

Explain the definition, commercial uses and legal implications of Blockchain on the music and entertainment industries.

The music industry has grown in such a manner that there are so many moving parts and actors involved in releasing a song. From performers and writers to producers, to publishers and labels, the systems regarding royalties, rights and contracts are very convoluted. However, as has been the case over the past twenty years technology has completely altered the music landscape. The internet changed the way we engage with music and artists, and CDs before that changed how we consume music. A new technology in Blockchain has the potential to disrupt the industry once more. In this essay I will define Blockchain and talk about its current state as a technology, discuss the potential commercial uses within the music industry and the legal implications of its usage. In doing so I hope to be able to give a broad coverage on the progress of blockchain and its effect on the music industry.

Blockchain is a digital ledger system stored across different networks. The system is usually programmed to record and track anything of value, from financial records to shipping transactions. To explain what it does in layman's terms blockchain is a series of blocks (pieces of data). These blocks usually contain three very important parts: Information about the transaction, who are the participating transactors and a unique code to distinguish the block from all others. Every time a new block is formed it is added to the existing 'chain'. The reason you would want to use blockchain is so that digital information can be distributed and recorded publicly, or at least publicly to those that need to see it. (Fortney 2019) Importantly this information can not be edited, and so you have a very trustworthy system of validation. The reason there is any monetary worth attributed to the blockchain platforms, that aren't a pure currency such as Bitcoin, is because the system of recording and distributing this information in a secure manner is incredibly processor heavy. For a transaction to be validated it must be checked by multiple random computers somewhere on the network. However, because this process uses a lot of processor power, it also uses a lot of electricity. Therefore it was decided that each validation should be awarded an amount of money that made it economically viable to have computers checking the transactions. (IBM 2019) Therefore to send some data you must pay a small amount of money in the form of an asset unique to whatever crypto platform you are using. For example, Ethereum is the second most popular blockchain platform and Ether, the asset used to pay for transactions, is it's fuel.

A lot of people mistakenly think Bitcoin and blockchain are one and the same. Bitcoin is a cryptocurrency and Blockchain is the underlying technology that enables it to work. The reason many think this is because Bitcoin was the first major use of blockchain technology. Bitcoin was created in late 2008/early 2009 by a group or person under the pseudonym Satoshi Nakamoto. The first transaction was embedded with the text "The Times 03/Jan/2009 Chancellor on brink of second bailout for banks." Which many point to as proof that those who created it were hoping to have created a currency that could disrupt global banking. (Cochrane 2018) This didn't happen in the years following as Bitcoin was mostly used to buy drugs and most famously to buy a pizza, the amount paid (10000 Bitcoin) would be worth more than \$80 million today. (Hankin 2019) However, in recent years Vitalik Buterin realised that the technology used to transfer money in Bitcoin, could also be used to transfer data. And so created the blockchain platform Ethereum. It's a technology that has the capacity to streamline many of the worlds more overcomplicated systems by providing one central line of data. Upon which there is the ability to create smart contracts and build apps. (Marr 2017) If and when it is adopted globally it will severely reduce the amount of time it takes to verify a transaction. No longer will people have to waste precious time in following a set of emails and receipts, nor will transactions get lost in the virtual quagmire that is the current system. One major issue standing in the way of world wide adoption is that the technology is still very much in its nascent stages.

Currently blockchain is not advancing at a fast enough rate to keep up with the many ideas for its usage. Firstly the transactions per second are still too low, Etheruem can only process 15 transactions per second which in a global network is far too slow. Secondly the current processor heavy system of verification (proof-of-work) is bad for the environment and thirdly, the nature of blockchain's economy puts off potential users. Companies that use blockchain fund themselves through a sale of 'coins', however for the most part these coins are also the product. Say with the music industry, a songwriter would be transferred these coins every time their song is played across the world. The issue with this is that the company's worth and the amount of money beneficiaries are receiving is intrinsically linked. If the company's reputation is increasing, investors will buy these coins, limiting the supply therefore increasing the price. This then means that an artist who was paid an amount of coins worth £10 for x amount of plays one day, could be sitting on £15 the next day. While this sounds beneficial to

the artist the incredible volatility of the crypto markets means this can just as easily shoot the other way. These are issues that many are trying to combat, as seen with the rise of stablecoins (assets where the worth is linked to that of the US dollar), but we are still a long way off having a legitimate solution.

Due to its nature as a decentralized trustless - conversely meaning trustworthy as there is no centralised authority you have to put your trust into - ledger of information, blockchain has many potential commercial uses in the music industry. The most central use seems to be that of ensuring fair payment for musicians and performers. Many of the potential ideas around fair payment come in the form of new blockchain run streaming platforms. As argued by Camila Sintonio and Alberto Lucarelli, it is seen as a “potential solution to the generators of monopolistic power for intermediators, namely distribution channels, information asymmetry and royalty payments.” (Sintonio & Lucarelli 2018 p.6) Many of these new streaming platforms would allow the artists to upload recordings directly to the platform and every play would result in a swift payment back to their account. Doing away with the ‘intermediators’. One major issue however is that many artists are signed to labels that provide them with the advances to be able to afford to record and market their releases. One such solution to this issue could be a complete overhaul in how labels work - their primary function now being collectors of usage information, as well as still providing support in other areas. They could then be designated as a separate stream meaning the label and the musicians receive the money at the same time. (ibid. p.7).

One extremely interesting usage of blockchain is in the democratisation of song-writing. Currently hit singles are written by a team of up to around ten songwriters, however these pools of collaborators are quite tightly knit. Therefore, it is becoming increasingly hard for up and coming songwriters to get any credits on the bigger releases. This is where the blockchain platform K-Tune comes in. Currently only focusing its attention on K-pop, K-tune provides a platform for users to find partners to collaborate with, and producers to find and purchase specified components to songs - top line, bass, lyrics etc. This provides amateurs the opportunity to work with professionals, as well as allowing established producers the chance to find fresh ideas. The rights to each component are recorded on the blockchain and so when a song is released all those who have worked on it, however small their role, will get royalties almost instantly. (Koksal 2019)

Other ways that it is perceived that blockchain could impact the music industry is through platforms that foster a sense of fan engagement. There are three such platforms being lauded today: Inmusik, EMusic and Viberate. Inmusik is a platform that allows users to crowdsource artist rankings in order to display what song, or who, is currently popular. It rewards both artists and fans through its own cryptocurrency called \$OUND Token, which can be earned by fans by finding songs and voting for artists. While artists will receive money via streams. EMusic, does deal mainly in royalties, but is also a blockchain based crowd-funding platform. It rewards fans loyalty to artists by providing them with exclusive content and promotional incentives. While Viberate is a music database that provides fans with up to date profiles on their favourite artists. By way of using blockchain to collect data from millions of crowdsourced data points. This data can include music videos, upcoming shows and social media engagement, whilst rewarding fans with VIB tokens for participating in the community. (Daley 2019) The main issue with platforms such as these is something that is plaguing the blockchain ecosystem in general. Do these companies need to be using blockchain and especially do they need tokens. Currently Blockchain has gone through a crisis of perception as the word appears to be a buzzword used to inspire investment in what are seemingly novel ideas. In 2018 alone more than 1800 companies didn't survive the year. Whilst blockchain is able to disrupt entire industries, it does not need to be used for absolutely everything.

One final and major and legitimate commercial use for blockchain brings us to the final point of this essay, the legal implications blockchain could have on the industry as a whole. Blockchain's most central capability is that of a decentralised, but verifiable, source of data that can be transferred easily. Therefore, it is a perfect platform for the recording of rights and royalties owed. One such proponent of the use of blockchain in this way is Imogen Heap, she argues that song writers and performers are usually "the first to put in any of the work and the last to ever see any profit." (Heap 2017) Along with this there is not enough information available for artists on how royalties are calculated and in which manner their fans listen to their work. This lack of information has resulted in swathes of legal issues and continues to be a drain on the industry as a whole. (Bradshaw 2018) There has already been a huge embracement of blockchain in the legal industry, even to the point that a panel on law and technology agreed that it "might be the most important addition to the legal infrastructure since William the Conqueror gave rise to the common law" (Ambrogi 2017) With such a tacit approval of the technology by an industry, labels and publishers so heavily rely on, it would serve them well to take advantage of the

advancements made in Blockchain. Being used solely as a database with no monetary worth attributed to it is the essence of blockchain.

One of the major issues that the music industry faces, especially in sync, is there is no centralized archive of data where people have the ability to go and license songs. The majority of this process is done by way of a paper trail, be it electronic or physical. This often means that things get missed, and people miss out on royalties owed - which can result in lawsuits. If the industry can finally arrive at a situation where all such information is available via a quick search then it will allow the rights holders to earn more money and license out more tracks. There will no longer be as many legal disputes over who owns what, when it's all there in a verified public record. This can also help in artists licensing samples, or electronic music producers making remixes. Currently it is an arduous journey to find the right publishes, owners of the masters and to ascertain who owns the original rights. If you have all this information available on blockchain, you can immediately monetise those samples and remixes - some which are being used without the proper approvals. (Soocher 2019) However, one of the biggest hurdles will be the transference of all existing data onto such a platform. The accuracy of such a system will live and die on how the original transfer is made, especially when you will need the majority of labels and publishers to do so at a similar time. It is a system that can assist with so much in the industry, but it is also one that will change the whole infrastructure as we know it and for that to happen there will need to be a lot of trust in the platform. (Lube, Cushley & Maitland 2018)

In conclusion, if the technology advances in the way that its developers are promising it will, blockchain is poised to alter the entire landscape of the music industry. There are still a plethora of issues that must be fixed and this can take far longer than expected. Etheruem, for example, is the blockchain many expect to be the platform that will serve as the basis for other blockchains to run one. However, every update that has promised to increase its efficiency has been delayed a number of times. I don't expect blockchain to have an effect on the industry in the immediate future, but when it does there will be many changes made for the better, especially in regards to payments and rights. However, as we are already seeing there will be a large number of companies started to try and take advantage of the shifting landscape and many of these will surely fail. Blockchain has the potential to change a lot of things, but it will not change the amount of risk it takes to survive in the music industry.

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