pirated genres. The effect of the law appeared to have been maintained for more than two years after the public's initial awareness with many infringement warnings going out from 2010-2012 (Danaher et al, 2017).

In April 2009, Sweden implemented a copyright reform policy based on the European Union's Intellectual Property Rights Enforcement Directive (IPRED) that made it significantly easier for rights holders to detect and identify file sharers. When comparing piracy levels and total music sales in Sweden before and after the law to those in two other Scandinavian countries—Norway and Finland--researchers found the law directly led to a 16% decrease in Internet traffic during the first six months, which they attributed to a 32% decrease in piracy. They also found that total music sales increased 36% during this time relative to the control group, with a larger increase for digital sales and a smaller increase for physical sales. But with very little cases making it to court, the effectiveness dissipated over time (Danaher et al, 2017).

Oversight Is Good But To a Certain Point.

In 2016, IFPI reported that 66% of all music pirates used general search engines (e.g. Google) to find pirated music. A year later this went down to 54%, last year it dipped under 50%, and in 2019 it's not

mentioned at all in their report (Masnick, 2019). In one instance, when publishers employed a third-party organization to selectively increase copyright enforcement on a specific set of book titles by having Google de-list the sites offering the copyright-infringing files and by sending takedown notices to those sites, this action caused ebook sales of those titles to increase by 11%. On the supply side, studies show search in relation to piracy and found that demoting search results that link to piracy websites can shift user behavior toward legal consumption, implying search engines may be useful partners in the effort to reduce piracy's impact (Danaher et al., 2017).

But back to Net Neutrality concerns, this feels like its controlling the Internet highways and giving certain powers that be too much power. We only have to look to previous attempts with Stop Online Piracy Act (SOPA) and PIPA to know that the public isn't down with that. In an attempt to remove links from foreign sites suspected of pirating copyrighted materials, opponents thought it gave the federal government a form of Internet censorship (Washington Post Contributor, n.d.).

There have also been voluntary agreements with payment processors, companies that provide ad services for websites, domain name registries and even one domain registrar. These firms would agree to withhold services to websites allegedly facilitating copyright infringement, and starve them from ads revenue. But there was often no transparency into which sites these were and it starts to feel like we're grasping at straws (Seidenberg, 2017).

Consolidated Hits Show We Mean Business.

Looking at more of the supply side, in May 2012, the U.K. courts ordered ISPs to block access to The Pirate Bay, a major indexing site for BitTorrent tracker files. When the Pirate Bay was the only site blocked, former users generally increased use of other piracy sites and VPNs, thus causing only a small

decrease in total piracy. In November 2013, U.K. courts ordered a near-simultaneous blocking of 28 piracy sites with 19 hosting video content. This led to significant reduction in overall piracy and greater increase in use of legal sites for average customer by 12% after the blocks occurred.

While ISPs could terminate multiple accounts of *repeat offenders* per the U.S. Digital Millennium Copyright Act (DMCA) -- but because they utilize Safe Harbor too much, there may not seem to be as much incentive. The very wording to qualify for Safe Harbor is vague: “adopted and reasonably implemented...a policy that provides for the termination in appropriate circumstances of subscribers and account holders...who are repeat infringers.” In *BMG Rights Management v. Cox Communications* showed limitations to Safe Harbor in which Cox was liable for contributory copyright infringement and paid out \$25 million in damages (Seidenberg, 2017). The author feels that a cap on Safe Harbor is strongly advised, chiefly the assessment of what’s considered “proactive” or “knowledgeable” -- and this isn’t just for ISPs but content platforms like YouTube and Facebook.

Investment in Improved Technology is Needed.

What about the detection software we already have like Content ID and MixScan? Songs containing samples may be removed due to false automated copyright infringement claims. A use may be transformative or de minimus and while the songs are taken down before defense can be given, a creative artists may lose revenue driving opportunities (Zwilling, 2016). So, with this detection software, it becomes a case of who should be put more at risk: the new creator or the original creator?

Also, with copyright free sample packs for DJs, these can be used in a number of songs for which the earnings should not be attributed back to one artist -- the first to upload or submit for protection of his

or her work (Zwilling, 2016). If a platform becomes too expensive to operate with manual review, that benefits no one -- so an automated approach for efficiency makes sense, but it needs to be refined.

Another solution pitched has been watermarks, essentially digital fingerprints baked into audio files. They do not change the audio at all, but when leaks occur they can be extracted to discover the source of the leak, including the IP address where the file was initially accessed (Shotwell, 2019). But some might say a tech guru can easily find a way around this. Detection is only half the solution; enforcement is the other half -- and we struggle to find the perfect blend.

Conclusion

Even with a clear understanding of both supply and demand, we witness how fine the line is between stifling innovation, putting too much power in the hands of a few, and protection of intellectual property rights. And because the law in itself is interpreted differently case by case, we've provided too many loopholes while we ponder how to get the right balance.

The trend appears to be that increased awareness and potential risk of being caught help limit piracy -- but if enforcement isn't strong in a timely manner, piracy will eventually start to increase again. It would seem an important factor is how one limits search and transaction costs to finding an alternative while increasing the value of legal avenues. If it's too much workaround to get the pirated material than to go the legal route, more Internet users presumably would turn to the legal channels and piracy be limited.

However, it's important the author add a disclaimer that even though previous cases may provide guidelines of what to test, these instances or studies are not definitive in their success or failure in all cases. We should question: is a P2P file sharing pirate the same as a stream ripping pirate, do they pirate

for the same reasons, and do the same incentives sway them? We have to be careful to not blanket judge across all scenarios of pirating, expecting the same results.

The struggle we face is how do we really top “FREE”? Isn’t it human nature to always want more? Because the moment we figure out how to reduce piracy within the current landscape, another shift is bound to happen to set us right back into the hole. What we can do is continue to educate, add value, and streamline approaches for obtaining proper licensing in the hopes we can keep our heads above water.

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