How Technology Changed the Rhythm of the Music Industry

by

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Writer Introduction

Not every child has the opportunity to grow up listening to Stevie Wonder and see 3 generations of Jazz Musicians at their Thanksgiving Dinner, and especially have to sing for their Thanksgiving dinner, but I did. These experiences and perspectives have allowed me the opportunity to truly understand the whirlwind that it can be to be an artist and how challenging it is to ensure you are keeping up with the world when it comes to your music and business. For this reason, I wanted to do my thesis for the Honors College on the impact that technology has had and continues to have on this industry from an artist, consumer, and business perspective.

During my time at LSU, I studied Information Systems and Decision Sciences with a minor in Analytics as well as being a part of Alpha Kappa Psi at LSU and was a selected member for Leadership LSU my final semester. However, while my schooling hasn't always focused on this industry, I have always found a way to bring it into my schooling through various projects and independent research. I have a passion for this subject because as I've always believed music has a way of connecting people as nothing else can; that was until technology came around. For me, this thesis is combining my two passions of technology and music to form a multiple month research paper into how far we have come and how far we can continue to go in creating and sharing our hearts, through music and technologies, with the world.

Section 1: Evolution of How we Listen to Music and the Impact on Consumers

Introduction

Starting at the basic level of what music looks like daily for everyone, is something to serve as your background noise or even escape from your everyday activities. However, learning how this industry all began, and how it continues to develop every day along with the rise of humanity is key to understanding the true impact that these technologies have had on the industry and its consumers. From the Phonograph to The Walkman to Streaming, each of these breakthrough technologies has brought about changes that we still see to this day.

Phonograph

We all know the phonograph as a breakthrough in technologies in 1877 when it was invented by

Thomas Edison to transcribe telegraphic messages from indentations on paper tape to later be sent over the telegraph time and time again. However, while the original intention of this technology was to record words and moments, in 1878 Thomas Edison predicted that "The phonograph will undoubtedly be liberally devoted to music." Which it did.

While this comes as no surprise, Thomas Edison was exactly right. These machines became widely used on streets as a "coin-in-slot" model for people to put a few coins in and listen to audio that ranged anywhere from jokes to songs. Additionally, the phonograph was the initial inspiration for more and more people to pick up musical instruments. This was even more so accurate for the genre of jazz where many musicians consider this to be their formative technology since the only other way to hear music was from a live performance or play the song yourself (Weeks, 2016). Leaving a major impact on users of curiosity for learning to play instruments as well as what was to come from this technology.

Radio

The radio, while it now serves as background noise for most people while they are driving around town, was first invented in the 1920's by Guglielmo Marconi and works by having electricity flowing into the transmitter antenna which makes electrons vibrate up and down it, therefore, producing radio waves that can travel through the air at the speed of light to arrive at the receiver antenna to where the electrons will vibrate inside of it. This technology was developed due to Marconi's fascination with Heinrich Rudolf Hertz's work with electromagnetic interactions but was later to be used as a way for Queen Victoria to send messages to her son Prince Edward while he was on the royal yacht. However, not much of the technology has changed from then to the radio we use daily.

The radio's impact on the music industry is unparalleled because it truly set the stage for new music discovery and allowing artists to be seen on a worldwide platform in a matter of minutes. This technology widened the scope for what artists could accomplish in the industry, with AM/FM Audio reaching around 228.5 million people a week. This allowed the industry to begin having major Music Labels like Sony Records or Universal Music because by having relations with these broadcasting stations they could have contracts to have their artists be heard by millions of people hundreds of times a week. Therefore, allowing them to build a global fanbase and rather heavy profits.

Vinyl

Vinyl Records were invented in 1948 from Columbia Records which made the world's first Long Play record which had a whopping capacity of 21 minutes per side. These records were 12 inches wide, played at a speed of 33 ½ RPM and were just under 7 inches in size. Vinyl records have been one of the most formative technologies in the industry since they have stood the test of time, including surviving their near-death in 1991. This technology is another analog technology that is said to provide a superior listening experience due to the technology's ability to better articulate the original soundwave with accuracy and richness. This analog technology works by having a record player which is an electromagnetic device that changes the sound vibrations of the grooves of the record into electrical signals. This further allows these signals to go into electronic amplifiers that vibrate and give the resulting sound into the speakers. This system was

originally developed from the phonograph and is the key to providing listeners with that living-room-concert like experience.

From an industry perspective, records were the first time in music history that you could take the music home with you in a high-quality format. This enabled users to have a more personal connection to these albums from their favorite artists with their ownership of the item and make them feel like they are part of the artist's story by owning an "artifact" of their journey (Mai, 2018). Additionally, the sound quality is "much warmer, richer and people appreciate that" as described by Gennaro Castaldo, the communications director for British Phonographic Industry, which is the British recorded music industry's trade association. This truly goes to show the connection people search for when it comes to their music, even if that connection is with a groove on a record.

Cassette and The Walkman

The Cassette is one of the first portable music technologies, works through magnetic recording and is made by having 2 spools inside of a hollow plastic casing with a length of flat plastic tape coated in a layer of ferric oxide that's been magnetized wound between the spools which are protected by a plastic case. This allows for sounds to be recorded on the cassette tape by having permanent impressions of an electromagnetic signal onto the ferric oxide coating on the plastic tape. This led to long term use and durability more so than the technologies that came before it.

The cassette eventually led to the creation of The Walkman, which was invented in 1963 by Philips, and named the "Sound-About", and was originally intended for journalists and secretaries. However, The Walkman was the next step for the cassette technology because it is a portable cassette player that comes with headphones and a leather case that comes out to a mere 14 ounces in weight. These attributes make the technology perfect for portable use, especially since the power source was only two AA batteries (Haire, 2009).

This technology's claim to fame, aside from being featured in the Guardians of the Galaxy movies by Disney, was that it was the first opportunity for people to listen to music for more than 45 minutes since the standard LP length was 45 minutes total and the cassette offered 45 minutes per side. This technology also allowed artists to get a hold of blank tapes and record their music on them without having to be picked up by a record label and was one of the first opportunities for stand-alone artists to get their sounds out there in the world. This additionally led to the creation of the first music bootlegs, since people could record at home, this meant that they would be able to buy one copy of the tape, have several blank tapes and individually record the music from the original tape onto their bootlegs and sell for cheaper prices (Sony's dilemma: Illegally copied music on Walkman, 2002). It's hard to believe that the true beginning of music piracy was in 1963!

CDs

Now to one of the few music technology tools I've used in my lifetime, the CD. The way the CD works is simple, the surface of the disk contains one long spiral track of information and on the track, there are flat reflective areas and non-reflective spots that represent 1 or 0. The CD player then shines a laser on the surface to detect the areas by the amount of laser light is detected which turns into 1 or 0 to allow the player to read the digital data from the disk. The CD was the first digital technology within the

music industry and for that reason caused a major revolution in the way music was created and distributed to consumers.

Now while the CD may not compare in quality to the vinyl record, its impact came in with the major consumer trend that we still see today, choice. This was the first time that users were able to skip to a certain track on the music they had with just the touch of a button, allowing consumers to have more control over their listening experience than they ever had before. Additionally, this technology was considered "indestructible" because as long as you saved the songs on a storage device, it didn't matter what happened to the CD. After all, you could always download another copy on a blank disk. This technology was also foreshadowing the future of music technology by being one of the first to have music that was intangible and easily copiable.

MP3 Players

The MP3 player simply is a type of digital audio player that is typically a handheld device utilizing a flash memory system for storing MP3 files. What this means is the device can include everything from playlists to radio to even streaming from websites and the music that is stored on the player typically comes from a transfer of music from a hard drive. An example of this is the Apple iPod which utilized the iTunes store for its music downloading system. Funnily enough, this technology reached its near-death in 1995 but was revived due to filesharing on internet sites, also known as music piracy.

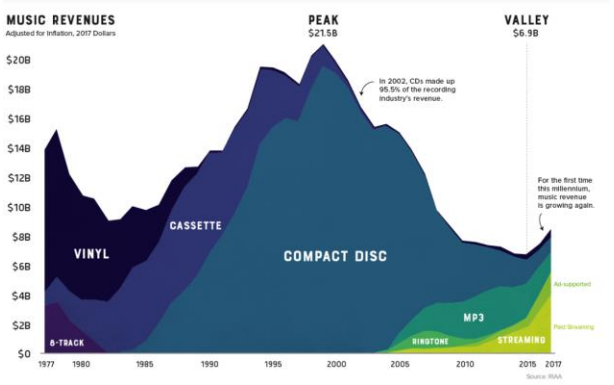
When the mp3 emerged in the late 1990s, the impact was widely missed and dismissed in its first stages by the industry as well as society with most people not being able to even comprehend the idea of not physically owning their music. However, the technology brought about changes that have fundamentally altered the music industry by introducing new market entrants, such as iTunes, Pandora, and Spotify, and invalidating the physicals-based business model. This caused the true start of the digital music revolution and changed the way users are listening to music to this day (Johnson, n.d.).

This revolution also added a new entrant for how quality was to be determined, portability. This technology-enabled consumers to have the content they wanted, when they wanted it, leading to a decline in the desirability for physicals like records. This also led to a new standard of quality in overall audio, because while vinyl records reign supreme in sound quality, mp3 were more desirable to consumers due to the new "on-demand" ability for the product. This meant that consumers began to focus on "good enough" quality of compressed files, to access it at any time. Looking toward the future, we see this on-demand trend continuing to grow, with consumers continuing to apply pressure to businesses for them to develop products that will adapt to their rapidly changing demands for portability and now customization (Riemer & Johnston, 2019).

Streaming

Now finally to the technology you probably used on your way home last night, Streaming. Streaming varies from the previous technologies by being the first where the user does not need to download and store the audio file on the actual device, but rather, the data is sent to the device via small packets that the audio file is divided up into. This allows you to play your music right away, or view the software's wonderful buffering sign! However, the impact of streaming is still being truly noticed every day. This groundbreaking technology has allowed for

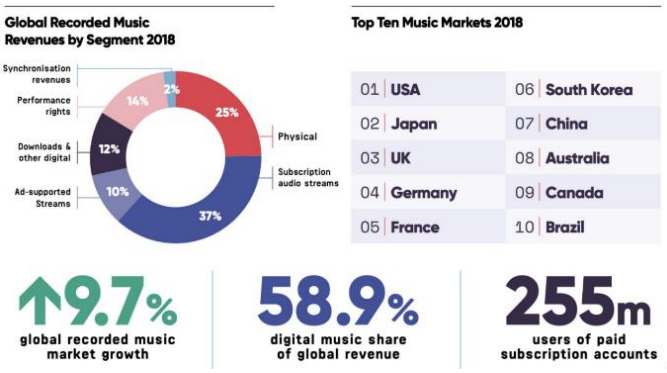
more and more people to gain access to artists across the globe which allows for better streamer welfare and demand for complementary goods, such as merchandise or concert sales, to potentially increase. However, this also means that there are more and more artists to compete with, so from a business perspective, artists are beginning to find it even more challenging to continue to stay on top of the leaderboards (Westcott, Loucks, Downs, & Watson, 2019).



Section 2: Current Industry Trends

Where We Are Now

Looking at how far we've come is one of the most exciting parts of studying this fascinating industry. However, in 2018 recorded music around the world grew by 9.7% and the total revenues equated to $19.1 billion. Giving the recorded music industry its fourth year of growth in a row. However, according to the report, a whopping 46.8% of the global revenue comes from streaming services with a 32.9% increase in paid streaming over the course of 2018 (IFPI Global Music Report, 2019). This is contrary to the 10.1% decline coming from physical revenue and a 21.2% decline from download revenue. Additionally, from a regional perspective, Latin America continues to be the one to watch with them also showing their fourth consecutive year of growth at a rate of 16.8% with Australia and Asia not very far behind and being the second largest growing regions with rates of 11.7% (IFPI Global Music Report, 2019).

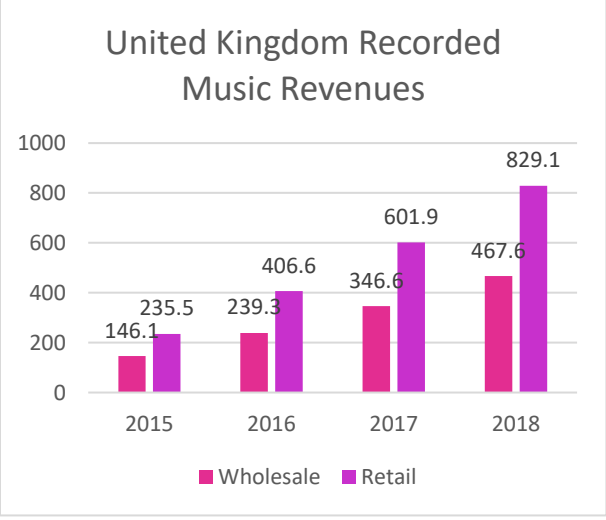


The Economics of Constant Music

Availability has been on the mind of every music connoisseur since the dawn of time, however, now more so than before this is becoming a requirement for artists to stay relevant and in the minds of the consumer. With Streaming making up 75% of the industry's generated revenue in 2018, it truly showcases what this technology has that all others did not, the ability to listen to whatever you want, whenever you want. Over the course of music history, we have seen this trend in place with each platform becoming more and more available and having additional storage which shows exactly what

consumers are looking for; the migration to all-access listening. (SoundCharts, 2019)

Music truly is everywhere; it's in your grocery stores, restaurants, barbershops, you name it at this point. So why is it that while music is being played more and more that we are seeing artists continuing to get less and less? Well, artists and labels are losing 1.1% of their total revenues, which equates to $108 million, to music retailers such as Spotify (Recording Industry Association of America, 2019). For example, as shown from the Entertainment Retailers Association, in the United Kingdom in 2018, according to ERA, music streaming subscription services in the U.K. were paid £829.1 million from consumers that year, and the wholesale, this is the artist's or label's share of the money, figure for the United Kingdom's subscription music services which in the same time frame was £467.6 million. This shows that only 56.4% of the total revenue ends up in artist or label pockets from streaming in that region. Further proving that while music is becoming more available, it comes at a cost for the producers of that music.



Niche is the New Main Stream

As shown in everyday life now, our society is moving toward Mass Personalization in everything we do. Whether this is in our purchases for our mattresses from Sleep Number, or simply buying a Coca-Cola with our name on it from the grocery store, we want almost everything we own now to reflect our individuality. We have seen this trend continue to rise in the music industry. The reason for this is because as Nolan Glaser, author of "Why You Like It: The Science and Culture of Music Taste", puts it, "Music becomes that stake in the ground — 'this is who I am'." A person's taste in music is something that makes them individual and stands out, but the types of songs they listen to can also bring them into different communities, such as the Indie Rock Community or Polka Dancing Brigade, which is a real thing! Experts believe that this trend is due to the coming of age with millennials and our ideals which are described as "wanting to be unique, but also be part of a community." So naturally, our music must match this.

With the wide amount of music that is available this mass personalization is leading to more and more diverse playlists that are considered to represent the creators themselves. This diversity has become especially exciting for the Latin music scene with 19 Hot 100 hits in 2017 as opposed to the previous 4 in 2016 (Cobo, 2018). This is largely due to the danceability of the music given that it traditionally consists of higher and more consistent speeds but is likely to have never happened without the help of Reggaeton. This surgency has led to more and more collaborations of major artists with Latin Pop artists in their music to try to gain more streams and continue to stay relevant and exciting with their fanbases. However, this presents a unique challenge for labels in making sure that their

numbers, while they might look like the songs are trending globally, are not just the numbers from their regional fanbases in the Western Hemisphere. Overall, diversity of music style is breaking boundaries within the music world as it celebrates the different styles across the globe.

Diving deeper into a music tech giant that has mass personalization in place, Spotify's Discover Weekly feature exemplifies the future of music growth strategy. Spotify currently utilizes machine learning to power this feature that utilizes your data and data from users with similar music tastes to provide users with a two-hour custom playlist each week. As Alex Underwood, the Vice President and Head of Global Strategic Partnerships and Verticals at Spotify, says, "personalization should be a trigger to inspire positive emotional resonance and reaction and any personalized content needs to be authentic to your brand and true to the category in which your brand exists." With music is unbelievably important for streaming services to understand that they are creating relationships with these consumers given that consumers truly do treat music as the soundtrack for their ever-changing lives. Spotify can enable the best of both worlds by having a team of individuals to go through the songs that are chosen by the algorithm and handpick recommendations. This enables users to feel right at home with their playlists on Spotify because while a machine may be doing all the work, every playlist will always have a personal touch. This shows that major companies are taking hold of this need for personalization by consumers and utilizing technology to do it (Popper, 2015).

Labels are Moving away from Albums

This trend begins to showcase itself with traditional albums. The artist will cover various styles throughout each song to have one to match every mood. However, we see people are continuing to move toward playlists that have similar song attributes, such as topic, tempo, and genre, and are no longer looking for mood-diverse albums. Additionally, with the amount of music that users are exposed to, they do not need to listen to the same songs repeatedly, even if they are by Billy Joel. In fact, in the Q3 of 2018 Report from MIDIA, only 16% of users said they were listening to whole albums monthly, which is down from 22% in the previous quarter.

Labels are also now competing in an attention economy where users now also have almost all forms of entertainment, such as Netflix, Instagram, TikTok, Hulu, Disney+, and many more, at the touch of their fingertips. This means that labels are having to make songs and artists compete with everything from Movies to Podcasts to Social Media, which is no easy task. This competition also doesn't begin and end with how many streams they can get or records they can sell, this competition goes all the way to their word-of-mouth marketing that is used which can have major impacts on up-and-coming artists. However, for most people, it is still fairly challenging to imagine Michael Jackson's Thriller competing with Avengers: Endgame (Krueger & Murray, 2019).

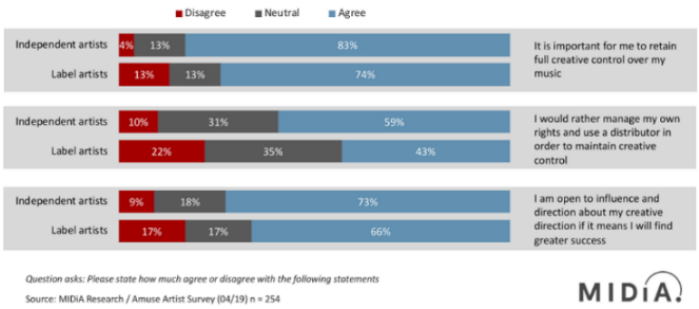
Focusing more on an artist's perspective within the labels, we are even seeing that artists themselves are wanting to move away from the album structure. This is mostly because artists recognize that to stay relevant, they can no longer drop large albums every few years and stay on a listener's radar, but rather need to

steadily release content to maintain followers (Wang, 2018). Now, this doesn't mean that artists that have been making albums for years are going to suddenly move away from them, but rather that this style of music production is going to be phased out with the new artists that enter the scene. The additional challenge for labels with these new artists is to make sure that they are keeping up with these relevant artists because with the dawn of streaming and decline in traditionally recorded music, so goes the traditional artist. Long story short, this means that music from the Spice Girls is considered more valuable than music from The Beatles in a streaming perspective.

The Rise of Independent Creator

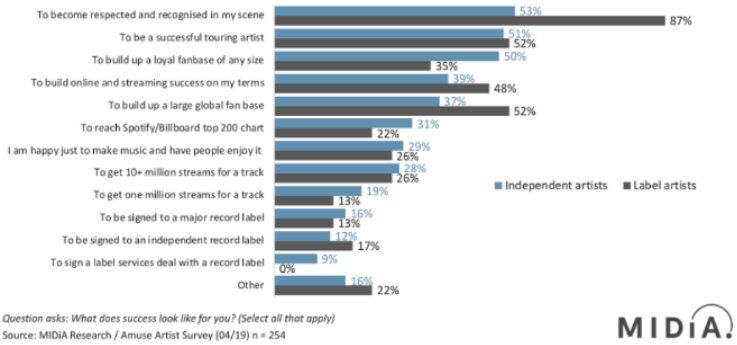
SoundCloud, labels have been shaking over the rise of the independent creator. As Mark Mulligan, the Managing Director of MIDiA Research, says that the late 2000s were where the dawn of the independent creator began, and this trend is not going to back down in 2020 because, with the rise of software's like CD Baby and TuneCore, artists have even more tools to meet their needs. This trend of independent creators has spread all across the audio entertainment world from independent music to independent podcasts (Mulligan, 2019).

With more musicians coming on the scene every day, it's no surprise that independent musicians are the fastest-growing segment of the business with independent artists generating more than $643 million in 2018, which is 34% higher from the previous year (Mulligan, 2019). What this shows is a major change coming in the music industry with new players drifting away from labels and long-term managers, and more onto short term contracts given the new nature that is being created in the industry of artists finally having the ability to control their own pace and destiny. This dynamic is shown with 83% of independent artists saying it is important for them to retain creative control over their music whereas only 74% of label artists agree with that statement (Daniels, 2019). The true game-changer for the industry is that artists can see now more so than ever before that they have the power to determine their fate as opposed to labels being the original, and truly, the only road to success.



Looking more into the numbers for this rise we see that independent artists earned around $12,860 a year from their music, and label artists earned an average of $23,913 (Daniels, 2019). However, these numbers fail to show 75% of independent artists or 61% of label artists that have said they make less than $10,000 a year from music (Daniels, 2019). This goes to show that in this industry there truly is no one path to success, even with the benefits of staff that come from being partnered with a label. However, we are seeing that more artists are adopting a different mindset of what is considered a success in their field. The number one form of success for both independent and label artists was achieving respect and recognition for their work with 87% of label artists and 53% of independent artists agreeing with this statement (Daniels, 2019). Additionally, only 20% of artists say that they believe signing with a label is a measure of success, with the

report stating, "artists now see labels as simply one more possible means to an end." At the end of the day, the culture of being an artist is starting to transform from the teenager in their room recording their version of "Teenage Dream" by Katy Perry to post on Facebook and dreaming of being a stadium musician, to now sharing their music because it's something they love to do with no real financial or luxurious dreams attached.



Section 3: Future Technologies and Their Impacts

The Big Picture

As technology continues to develop, so will the music industry. With many companies already adopting major technologies such as Artificial Intelligence and Blockchain, with these foundational changes comes a major change to the industry as a whole. This section takes a deeper dive into what we have to expect in the music industry in the next 50 years from what technologies are entering the scene, the impact that they will have, and how current business trends are shaping the way we get to the music.

Artificial Intelligence

There's no doubt that you've heard these words before, but probably never in the context of changing the music industry. However, Artificial Intelligence is expected to make a major impact on the industry in making music, marketing music, and artist discovery; and truthfully it already has.

For every musician, one of the most challenging, and expensive, is getting a group together to record your song since not everyone can be Ed Sheeran and play every instrument on your track. This is something that has stifled a lot of musicians over the course of history due to them just not having the connections to bring their sound together. Well, a small Australian startup called Popgun, just might have the solution. The company developed an artificial intelligence named Alice that is capable of playing the piano with humans as well as listening to the notes they played and predicting what she thinks might come next (Dredge, 2018). This technology has now exploded into a major innovation with the company having AI that can play the drums and bass as well. However, one key thing to note about this is that while the AI can play the instruments, it still has no concept of what is considered to be good or bad, so it looks like the pianists, bass players, and drummers aren't going to be completely out of a job for a while. What this means for the industry is that music and the ability to create high-quality recordings are going to become more available to musicians across the globe.

Looking at the number of artists that are on the scene and are expected to come on the scene as more technologies become available, AI is expected to reshape the way artists can market to users. With more than 20,000 new tracks uploaded to Spotify every day, AI is expected to help streaming platforms and labels by performing an advanced sorting that will promote songs to users based on the previous songs they have to listen to (Marr, 2019). Additionally, this is expected to make genre's next to obsolete because these playlists are made based on what the user would consider being "good music" based on big data. As Scott Cohen, the co-founder of The Orchard which was acquired by music giant Sony back in 2012, suggested during his keynote speech at Eurosonic Nooderslag conference, that currently consumers are stuck in a place of having too many choices and we need a new model of trusted recommendations.

Discovering artists with the amount of content that is on our streaming platforms is no easy feat. However, through the utilization of AI, artists can be discovered through the system's sorting and recommending their songs to users who have also listened to similar songs. This can also help aid systems that are already in place in

some streaming services such as Spotify's Discovery Weekly to curate more music that is appealing to them. This also helps record labels in Artists and Repertoire with their artist discovery. We see this trend truly starting to shape the future with Apple acquiring A&R startup Platoon and Warner Music Group's acquisition of the Soda tone for their algorithm that incorporates streaming and touring data to find talent (Payne, 2018).

Fall of Physicals

It's no secret that streaming has caused many physical forms of music such as vinyl records and CDs to go by the wayside in terms of sales and label attention. However, more evidence is revealing itself of labels simply no longer have their time, energy, or staffing to dedicate to the sector of the industry practically forcing it into a decline (Knopper, The End of Owning Music: How CDs and Downloads Died, 2018). This has been illustrated with Sony Music Entertainment, Universal Music Group, and Warner Music Group transferring all the physical distribution efforts to Direct Shot, a service provider that fulfills orders for the company's record stores. In these efforts, record stores have reported back how a lack of attention to physicals sales by the labels is continuing to accelerate the decline. Some common examples are leaving stores waiting on new releases or catalog orders for months at a time, shipments that arrive hold a fraction of what was actually ordered, or sometimes even arrive empty, and special edition vinyl that is ordered for customers often time never arrive or are even produced, just to name a few (Christman, 2019).

For the majority of music history, physicals have been the label's primary way of making money, so naturally, the labels would have teams of people ensuring that every order was fulfilled on time and with the proper materials. However, due to streaming, this is no longer a priority, even though physicals are responsible for more than $1 billion and 12% of the total revenue last year (Recording Industry Association of America, 2019). However, there is much to be said for the costs associated with creating a physical record given that the average vinyl record costs $6 to make in a bulk order. This meant that for new artists coming on the scene before streaming, it was next to impossible for them to be able to afford to get their physicals on the market without the help of someone with a major chunk of change. Therefore, with the rising of the independent artist and decline of labels, artists no longer have a desire to pay for physicals when they could just push their files out to the streaming services for a considerably smaller fee and reach more potential fans.

Smart Speakers & Metadata

While most people look at their smart speakers and see a way to instantaneously find out the weather or set an alarm for their chicken that's in the oven, smart speakers are changing the way music companies can look at their music data. Looking into what allows these smart speakers to work, the systems rely on complex artificial intelligence technologies that convert the sound waves into words by utilizing automatic speech recognition. Experts are even estimating that by the end of 2020 50% of all web searches will be voice-enabled and that by the year 2021 there will be more smart speakers on the planet than humans (Westcott, Loucks, Downs, & Watson, 2019). So naturally, with nearly 25% of homes in the United States owning a smart speaker currently, and listening to music is the most popular use case for smart speakers, there's no doubt of that they are going to have an impact on the industry in a big way with

something that has typically been considered to be relatively small; metadata.

Labels are starting to have to think of the challenges of having their songs be queried on smart speakers with requests that range from specific songs down to something like "Alexa, play me a sad song." which is causing more companies to consider what goes around music as well as what goes into it. A great example of this feature is Spotify's song attribute of danceability which "describes how suitable a track is for dancing based on a combination of musical elements including tempo, rhythm stability, beat strength, and overall regularity." Songs are requiring more tags, metadata, to get pulled for the areas they are strong in and for more users to hear their material, however, this is quite a challenge when you are making something very subjective for a user like "play me a sad song" or "play me songs to work out to" (Westcott, Loucks, Downs, & Watson, 2019). Therefore, this is one of the major challenges that the industry will be faced with, especially with a new song being uploaded to Spotify every 4.3 seconds. These playlists that will be created by these queries are considered contextual playlists which are expected to reshape the way people discover music eventually leading toward favoritism of mood-specific playlists (Elnaj, 2019).

Merging of Medias and Big Tech

It's no secret that bundling has become the new way of selling these technologies when it comes to Software as a Service package, my personal favorite being Hulu, Spotify, and Showtime for $4.99 a month. However, the future of bundling is bundling many forms of media which we see showing itself all across the past few years with record labels working to make documentaries of their major artists such as Bohemian Rhapsody and Rocketman, or having superstar artists working with fashion giants like Rihanna's new brand with Fenty. However, this trend is turning into something much more than documentaries on famous artists and the creation of new fashion brands. This is turning big technology companies into indestructible forces that no one can compete with, except of course with each other.

With 69% having at least one streaming service, it comes as no surprise that this is having an impact on the media industry. The behaviors that are leading to these vast changes are that consumers are getting tired of having multiple streaming platforms and are frustrated with having the shows they love disappear from their library (Westcott, Loucks, Downs, & Watson, 2019). While of course, we know that consumers are seeing this become more common due to networks launching their streaming platforms for their products, like the launch of Disney+ in late 2019. This is change is continuing to diminish the value of the individual streaming service for the consumer in the long run, as well as lead consumers to potential data privacy issues with the number of platforms that have their information. Therefore, the solution to this problem lies in the Deloitte Media Trends Survey report that they "believe companies that are best able to reduce the friction, making it easier for consumers to have it their way, will be most amply rewarded." Thus, the large pocketbooks and advance technologies of Big Tech come in.

As we have seen over the past 10 years, big technology companies are starting to compete within the entertainment space. We have seen this especially with Apple's creation of TV in 2007, Apple Music in 2015, and now the Apple HomePod in 2018 that Apple it's clear to see that Apple is working to increase connectivity within

its services, even more so than it already has, to combat the frustrations that many consumers have of paying for one monthly subscription for their services. Plus, the fee is estimated to be only $13 monthly for access to both Apple Music and Apple TV. However, this strategy isn't specific to Apple with Amazon also adding Amazon Video in 2006 and Amazon Music in 2007 that comes included with any Amazon Prime Membership (Laporte, 2016). This just goes to show that more big technology companies are understanding the impact that they can have on this industry, and in many ways, the footprints they can make will make it next to impossible for newer on the scene streaming services to even make a dent. Therefore, it is expected for big technology to truly become the future of entertainment as a whole (Manjoo, 2017).

Conclusion

Whether it be listening to music in our car or having it support us after a heartbreaking experience, the music world is an integral part of our worlds. By looking at how music has dramatically changed over the past 50 years and taking a quick dive into how the industry is expected to evolve over the next 20 years, there is no doubt that with the advancement of available technologies come with the advancement of music around the globe. However, the music business is still in the dawning of the revolution. Streaming is going to conquer new markets and give millions of people unlimited access to music; democratization will be powered by these emerging markets that will take over the music world and listening to your favorite song by Queen is more available than ever before. Now, all we must do is evolve our tempos to match that of our allegro changing world.

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