

New Technology In Music : Essay

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It is no secret that technology has advanced at an alarming rate over recent years, with an abundance of new products launching on the market every day. Globally, we have up to 1.35 million tech startups worldwide (Bulao, 2020), which has spawned a creative wave of innovation that has carved its way into the music industry. From the inception of the L.P. in 1931 and the cassette tape in 1963, technology was actively present in its contribution to music (Herzog, 2014). In the early 2000s, music was still being stored on cassette tapes, and C.D.s bought in store and listened to on devices such as stereo systems or portable Sony Walkmans. The first iPod was released in 2001, where you uploaded your C.D.s into iTunes and stored them all on a portable device that you could listen to anywhere (Wain, 2019).

How we consume music services has completely shifted. In the early 2000's we had file-sharing services like LimeWire and Napster, which opened up the door to the MP3 market. With listeners' new ability to store thousands of records at their fingertips, it was no surprise that previous consumption methods were largely phased out and in quite a quick succession. The number of users with mobile devices has seen rises from 1 billion users in 2012 to 3.8 billion in 2021 (Statista, 2021), and this has given consumers access to millions of songs at their fingertips. Physical products dived popularity and saw massive declines throughout the decade, with revenue dropping £100 million over ten years (Cole, 2019).

This shift in consumer habits has seen Spotify services grow from 62 million users in 2017 to 144 million in 3 short years with Apple Music, and others have seen similar growth (Porter, 2020). Streaming is currently recorded music's dominant force, the power of which grows each year. I guess Apple's Steve Jobs was wrong when he notoriously (and somewhat arrogantly) proclaimed, "The subscription model of buying music is

bankrupt" and cannot be saved even by "the Second Coming." Well, in the words of a Grinch-refuting Dr Seuss (a very different kind of genius), "it came just the same." Streaming now accounts for 80% of U.S. recorded music revenues (Csathy, 2020). With new technology undermining the traditional recording industry within such a short time meant the music industry had to adapt and learn new ways to integrate itself into the ever-evolving landscape. Ironically, the first company that created a successful online service for legal sales and distribution of music was not a music industry player at all—it was Apple. In 2003, they convinced major labels that music consumers would buy music legally if offered a straightforward service that allowed them to buy and download music for less than a dollar per track (Wikstrom, 2015).

This kind of new services and technologies triggered the decline in illegal downloading, and this was the first sign that the music industry as we knew it was drifting from the product sector to the service sector. In an environment with transaction costs as small as those on the internet, where virtually everything is a click away, offering platforms of this type makes perfect sense and is set to become one of the most advanced in this so-called digital transformation (Dans, 2020).

Suddenly, the need to collect physical products became less relevant to the consumer, and the cost of these items and the space they took up seemed considerably less attractive than having access to all your music for a lot smaller cost fitted nicely in your pocket. You could summon the music whenever you wanted to hear it — in much the same way you might have asked a performer to play your favourite song in a public square in 1840. Or in 1540 (Doyon, 2013).

These new music stores and services like YouTube allowed consumers to consume music instantly and with vast choice but allowed people to upload their music collections and discover new music faster. Listeners no longer had to rely on radio play and significant record label support to stumble upon fresh talent, internet technology, and unlimited options. It sparked a new wave of music consumption and distribution.

Technological advances have not just contributed to how music is consumed but also created. With digital audio workstations becoming affordable for most home studios, this saw the rise in music being able to create and distribute worldwide without all of the traditional routes to the market being required. "Digitalisation of both recording and distribution made it possible that a track recorded in one's bedroom can become viral and brings one success in the mainstream music market as in the case of Owl City. The channel to distribute music to the global market is practically accessible to everyone, through the services like CD Baby and TuneCore" (Eunsea, 2018).

As a means of editing and recording sound, one of the most significant contributions to technology in music is the personal computer. Though digitization has separated music from its medium, it has also given artists untold freedom and control levels. Pro Tools, Ableton, Logic Pro: These and other programs let musicians work on recordings anywhere they can plug in their laptops (Hadis, 2016). This technology has given artists and listeners a whole new way to distribute and consume music. Artists can release music at a moments notice and often surprise their fans with surprise digital releases. It has made music more accessible to a broader audience.

We can see the shift in behaviour that new music services have created but looking at how the younger generation (often describes as the trendsetters) are consuming and distributing music. Young people are changing how they discover music, and traditional methods such as radio are also dwindling. "Younger audiences are abandoning radio for streaming. Just 39% of 16-19-year olds listen to music radio, while 56% use YouTube instead for music" (Mulligan, 2019).

Recent advances in technology can assist the industry in other ways by harnessing new ways to develop content distribution and helping solve issues on the other side of the music business for artists and songwriters. Like the rapid digital transformation of various sectors discussed already, the music industry has a fantastic opportunity to streamline its processes and improve the backend by effectively harnessing technology's power—notably, the potential to tackle royalty distribution through big data and artificial intelligence (A.I.). This technology can solve some of the industry's significant issues regarding royalties payments and license by creating a transparent ecosystem utilising blockchain innovations. The music industry is starting to pay attention to this, and last year, these developments in music technology proved to be having a positive impact on tracking and distribution, after artists received a total of £746m in royalties, a rise of 4% on the previous year (Edwards, 2019).

Technology has become so influential in today's music that it seems impossible to imagine the industry without it. Even though various forms of technology have been present in music since the beginning, shaping many various sectors, new services providing platforms for creation, distribution, and informative music analytics (that in the past has proven difficult) has made the industry even more scalable and accessible than before

(SevenIntegration, 2021). The music industry is finally seeing financial growth with the International Federation of the Phonographic Industry (IFPI), stating that the recorded music revenue returned to growth in 2015, after nearly two decades of piracy-driven declines. The global industry's revenue bottomed out at \$14 billion in 2014 but grew to \$20 billion in 2019, back in line with 2004 levels (Stone, 2020).

Many argue that technology has harmed the music industry and that the damage caused by more recent new technology services is more prominent than ever. One example of this is the 1980's, in which the industry was terrified of cassette taping, believing consumers would copy music and record from the radio. However, this worry never really materialised, certainly not to the levels needed to disturb the industry (Morris, 2014).

This argument stretches further when you consider that the record label as we know it is at threat of being rendered unnecessary as technology (especially audience reach) is such a commonplace. With the emergence of new services offering independent record label services and a DIY business model making the 'music business' a lot more accessible and transparent, then the traditional need for the middle man's becomes redundant. Combining these services with the ability to produce music at home without the need for a record labels studio further adds to the weight of going it alone and utilising technology in the right way to build and develop your music career. This method has become seriously attractive to modern artists upon realising that there is also considerably more ownership available without a label.

It has also been argued that the hierarchy in the industry has shifted since the rise of streaming worldwide. Streaming services have a lot more

control over the industry landscape regarding support, releases, and marketing. Bloomberg wrote an article in 2016 that accuses Spotify of actively burying certain artists promotion campaigns that prioritized releases with Apple Music or Tidal (Shaw and Satariano, 2016). When Katy Perry's single 'Rise' was released with a week early release on iTunes and Apple Music. It is suggested that Spotify deliberately blackballed the song's release from their priority playlists and promotions on the platform. The song never made the top eighty on the charts, securing 176 - one of her most inferior to date (Ingham, 2016).

Another criticism is the guidelines under which streaming services calculate a songs contribution towards album sales via its streaming numbers. At first, labels and artists were receptive to this, but with the minimal advantage being gained unless in the top streaming numbers, which is more challenging in a saturated market for artists to achieve. This issue then filters down into the amount of money earned on there back end, extremely low. "Due to streams being so easily accessible, the payout for each stream is less than a penny per stream. To make matters worse, each streaming service has a different payout per stream as well" (Mcintosh, 2019).

As with most advancements in any sector, there will always be positive and negative changes, and it is all about you adapt. Social media services have become an integral communication and marketing asset in the music industry, and without this new technology, music would not reach the audience it can in the modern age. Labels can target specific audiences, and artists have a new creative way to build their online community and interact with fans more instantly. In turn, audiences have many ways to consume, share, and purchase products from their favourite artists. Gone are the days of a controlled market, in which the big four record labels could decide what

the industry heard and what they did not. (LeDoux, 2017) writes, "Today, there are fewer major record labels and an abundance of independents, each striving to promote their artists to a plethora of consumers. CD's and records are still being sold and people rarely purchase them this way, because most of us download music on our phones, apps, or listen for free on YouTube."

The music industry has benefited from a more connected world with communication services like Zoom and Microsoft Teams proving a platform for people to work. These services have resulted in campaigns being run faster and more efficiently. It has meant legal contracts, publishing agreements, and sync deals can be seamlessly agreed upon, edited, and signed - all using new technical service products.

It has taken a long time for the music industry to navigate through the technological storm that has ensued over the last two decades, and things are set to grow and adapt even further shortly. With recent developments in A.I., Blockchain, and holograms, music has entered a new era where soon virtual artists like Megurine Luka, a fully animated artist from Japan, are gaining massive notoriety, could become mainstream (Michel, 2017). Other artists have utilised V.R. to create unique experiences, Which before would not have been possible. "Earlier this year, Elton John announced his farewell tour with a V.R. extravaganza that included a motion-captured Elton performing his greatest hits, digitally rolling back the years and personally guiding fans through his cosmos-traversing life story" (Needham, 2018). With this technology in its early stages, I am sure we are set to see spectacular new services in the not too distant future.

A BBC article discussing the future of music in twenty years identifies the algorithm as the leading player in influencing music taste right now. In a few

years, the primary music units have become the social-media post, the YouTube rip and the Spotify playlist (Paul-Choudhury, 2019). The algorithmic tools used for discovery are very clever ways of making a recommendation based on what they know about you, but recommendations have only ever been one way of discovering music. Browsing is another: there is still no perfect digital equivalent to rifling through vinyl records (O'Brien, 2019).

Regardless of the abundance of new technology and services in music, the product sector, specifically vinyl production, had a fascinating resurgence. Boosted by events like the recent worldwide Record Store Day and love for nostalgia, vinyl sales are at a 25 year high. In the U.K. alone, 4.2 million records were sold in 2018, while figures from Statista for Australia show a similar upwards trajectory with 860,000 records sold in 2018, nearly three times more than in 2015 (314,000) (Price, 2019). Vinyl record sales outnumbered CD sales for the first time in 40 years in 2019, proving that there will always be room for a physical product in a multifaceted industry that can simultaneously combine both product and service sectors. "There's that ritual of taking the record out of the sleeve and putting it on the turntable and you get to see the art. There's a depth to it." (Asprou, 2019).

Technology will always continue to develop grow with it or not. We have transcended multiple mediums of music consumption from vinyl, cassette tapes, C.D.s, MP3s, and now streaming. With technology snowballing, this indeed is just the beginning. We cannot deny that music streaming has improved many negative situations that once occurred throughout music history, but it still has its flaws. The music industry is incredibly versatile and resilient to change (even if it takes time).

The latest technology will continue to facilitate music in different ways, and as much as these innovations will sometimes at first cause confusion and undoubtedly challenge us in new ways, we must learn to embrace and use this technology to our advantage. If we do not allow things to grow and develop, we cannot expect the music industry to compete in an ever-changing world where the market is saturated with content and new products. The pros in the music industry becoming more prominent in the service sector than the product sector outweigh the cons. Technology has become a vital part of our lives, which will most certainly continue at a vast rate - and we cant leave music behind.

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