THE INTERFACE OF SPOTIFY

A sociocultural inquiry into Spotify's influence on music

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Abstract

This paper researches the sudden, swift motion towards streaming music, and the impact it has had on both the consumer of music and the producers of music. It will use streaming giant Spotify, one of the most innovative and biggest ones globally, as a case study. Following the methods and notions of the novel field of research 'Software Studies', developed at M.I.T., this paper will study Spotify´s interface and the proper complemented back-end of this software in a cultural-sociological way. The interface and user experience are critically analysed and subsequently used to affirm or disprove three major future scenarios for the global music industry presumed by scholars and music and tech journalists. The first one is the 'homogenisation of music' or better described 'the disappearance of the so-called 'long tail' and the second one encompasses the 'devaluation of music' as art. The latter is what I want to entitle the 'anonymisation of the musicians', which describes an alienation from the consumer towards the music and their producers that they're listening to. Which scenario goes for the future, and which one is fed too much by the fear of technological disruption?

Introduction

In the midst of this global COVID-19 pandemic, I'm designated to stay in my tiny student dormitory of ten squared meters with a queen-sized bed occupying most of the space. It is both my study corner and my place to sleep, although primarily it is an all-inclusive entertainment centre with a flat-screen TV and high-end speakers. I consume a frightening amount of TV shows, documentaries and music. I find this problematic because it appears to control my whole rhythm of the day and even the flow of the week; in the morning, while my breakfast waits and my coffee gets cold, I watch the newest Youtube recommendations and subscriptions, and in the night I check many platforms like *Netflix*, *Amazon Prime Video*, and *NPO* (the Dutch public broadcasting mobile application) for new content before I start eating my, once heated, now lukewarm, supper. It seems to control me and my daily and even weekly schedule. Now, I am not an outstanding cinematographic critic, but I know that this addictive way of consuming this type of media feels enslaving and obsessive.

However, I am certain that I am not the only one. My generation (I was born in 1997, so I used to think I was part of the *Millennial Generation* or *Generation Y*, but nowadays feel that I am not that remote from *Generation Z*) has grown up with the idea that *all-you-can-eat* is not exclusively for food consumption at the local sushi restaurant, but for their media

consumption as well.[1] Whether we recognise it or do not, this notion is engraved by the rapid growth of the consumption of the predominant internet. This way of personalised auto-play consumption seems to influence the fabric of our modern society on a technological disruptive scale. Still, the mass cannot care about the immense impact on us, the consumers, or the producers of this content or even the overarching art form the media is embedded in. The newest, more shallow and desultory way of consuming media follows up a duller slower version. For example, the Chinese Social Media application, TikTok, which lets users with an attention span of a maximum of fifteen seconds watch half-heartedly as much video content they can consume, basically defeated the old market leader in social media, Facebook, in growth last year, which was on its turn slightly too unhurried for my generation.[2]

Then there is another huge issue related to the rapid growth of the usage of the internet: our privacy is in the hands of Big Tech companies. When scrolling through my recommended videos on Netflix, my jaded eyes fell on a tech documentary called *The Social Dilemma.* They address these particular issues, primarily aimed at consuming social media in a slightly thrill-seeking way. Still, they make good points like the alarming usage of our data for targeted advertisements, the neuroscience behind the addictiveness of (social) media platforms and a whole generation - my generation - that has grown up thinking it is normal to be manipulated by Big Tech companies.[3] However, the only place to watch it is Netflix, ironically a type of social media. Paradoxically, the social media platforms the documentary intended to expose (Facebook and Twitter) were the place people flocked to, to share their opinions and criticisms.

As I said before, I am not an expert on social media or a scholar on media consumption, but I do know the ins and outs of another part of the entertainment sector: the music industry. I have worked multiple years at a venue in my hometown Nijmegen as stagemanager, producer/promoter and bartender, and I am also a producer of music myself in a semi-professional indie band.[4] Besides being behind the scenes in the music industry, I feel I am a substantial and responsible consumer of both recorded music and live concerts. But enough of my résumé, my reason for mentioning this is that after seeing this documentary, I quickly realised my beloved music industry is not free from this changing (digitalised)

[1] 'Why Music Must Embrace The Latest Wave Of An Industry Disruption', *John McDuling/Quartz*, http://qz.com/284176/why-music-must-embrace-the-latest-wave-of-industry-disruption/ (accessed on 28-05-2021).
[2] Sensor Tower, *Q4 2019: Store Intelligence Data Digest* (2020) 7.
[3] ‘’The Social Dilemma’ Review: Unplug and Run’, *Devika Girish/New York Times*, https://www.nytimes.com/2020/09/09/movies/the-social-dilemma-review.html (accessed on 28-05-2021).
[4] I won’t name any band name on my managers recommendation

mediascape.[5] On the contrary, music seems to be one of the finer prime examples of media that is subjected to the new digital age. In the last decade, the companies influenced by the excitement around the Big Tech start-ups in Silicon Valley also invaded and overtook the (recorded) music industry.[6] The first globally successful one was Spotify, and soon many competitors (like Apple Music and Tidal) followed. Nowadays, we can *stream* every piece of music ever made, for approximately the cost of one single physical album a month or even less: for free.[7] I am not claiming that this development is obnoxious. The rise of streaming services in the music world brought enough beneficial changes like an entire revisited revenue model for artists and labels.[8] Until recently, we could not even imagine having (legal) unlimited access to such a vast amount of recorded music. This also leads to another seemingly significant development; bottomless accessibility to the so-called *long tail* of the music industry. Fans could now reach even the most obscure subgenre, and vice versa, from all over the world. These positive changes in the music industry will be touched upon. Still, the focus of this research lies on the negative scenarios that came along with the digitalisation of the music industry. In the following chapters, I will briefly illustrate the history of technological changes the music industry has gone through before describing how software like Spotify has meddled in our lives. After this introduction in technological disruptiveness in music, I will go further on about the research this paper will contribute to the debate around the connection between Spotify's *GUI* (Graphical User Interface) - or better *media interface* - and three major undesirable scenarios for the future of the music industry: (1) *the devaluation of music*, (2) *the homogenisation of music* and (3) *the anonymisation of the musicians*.

A brief history of commoditised music

Consumption, production and the music container

Of course, music has not always been able to be captured, contained and then played back to one's ears. On the contrary, for the most time in music history, the art could only be performed and quickly vanished into thin air as soon as it was played, only to be picked up by listening ears. Considering that music is an alleged *cultural universal*, meaning that it has

[5] Arjun Appadurai, 'Disjuncture and Difference in the Global Cultural Economy', in: *Theory, Culture & Society: Explorations in Critical Social Science* 7:2 (1990), 295-310, here 299.
[6] 'Why music streaming services went big — really big — in 2016' , *Gina Hall/Silicon Valley Business Journals*, https://www.bizjournals.com/sanjose/news/2017/01/09/why-music-streaming-services-went-big-really-big.html (accessed on 28-05-2021).
[7] Lee Marshall, 'Do People Value Recorded Music?', in: *Cultural Sociology* 13:2 (2019) 141–158, here 147.
[8] Sara Karubian, '360° Deals - An Industry Reaction to the Devaluation of Recorded Music', in*: Southern California Interdisciplinary Law Journal* 18 (2009) 395-462, here 426.

been found in every identified civilisation in the past and present, it can be concluded that music is presumably to have been existing in the prehistory, before the written word, which is where history, the study of the written word, is impracticable.[9] This means that the first time music was recorded and played back to human ears has been relatively recently when taking the entire history of human kind into account. The first sound ever recorded is quite straightforward and well-known. It was captured by Édouard-Léon Scott de Martinville 1860 in France.[10] However, to play the captured audible sound waves back, another device was needed, one that Scott de Martinville could not get a grip on. In 1877, approximately two decades later, the 'phonograph' by Thomas Edison was the first machine that could both record and playback sound effectively. However, why is this history so vital for how we consume and produce music today? Well, as cultural scholar Maria Eriksson mentioned in her article on Spotify and the logistical role of digital music packages:

> *'The material constitution of musical containers has played a key role in developing the music industries. Containers are not passive devices that hold objects in place but entities that carry the capacity to shape and transform markets'.*[11]

This means that this article has to understand the history of recorded music before truly comprehending the impact the sudden swift towards streaming music, a type of container as well, has on the music industry. The container is as necessary for media products, as the media itself and possibly even more essential to a cultural study of software.

One could argue that Edison's accomplishment was not the first time music was 'contained'. What about sheet music? That has been around (in the western world) for at least an entire millennium since Guido of Arezzo developed a musical notation in the tenth century similar to the one we know today.[12] To abridge things for this article, we turn to the history of the commodification of music. Social-cultural theorist Timothy D. Taylor describes that 'when a new (musical) technology is introduced, music undergoes a certain process of commodification, decommodification and recommodification'. This is what he calls the

[9] 'Music everywhere', *Jeb Gottlieb/The Harvard Gazette*, https://news.harvard.edu/gazette/story/2019/11/new-harvard-study-establishes-music-is-universal/ (accessed on 28-05-2021).
[10] Ian Michael Dobie, *The Impact of New Technologies and the Internet on the Music Industry* (University of Salford 2001) 5.
[11] Maria Eriksson, 'The editorial playlist as container technology: on Spotify and the logistical role of digital music packages', in: *Journal of Cultural Economy* 13:4 (2020) 415-427, here 418.
[12] Anna J. Reisenweaver, 'Guido of Arezzo and His Influence on Music Learning', in: *Musical Offerings* 3:1 (2012) 37-59, here 39.

commodification apparatus.[13] Later on, he adds that we can divide music as a commodity, something that - simply said - holds a particular value, in three subdivisions called the *regimes of commodification*: published scores, recorded sound and live performance.[14] While the latter is complementary for the topics in this article and thereby couldn't be neglected entirely, this article is focused on the recording and playback of sound in our modern digital times. As mentioned earlier, the first recordings were made and played back at the end of the nineteenth century by Edison's phonograph. This invention was refined and improved throughout the subsequent decades and renamed the gramophone. It took off for the mass audience when the fragile bees wax that initially contained the sound in a cylinder shape gave way to the synthetic gramophone disk that 'could hold more music, took up less storage space, and was less sensitive to damage'.[15] Later on, in the twentieth century, the gramophone was modified into a more practical turntable style model, which are still used today. However, the expensive production costs of vinyl records made it easy for a new musical container to thrive. Philips' *cassette tape* became dominant in the second half of the twentieth century. With the benefits of cheaper production costs, the cassette led towards, yet again, a more affordable alternative for the capture and playback of music.[16] Only two decades later, in 1982, Philips, in cooperation with Sony, developed once more a low-cost and more trustworthy alternative: the *Compact Disc* (CD).[17]

Accompanied with these three chief technological inventions (the vinyl record, the cassette tape and the compact disc) this new industry began to flourish. The second half of the twentieth century became in the musical world known as the golden years of the record industry, led by a handful of major record companies that are nowadays, after numerous mergers, called the big four: EMI, Sony Music Entertainment, Universal Music Group, and Warner Music Group.[18] The emergence of the cassette didn't only accelerate a professional global music industry; it also triggered a first juridical battle over music sharing and unfathomable copyrights laws. In most cases, the magnetic strip of the cassette could be overwritten, making it easy to re-record songs off the radio, paving the path for the first

[13] Timothy D. Taylor, 'The Commodification of Music at the Dawn of the Era of Mechanical Music', in: *Ethnomusicology* 51:2 (2007) 281-305, here 301.
[14] Timothy D. Taylor, *Music and Capitalism: A History of the Present* (The University of Chicago Press 2015) 21.
[15] Pekka Gronow, 'The Record Industry: The Growth of a Mass Medium', in: *Popular Music* 3 (1983) 53-77, here 53.
[16] Dobie, *The Impact of New Technologies and the Internet on the Music Industry*, 30.
[17] Ibidem, 25.
[18] Joel Waldfogel, 'How Digitization Has Created a Golden Age of Music, Movies, Books, and Television', in: *The Journal of Economic Perspectives* 31:3 (2017) 195-214, here 207.

'illegal' music sharing. At least that's what the earlier mentioned conglomerates claimed. However, the record companies didn't know what was going to happen years later on.

While the music sharing was limited to a local social network of friends which was marked by location and was also prone to degradation of audio quality - by the fourth generation copy, the quality had largely become gritty - the rise of the internet around the turn of the century and the accompanied newest music container, the *MP3*, threw a spanner in the works for the newly bloomed, yet still growing record industry.[19] The most significant technological disruption for the music industry came under the name of *Napster*. The online free music-sharing service, having 80 million active users at its peak year in 2000, paved the way for later other illegal file-sharing services such as LimeWire and µTorrent.[20] The internet, which was still in its infancy in the early years of the zeroes, had the appearance of the digital equivalent of the Wild West. Lawmakers and cultural policies rapidly tried to follow the exponential growth of the internet by curtailing the way we freely downloaded media. While beforehand the recording industry seemed to be at its peak, as the world's record companies generated nearly $29 billion in 1999, this profit was almost cut in half the next decade. Between 2004 and 2010, the industry, meaning the record labels, saw a 31% decline in value.[21]

The damage was controlled by software as Apples iTunes, which offered a legal alternative to the piracy of music (and other media). They made the MP3s available for digital purchase. However, the historical decline in the economic value of recorded popular music in the 21st century has triggered a debate about music being *devalued*.[22] Apparently, because music became a slightly 'free', yet illegal, commodity, a *value gap* was created between the socio-cultural and economic values consumers appointed to music.[23] The consumer would not pay as much as they used to pay for music in the twentieth century, meaning that some first signs of (1) *the devaluation of music* have shown. At the peak of the recording industry in the late nineties, a CD album seemed overpriced with an average price of $18.99 per album. This debate is further explained in the following chapter, accompanied by the other two major negative future scenarios for the global music industry. After years of legal battling between the piracy applications, the record industry and cultural policy makers, it was clear: the music industry needed a revival, and it needed to happen quickly.

[19] Dobie, The Impact of New Technologies and the Internet on the Music Industry, 25.
[20] 80 million was a lot since the internet hasn't completely intruded our daily lives back then.
[21] Bert Weijters, Online Music Consumption in Today's Technological Context: Putting the Influence of Ethics in Perspective, in: *Journal of Business Ethics* 124 (2014) 537–550, here 540.
[22] Marshall, *Do People Value Recorded Music?*, 141.
[23] Ibidem, 142.

The rise of Spotify

This is where specialised Big Tech companies truly entered and overtook the music industry. They spotted the value gap piracy has created for the global music industry and stepped in by introducing a new musical container: the streamed file. This invention has not only been acclaimed to pull the music industry out of its troubled situation, but the technology has also been appraised to ignite and to be the backbone of the second wave of the golden years for the record industry.[24] It could support a vast amount of artists to find a way of living of the money made by their music, and fans could now listen to whatever music they like from all over the world. The first big streaming giants were the French company Deezer and Swedish company Spotify. Still, years later, Apple turned iTunes into a streaming service as well, calling it Apple Music, and other services such as Tidal and Amazon Music tried to compete for the customers' hearts. Prompted by technological innovation – i.e. the invention of *4G* internet and the ever-growing processor speed of computational power, defined by Moore's Law, made sure that internet connections were fast enough to stream files from central data storages anywhere in the world – streaming took over the media landscape.[25] The internet seems to have moved on from its infant state to a more adolescent character. Nowadays, everything that adheres to the internet is quicker and enhanced and more accessible. However, still ethical questions need to be addressed, meaning that a proper adult form of the internet is still omitted.

The focus of this paper lies on these ethical questions based on the practices by Spotify. Although Apple Music has the most significant market share (based on monthly users) Spotify seems to be the most innovative company, by introducing new ways of listening to music to the world, having futuristic plans with their *User Interface* and building back-end software specially made for the artists that upload music to their platform.[26] Furthermore, for Apple Music, because their interest lies in selling hardware, like their iPhones, a music streaming feature makes their products more valuable. For Amazon Music the drive is comparable; selling as many Amazon Prime subscriptions and Alexa devices. Spotify only has Spotify. In addition to that, most academic scholars use Spotify as *pars pro*

[24] Waldfogel, *How Digitization Has Created a Golden Age of Music*, 211.
[25] Ron Eglash, 'Computing Power', in: *Software Studies: a lexicon*, Matthew Fuller (ed.) (2008) 55-64, here 61.
[26] 'Spotify's Innovative marketing and revenue model', *Shooby Kandel/Medium*, https://medium.com/@sho0by/spotifys-innovative-marketing-and-revenue-model-b3351bbc968d (Accessed on 28-05-2021).
'Most popular music streaming services in the United States in March 2018 and September 2019, by monthly users', *Statista*, https://www.statista.com/statistics/798125/most-popular-us-music-streaming-services-ranked-by-audience/ (Accessed on 28-05-2021).

toto for the rest of the music streaming services. To embed this article in other academic work, this article will also centralise around Spotify. However, since its release in 2008 in Sweden, Spotify has undergone quite some exciting transformations. What is Spotify? And what does it do for the music industry? In the next paragraph, the rapid changes of business models and marketing strategies will be briefly identified to show the weight behind the current state that, in unity with Spotify, the music industry is in.

Founded in 2006, Spotify emerged from said peculiar era in the short history of the internet. They adhered to the early developments in internet customs, which are profound examples of Web 2.0. Here, in contrast to the immature *Web 1.0*, information wasn't only passively consumed and downloaded, but also actively created by the consumers.[27] Spotify grew up in this seemingly static notion of a digitalised society, only to kick-start, with similar companies in other media branches such as *Netflix,* a new version of the internet. Back in the zeroes of this century, digital culture was not yet a *streaming culture* assumed on continuous online activity, but rather a *storage culture* reliant on, yet again, Moore's Law. This is where Spotify's core business was formed: A subscription service for basically a 'huge database of songs', democratising music consumption, all intelligible by the notions of Web 2.0.[28] The core business model had nonetheless changed several times before a massive turn of events changed the future of the Swedish company: Firstly, it wasn't explicitly for music, then Spotify focussed on free-to-use, yet ad-supported, music, and thirdly the free service was revised as a way marketing tool to lead users to their subscription service.[29]

However, Spotify quickly became criticised for its static approach, retaining a more passive role like the digital equivalent of the vinyl cabinet, instead of a more active place in music consumption like the radio stations. Not long before, Spotify had been critically celebrated for being elegant and straightforward, and now, in 2011, it was talked down by critics of being 'just a huge database of songs'.[30] At the time of its launch in 2008, Spotify placed itself in the vast media history by appearing as the digital successor to the record shop. A few years later Spotify took the criticism into account and began to revive the charm of the radio stations. In 2014, by the acquisition of music analysis firm *The Echo's Nest*, Spotify became a pacemaker for the development of Web 3.0, where media companies no longer assumed that the user knows its cultural taste, but rather pave the way for them what music -

[27] José van Dijck, 'Governing a responsible platform society', in: *The platform society: Public values in a connective world* (2018) 135-166, here 149.
[28] Maria Eriksson et all, *Spotify Teardown: Inside the Black Box of Streaming Music* (The MIT Press, Cambridge 2019) 70.
[29] Eriksson, *Spotify Teardown*, 78.
[30] Ibidem, 70.

and similarly: books and movies - they would like to hear.[31] This development is what multiple academics named *the curatorial turn.*[32] Instead of a database of music, the discovery of music became the battleground for streaming services of the consumer's hearts. Since the accumulation of *The Echo's Nest,* and its multiple innovative features, Spotify grew in approximately five years to the platform as we know it today. In this half a decade, amid this curatorial turn and all its additional features, the way we listen to music and how we make music has been profoundly influenced and, therefore, is inevitable from criticism. The 'personal assistant' algorithmic equivalent in deciding your cultural capital is a convenient tool for many music consumers and musicians. Still, at the same time it is heavily influencing the musical landscape. Besides the discussion around the payment towards producers and musicians, two other interesting tendencies were spotted by academics and music journalists since the emergence of this curatorial turn: (2) *the homogenisation of music* and (3) *the anonymisation of the musicians*. In the next chapter, I will provide a theoretical framework for the research of software on a socio-cultural level to analyse these three trends and subsequently embed my research in the scholarly literature on Spotify and music streaming culture. After that, I will thoroughly dive deeper into the methods and demarcation of inquiry done in this article.

Theoretical Framework

When initially thinking about researching software and correlated computer language, my social-cultural academic background seemed inapplicable. How could I add something useful on the subject without even knowing how an algorithm in its mathematic nature works? Why would an outsider of the technological world know more about the topic than those who created and designed it? This is where a novel field of research, *Software Studies*, nowadays a book series for the MIT Press, steps in with its key authors Matthew Fuller, Lev Manovich and Ted Striphas. It is a rising interdisciplinary research field that studies software systems and focuses on their social and cultural effects. The use of software has been studied by field of research as *New Media Studies* and *Cyberculture*. Still, in contrast to *Software Studies*, they never placed the software as a foundation for culture and society.[33] In a world where software

[31] Jeremy Wade Morris, 'Control, curation and musical experience in streaming music services', in*: Creative Industries Journal* 8:2 (2015) 106-122, here 117.
[32] Robert Prey, 'Locating Power in Platformization : Music streaming playlists and curatorial power', in: *Social Media + Society* 6:2 (2020) 1–11, here 3.
[33] Jeremy Wade Morris, *Understanding the Digital Music Commodity* (University of California Press, Montréal 2010) 12.

quickly meddled in our lives, it seems highly suitable to establish software as a herder for cultural change. However, this article won't necessarily neglect the methodology of New Media Studies, where interfaces and their observable social effects are thickly discussed. No, it will combine research on interfaces, design and impact, like *New Media Studies* offers, with a notion of analysing the back-end of this *consumer front* for software. Therefore, Software Studies is a combination of both humanities and computer literacy. Furthermore, this methodology doesn't only research the effect software has on our culture but also explores this interaction the other way around. How does our culture shape the software, and is this seen in the software's code?

To make this study accessible and executable for social-cultural academics, media scholar Matthew Fuller edited a lexicon explaining the essential primary computer language, called *Software Studies: A Lexicon.* This can be used to a certain extent as a manual for understanding the computer language. It is not that much of a handbook but steers more towards being a tool for mastering the software language in a sociocultural way. In the introduction of the lexicon, Fuller highlights that software now only exists as a research object 'in terms devoid of any reference other than itself.'[34] He continues with the notion that software is often seen as a 'tool, or something that you do something with; It is neutral, grey, or optimistically blue.'[35] He, and thus the whole Software Studies field of research, rejects this notion and recognises that software has become 'a putatively mature part of societal formations', meaning that the most recent generations are born into a daily life where an online environment is as significant for our culture as the physical world.[36] This underlines the importance of a thorough study of the software, as mentioned above.

In his book, Cultural Software, professor in computer science Lev Manovich, who has contributed to Fullers lexicon, continues on the importance of this method of software studies. He mentions that software carries millions of atoms of culture, human interactions in media and information. While the whole world uses and thereby contributes to this system of atoms, he addresses the invisibility of these cultural bits.[37] Manovich declares that software is the invisible glue that ties it all together in the modern world.'[38] This means 'that all academic disciplines which deal with contemporary society and culture (like music in this thesis) need

[34] Matthew Fuller, 'Introduction', in: *Software Studies: a lexicon*, Matthew Fuller (ed.) (2008) 1-15, here 3.
[35] Fuller, *Software studies*, 3.
[36] Ibidem, 3.
[37] Lev Manovich, *Cultural Software* (2011) 1.
[38] Manovich, *Cultural Software*,2.

to account for the role of software and its effects in whatever subjects they investigate.'[39] On top of that, Manovich predicts that the development of software is getting more and more democratised.[40] The number of people who can write and read scripts and programme languages increases, and the *open-source* movement grows in size.[41] Thus, he argues that it is 'the right moment to start thinking theoretically about how software shapes our culture, and how our culture shapes it in its turn.'[42]

Besides this reason to research Spotify's interface, Johanna Drucker, visual theorist and cultural critic, added another important note. She argued that graphical interfaces are, in essence, *zones of affordances* that 'organise data in particular ways and thereby foreground some things rather than others'.[43] With this in mind, in combination with the notions of Lev Manovich, the interweaving of culture and digital interfaces seems profound and should therefore be sincerely studied by sociocultural academics.

However, according to Manovich and another scholar, Ted Striphas, a massive problem is this invisibility of the algorithms, sources codes, and even how the user interfaces psychologically influences us. Striphas, professor of Communication of New Media, takes this even further in his book *Algorithmic Culture,* where he worries about high stakes in software culture. He warns for the 'gradual abandonment of culture's publicness and the emergence of a strange new breed of elite culture purporting to be its opposite'.[44] He continues with the notion that 'human beings have been delegating the work of culture to data-intensive computational processes'.[45] Thus outsourcing our thoughts on what our culture is and could be to quantitative mathematics. Therefore one could say that in a sense, since the digitalisation of our society, algorithms and source code have in a certain way shaped our culture, not the other way around, making it even more critical for humanities to research this massive object of study.

Software in its nature isn't suitable for users. Pages of programming code seem like an overload of useless information for the inexperienced consumer. That's why designers complement a certain skin on top of this layer of code, which not only polishes the look and

[39] Ibidem, 7.
[40] Ibidem, 9.
[41] 'The do-it-yourself Web emerges', *CNET News/Martin LaMonica*, http://www.news.com/The-do-it-yourself-Web-emerges/2100-1032_3-6099965.html (Accessed 31-05-2021).
[42]`Manovich, *Cultural Software*, 9.
[43] Johanna Drucker, *Graphesis: Visual Forms of Knowledge Production* (Harvard University Press, Cambridge 2014) 157.
[44] Ted Striphas, Algorithmic culture, in: *European Journal of Cultural Studies* 18:4 (2015) 395–412, here 397.
[45] Striphas, *Algorithmic culture*, 396.

feel of the software but also steers the consumer in the right direction to find whatever they needed. In short, the interface isn't only a fancy design to simplify code; it is also a navigator. This is what we usually call the *Graphic User Interface* (or GUI for short). However, Lev Manovich thinks the concept of GUI is obsolete in the modern day. He prefers to call this skin a *media interface* because in contemporary software, the shell isn't only stationary and visual – as the word *graphic* implies — but has evolved to draw attention from all five of the human senses. Therefore the term *media interface* includes, for example, (notification)sounds, animations and vibrations as well. That's why Manovich roots for using the term *media interface* instead for modern software skins.[46] This thesis will use this complete notion to follow Software Studies' methods, but can hereafter be simplified to merely the notion of *interface* for readability.

Additionally, according to Manovich, there are multiple ways software and interfaces could influence culture. The ones that apply to Spotify's media interface are: (1) creating, sharing and accessing cultural artefacts, (2) the communication with other people, like social networking features, and the (3) participation in online information ecology – this happens more or less automatically in Spotify's digital environment with the help of its algorithms — but most of all (4) the engagement in new interactive cultural experiences.[47] Spotify is an interactive cultural experience in itself with engagement from the two global types of users. Via Spotify's platform ecosystem, users, consumers and artists, step into a completely new digital cultural ecosystem, one that didn't exist ten years before. This is the most applicable for this thesis and other research on Spotify's media interface because it appertains to the interfaces' sudden influence on the users' musical experience. Still, the first three will be touched upon in this thesis. Now that I defined the bigger picture behind researching software in general, and on top of that the importance of humanities in computer science, I will summarise the debate on Spotify's media interface in the next section.

Research on Spotify's interface

The most extensive and most notable research on Spotify's interface, back-end and business model is done by the Swedish academics Maria Erikson, Rasmus Fleischer, Anna Johansson, Pelle Snickars and Patrick Vonderau. In *Spotify Teardown: Inside the Black Box of Streaming Music* they mixed Spotify's front-end, meaning not only the (media) interface but also their marketing outlets and business growth plans, with investigational research of the back-end.

[46] Manovich, Cultural Software, 16.
[47] Ibidem, 11.

The Swedish researchers tried to disassemble Spotify and its algorithmic choices by an IT procedure, called *reverse-engineering*, convenient when a software's code is behind closed doors like Spotify's is.[48] Unknowingly, or somewhat undefined, Erikson and her team followed the methods of Software Studies to a certain degree by researching the front-end to find the roots in the back-end in a rather playful way.[49] However, they didn't lavishly investigate the social and cultural field of research. Their book is an overarching paper on Spotify's developments. Still, they steer more towards an economic and political critique of Spotify's business model and they touch very lightly on the socio-cultural impact Spotify's emergence has on the consumers, on the musicians and the music itself. For example, they questioned the value Spotify was adding to the music industry, but an in-depth analysis to answer this question is absent. *Spotify Teardown* is focused on the corporate strategies and entrepreneurial vision of the showpiece of Swedish digital innovation. With this, they instead emphasise indicating the innovations in economic value, leaving the aesthetic and cultural value of music for what it is. This thesis tries the opposite by focusing more on cultural value by scrutinising cases of musicians and music consumers using Spotify.

On the other hand, their book is a good starting place for any other cultural academic to analyse Spotify's engagement in the music industry. Their intervention chapters try to seek the edges of Spotify's *Terms and Conditions* by whimsically researching Spotify's arrangements with record labels, how they track streams, how the company handles their data, and personalised advertisements interrupting the music.[50] With these chapters, they don´t fully answer their own questions but invite other scholars to think about these subjects of discussion. They know a fully future proof academic research paper on Spotify, which touches all research fields, is too big of a project and quickly outdated due to the ever-changing software. Still, they give some excellent utilities for other scholars to think about doing research on Spotify.

As you can read, Erikson and her team investigated contractual technicalities and offered quite an interesting approach to doing qualitative research into Spotify. The interventionist chapters are meant as 'provocation pieces meant to inspire research, without taking on a prescriptive character'.[51] This method is right up the alley for this thesis, which tries to be both unbiased and a social-cultural critique on the use of Spotify. Meanwhile, they 'improvised theory', borrowed from Allaine Cerwonka and Liisa H. Malkki, to 'recreate the

[48] Eriksson, *Spotify Teardown*, 18.
[49] Ibidem, 100.
[50] Ibidem, 15.
[51] Ibidem, 25.

centrality of surprise encounters with the often-undisciplined realities of our various research fields'.[52] With that notion, they meant that qualitative research into a quantified research object often leads to unexpected results. They suggest that these results should, of course, be fully embraced, but also when it is possible to be embedded in academic theory, it should be. This is meaning that 'instead of presenting knowledge as a set of pre-packaged findings reducible to any one single concept', we should improvise theory to include all kinds of findings to fulsomely comprehend the role of Spotify in our changing musical landscape.[53] In combination with the methods of Software Studies, this article tries to follow this method to enter the environment of Spotify as unbiased as possible. Theoretical interference could be treacherous for cultural academics. Philosopher Jerry Fodor renounces this by imposing that 'anything goes' in qualitative research.[54] Therefore, in this thesis, the theory will not be enforced upon the findings but the other way around. The discoveries will lead to the explanation of the cultural theory that applies to the culture that derives from (and exists in) Spotify's interface. With this method, I try to put aside my biases and freely deep dive into Spotify's created ecosystem.

Spotify Teardown has got the high status of a well-executed critique of Spotify's growing power in the music industry. Still, it surely isn't the only one who tries to untangle the complex influence the streaming company has. Many academic shed their lights on the economic value a song carries once it's digitalised, defining cultural-aesthetic value and the interface again in monetary terms. Jeremy Wade Morris, a Media and Cultural Studies professor, tried to describe the 'modern digital music commodity'. In his book *Selling Digital Music, Formatting Culture,* he researched the techno-economic setting of music services, like Spotify, and Pandora Radio and iTunes, and the influence on the digitalised music as a commodity. While he tries to explain our culture on the hands of this new music commodity, his article, published in 2015, is in the rapid changing business of the digitalised world, already outdated. Spotify has moved on to a different business model, the 'personal assistant' one, as explained in the introductory chapter. On the other hand, the notion of a new musical commodity is fascinating for the background of this thesis, but it again neglects the importance of cultural value.

It seems logical that most academic papers on this subject address music and digital culture with an economic approach. Globally, the most extensive critique on Spotify is the

[52] Ibidem, 25.
[53] Ibidem, 25.
[54] Jerry Fodor, 'Observation Reconsidered', in: *Philosophy of Science* 51:1 (1984) 23-43, here 23.

underpayment of the musicians, while there is a co-dependency between the streaming giant(s) and artists.[55] This reliance, which seems more problematic for artists than for Spotify, seems to be unbalanced. On the 15th of March of this year, 2021, worldwide demonstrations, demanding a reasonably looking 'penny per stream', were organised by the *Union of Musicians* (UMAW) in front of every Spotify office worldwide to deliver.[56] However, while this economic dispute certainly needs to be addressed, it casts a shadow on other more cultural associated issues following the quick rise of Spotify.[57]

Robert Prey, a media scholar at the University of Groningen, sees this problem as well. In a few essays on Spotify, he addresses certain innovations Spotify had done since 2015 when they followed the curational turn. To a certain degree, his articles are a socio-cultural critique, but Prey focuses the most on the back-end of Spotify and how this affects the front-end. Thus, his main field of research is the datafication of music. While he briefly embeds this in a rapid digitalised culture, he only focuses on data and the social problems of this change in music consumption. Therefore, Robert Prey is leaving the rest of the interface for what it is and focuses only on the effects data has on consumption, neglecting the consequences for music production. In his books, *Knowing Me, Knowing You: Datafication on Music Streaming Platforms* and *Musica Analytica: The Datafication of Listening*¸ Prey points out some very interesting notions, like the idea that the online music streaming environment is not only horizontally segmented via categories but also vertically ranked through hierarchies of listener value.[58] This thesis will use these ideas and will develop them further by analysing the media interface. Robert Prey, who can be seen as a key figure in the debate around Spotify's social implications, published one piece on merely the interface and its role in our digitalised culture, called *Locating Power in Platformization: Music Streaming Playlists and Curatorial Power,* but here he solely focuses on the part of the new musical container, the playlist, and the effect it has on music consumption. This thesis aims not to show one aspect of the online environment but tries to seek its cultural background and impact. In essence, this means that

[55] ''Justice at Spotify' to confront streaming services underpaying musicians', *EWN* https://ewn.co.za/2020/11/26/justice-at-spotify-to-confront-streaming-services-underpaying-musicians (Accessed 31-05-2021).
[56] 'Homepage: Justice at Spotify', *Justice At Spotify*, https://www.unionofmusicians.org/justice-at-spotify (Accessed 31-05-2021).
[57] For more these types of academic writings on the economic impact of Spotify I would like to lead you to
Lee Marshall, 'Let's keep music special. F—Spotify' on-demand streaming and the controversy over artist royalties', in: *Creative Industries Journal* 8:2(2015) 177-189.
Lee Marshall, 'Do People Value Recorded Music?', in: *Cultural Sociology* 13:2 (2019) 141–158.
Rasmus Fleischer, 'If the Song has no Price, is it Still a Commodity? Rethinking the Commodification of Digital Music', in: *Culture Unbound* 9:2 (Linköping 2017) 146-162.
[58] Robert Prey, 'Musica Analytica: The Datafication of Listening', in: Raphaël Nowak & Andrew Whelan (eds.) *Networked Music Cultures* (2016) 31-48, here 38.

every detail of Spotify's interface and its compatible back-end, for both musicians and consumer, needs to be addressed to comprehend the possible future for the music industry fully. The methods behind this research are illustrated in the next section.

Methods and demarcation of inquiry

While I recognise that data research is in many cases highly relevant, and quantitative and economic analysis is undoubtedly applicable to the study of software and the music industry, I'm also aware that approaching new developments other than the status quo of this research field could shed fresh new light on the subject. In a society where technology seems to 'innovate' exponential, and human only has approximately five years of getting used to this new modernisation, before an even more high-tech substitution replaces it, it is crucial for philosophical and cultural academics to oversee the innovations, before *technological determinism*, *technological reductionism* or *media determinism*, gets the upper hand. These different notions for the somewhat same theory assume that the technology of a civilisation regulates the progress of its social structure and cultural values. New technology isn't always better technology, and new technology isn't always equal to a better culture.[59] The scholar who introduced this notion to the social-cultural academic world, Raymond Williams in 1974, wrote in the same book about *symptomatic technology*. Still, the idea of technological determinism overran this concept. Symptomatic technology shows that innovations are simply by-products of broader social processes. What mattered for Williams was that technologies should never be studied isolated, but they should always be understood *in relation* to social processes.[60]

This notion is precisely at the core of this thesis. With Spotify's media interface and its compatible code as the object of inquiry, I try to answer the following question: How does Spotify's interface affect its users, i.e. the music consumer and the musician, and music's culture? While the Swedish streaming giant is marketed and praised as the 'democratisation of musical taste and music distribution', this thesis speculates if there is a sociocultural dark side to Spotify's acclaimed success story.[61] In the first research chapter, three major negative scenarios, all delineated by music journalists and media scholars, and their social and cultural implications for artists, consumers and music are depicted and redefined. These possible futures are the (1) 'devaluation of music' as art, the (2) 'homogenisation of music' or better

[59] Raymond Williams, *Television: Technology and Cultural Form* (Taylor & Francis, New York 1974) 133.
[60] David Hesmondhalgh, *The Cultural Industries*, 4th ed. (Sage Publications, London 2019) 110.
[61] Thomas Hodgson. 'Spotify and the democratisation of music', in: *Popular Music* 40:1 (2021) 1-17, here 2.

described ‘the disappearance of the so-called *long tail’*, and the (3) ‘anonymisation of the musicians’, which describes an alienation from the consumer towards the music and their producers that they’re listening to. Which scenario goes up for the future, and which one is too much fed by the fear of technological disruption? These scenarios are thoroughly analysed and falsified or confirmed by researching the media interface, its code and Spotify’s, or The Echo’s Nests, patents for upcoming plans for their interface. In the latter case, this thesis will consulate Spotify on its interface to circumvent these undesirable scenarios.

But what includes this interface in Spotify’s case? The musical software is accessible on many devices. This thesis will not only investigate the widely used web-player, mobile version or downloadable desktop application; it will also analyse its embedding into partner-in-crime, Facebook, streaming to a smart-TV or Google’s *Chromecast*, Sony’s *Playstation* and even the players in the dashboard of cars. In short, every possible way one could consume music via Spotify is taken into account. With the use of Spotify, I do not only mean the many different types of the consumption of music, as I explain later on, but also the production side of music. Artists are after all users of Spotify’s digital environment as well, as Jose van Dijck showed in her book on *platformisation*.[62] When uploading music, they sign their own Terms and Conditions and have got their own backstage application provided by Spotify as well: *Spotify For Artist.*

Since I’m a producer and a consumer of music, all the different types of interfaces and applications are accessible to me and available to this research. Spotify seems to be merely a mediator or connector between their users.[63] To keep a clear division between these two types of users, the first section in the analysis will explore the consumption of music in relation to the interface and the section after that, the last one, will focus on the artists application. This is listed in this sequence because the way we consume music seems to affect the artists in a higher degree than the other way around. This layout is crafted to completely answer this thesis’s main question: How does Spotify's media interface affect its users and music culture?

The praised virtues and possible wrongdoings of Spotify

Spotify launched into the world with its great promise of ‘music anytime, anywhere, and at the right price’[64]. With this slogan, which changed quite a bit over time, they aimed to win the

[62] José van Dijck, ‘The platform society as a contested concept’, in: *The platform society: Public values in a connective world* (2018) 7-30, here 16.
[63] Van Dijck, *The platform society as a contested concept*, 16.
[64] ‘Audio-First’, *Spotify/Daniel Ek*, https://newsroom.spotify.com/2019-02-06/audio-first/ (Accessed 31-05-2021).

consumers heart by promising a never-ending database of music, only for the musicians to follow the already seduced crowd to the music platform. Little did Daniel Ek, co-founder and CEO of Spotify, know that the cleverly crafted motto of the music start-up would be realised in such a short period of time. With the local launch in 2008 in Sweden and the following years in surrounding western countries, Spotify provided a service to the world that the three major record labels, Sony – Warner – Universal – in the decade before this launch, couldn't bring to pass.[65] In 1999, the subscription-based music player, initiated by the big three of the record labels, called Project Madison, failed, most likely due to the underdevelopment of the technology required for streaming music.[66] It was clear that the music industry was in considerable need of a legal alternative to the destructive piracy platforms, like Napster.

Considering that Ek held the position for the former CEO of µTorrent, one of the platforms, similarly to Napster in relation to the music industry, that burned the music industry to the ground, he knew the now fertile, charred, ground by heart and quickly planted his ideas for a new music consuming experience. It worked. Together with his co-founder Martin Lorentzon, Daniel Ek provided a lifeboat for the drowning music industry. As told in the introductory chapter, the company has made quite the changes in business strategy throughout approximately twelve years. Still, they kept their promise of bringing music to anyone at (practically) no expenses. In this section, I will briefly call attention to some other great benefits that the rise of Spotify has brought us, consumers and artists, before moving on to what is questioned about Spotify, meaning the earlier mentioned three major feared scenarios.

One of the chief potentials of the new music streaming software was a straightforward extraordinary accessibility to music. Music consumers could step into the globalised music scene via Spotify to discover music from all over the world and for artists who could restore the disconnection with their fans that had been developed in the harmful decade of music piracy.[67] Moreover, the connection with new music fans wasn't as much restricted to the locality as it did in the golden age of record labels, where the local record shop recommended either local artists, label-backed globalised bands or, in the best case for a discovery of the

[65] Jeremy Wade Morris, *Selling digital music, formatting culture* (University of California Press, Oakland 2015) 266.
[66] 'Madison Project stunner: Sony and Time Warner in cahoots', *Forbes*, https://www.forbes.com/1999/03/03/mu6.html?sh=6c86b403133b (Accessed 31-05-2021).
[67] Jochen Eisentraut, 'Accessibility, Identity and Social Action'. in: *The Accessibility of Music: Participation, Reception, and Contact.* (2012) 217-276, here 217.

most music, niche musical findings from an employee.[68] Nowadays, music culture has undergone such a transition that with one or two clicks of a button, a Yuppie from Brighton could dive deep into the samba culture of Rio de Janeiro before moving on to half an hour of Mongolian Tuvan throat singing. The possibilities seem endless.

This development has worked the other way around as well. For artists that are seeking a new audience, Spotify can, in theory, connect them to like-minded and cultural corresponding music fans creating a globalised online subdivision of musical taste. One finds the people with the same cultural capital as themself effortlessly and more rapidly. This does not mean that new, more minuscule social groups are formed, but rather that the borders of subcultures are somewhat blurry and vague. One could effortlessly discover great pop artists in the metro but simultaneously belong to the underground techno scene of Berlin. This does not only apply to music but to every type of cultural expression and media formats. Other platforms such as Reddit, Facebook, Netflix and Youtube effectuate the same results in their cultural area.

The rise of Spotify and this *decentralisation* of musical taste have greatly affected the music industry in the past decade. In the first few years, Spotify's focal point in its business plan was vast growth in listeners. Their original strategy was 'the bigger their user base gets, the more plays it could generate, the more the labels, musicians, and Spotify itself would earn from advertisements and subscription fees. This blueprint is still applicable to this day. Spotify's core mission, updated in 2018 after making its debut on the New York Stock Exchange, changed yet again.[69] It wanted, and still does to this day, 'to unlock the potential of human creativity by giving a million creative artists the opportunity to live off their art.'[70] This is an excellent promise and shows signs that the once *lifeboat-like* character of Spotify has turned into more of a yacht itself. However, even luxurious vessels can potentially have their own problems.

Alongside the democratisation of musical taste, the distribution of music has got less complicated. With the help of third-party online aggregators, like CDBaby, DistroKid and TuneCore, the releasing of albums and singles on streaming services have undergone a process of democratisation as well. Additionally, the release of music has become much more

[68] Tarek E. Virani, 'The Resilience of a Local Music Scene in Dalston, London', in: Brian J. Hracs (ed.) *The Production and Consumption of Music in the Digital Age* (2016) 101-113, here 104.
[69] 'Spotify closes up 13 percent after falling from highs on first day of trading', *CNBC/Sara Salinas,* https://www.cnbc.com/2018/04/03/spotify-spot-ipo-stock-starts-trading-on-the-nyse.html (Accessed 31-05-2021).
[70] 'Spotify Dreams of Artists Making a Living. It Probably Won't Come True', *Rolling Stone/Tim Ingham,* https://www.rollingstone.com/pro/features/spotify-million-artists-royalties-1038408/ (Accessed 31-05-2021).

flexible than before. In the past, artists would prepare much bigger rollouts with large marketing plans for their releases. Nowadays, a song could be recorded and dropped online in the same week. This hindered the power of the record labels, with a core business of big music rollouts and multi-year artistic plans, which were already in a recession from the piracy era. The multinational record companies quickly reinvented themselves by introducing the *360º deal* with artists.[71] This meant that their power moved on from distributing music to controlling and supporting the artists more in a role that a manager once had.[72] They now manage the image, pay-outs, videos and other music-related odds and ends of the artist that are members of their roster. In theory, record labels could have become obsolete in the modern digitalised music industry, but due to clever politics and investments in streaming services shares, the multinational records labels are still present and alive.[73]

On the other side of the fence, a large slice of the music industry that has detested this musical actualisation of capitalism for more than half a century, the underground independents, also adequately adapted to the new online environment. Prior to the internet these artists were called *Indie* – meaning independent from big record companies — and relied upon self-distribution, (local befriended) record shops, word-of-mouth marketing or in the best case upon small indie labels. In the modern age, this alternative scene thrives. The musical *DIY* (*Do-It-Yourself*) *culture* once included merely underground genres, for example, the riotous punk-movement, but has now expanded to both a broader inclusion of genres – loads of DIY songs are well-known pop-songs or, on the other side on the *long tail* of published music, obscure songs with a maximum of a thousand plays-, and therefore has opened up to an enormously larger audience.[74] Not only the DIY culture flourishes under the regime of the music streaming services, but also the somewhat antiquated vinyl industry has lost its dust. Due to the immaterial impersonal experience of streaming music on Spotify, a section of the music geeks all over the world realised that listening to music should, at least for them, be accompanied by material artefacts, like the vinyl's sleeve dipped in artwork, or the slight imperfections of the needle touching a filthy bumpy record.[75] With this aesthetic understanding, the once, almost deceased vinyl industry is booming again for a small portion

[71] Lee Marshall, 'The 360 deal and the 'new' music industry', in: *European Journal of Cultural Studies* 16:1 (2012) 77–99, here 77.
[72] Karubian, *360° Deals*, 419.
[73] Ibidem, 398.
[74] Kait Kribs, *The Artist-as-Intermediary: Musician Labour in the Digitally Networked Era* (eTopia, York 2017) 5.
[75] Brian Hracs, 'Death by streaming or vinyl revival? Exploring the spatial dynamics and value-creating strategies of independent record shops in Stockholm', in: *Journal of Consumer Culture* 0:0 (2017) 1–20, here 3.

of music geeks and audiophiles. The immateriality of the digitalised world provided a resurrection for materiality.

Another eminent break with the pre-digital, and more specified *pre-streaming*, music world lies in the way we discover new tunes and artists. In the juvenile years of the music industry, amid the twentieth century, we found new music mainly by listening to the national radio and by reading music magazines.[76] This meant that the disc jockeys at the radio stations were the primary source of new music for consumers. The same goes up for the journalistic music editors. Their source of information often came from, not surprisingly, the record labels, which could push their artists to the front and, therefore, also to the top of the billboards. People could, in theory, back then, listen to whatever they want - although the presence of illicit pirate radio vessels implied otherwise, that's a whole different topic of research. In reality, they liked the music that these gatekeepers, the music journalist and radio stations, pitched to them.[77] This meant a simple, quite binary influence of both destructive and flattering reviews. The nature of the review, positive or negative, and the airtime an artist got on the radio seemed back then more influential than it is today.[78]

This last notion has become less and less absolute when the modern recording industry slowly aged. The emergence of loads of subcultures meant a less centralised power for the gatekeepers, and this craft of offering opinions on new music releases became a more democratised and polarised job.[79] Every subculture has had its own significant gatekeeper(s), like some influential subcultural magazines, in the last decades of the twentieth century. When the internet arrived in the modern century, and later on when the streaming giants established themselves, this process of polarising and democratising the musical taste became more and more apparent. The radio disc jockeys, its *song plugger* system and the music journals are still alive but are slowly losing their curational power to the high tech companies like Spotify.[80] In the modern digital age, we slowly see fewer people listening to the radio, and magazines struggle to keep their heads above the water due to the sudden shift towards a free, ad-supported form of media.[81] Weighted, subsidized, radio, like the BBC in the United

[76] Jan-Christian Tonon ,*The Role of Gatekeeping in the Music Industry: Why Intermediaries Remain Essential in the Digital Age* (Kopenhagen 2011) 2.
[77]Tonon, *The Role of Gatekeeping*, 2.
[78] Tiziano Bonini and Alessandro Gandini, 'First Week Is Editorial, Second Week Is Algorithmic: Platform Gatekeepers and the Platformization of Music Curation', in: *Social Media + Society*, 5:4 (2019) 1–11, here 4.
[79] Tonon, *The Role of Gatekeeping*, 24.
[80] Prey, *Locating Power in Platformization*, 7.
[81] 'Millennials Aren't Very Interested In Traditional Radio Any More', *Forbes/Hugh McIntyre*, https://www.forbes.com/sites/hughmcintyre/2016/07/12/millennials-arent-very-interested-in-traditional-radio-any-more/?sh=1a3fa7db37c4 (Accessed 31-05-2021).

Kingdom, and NPR in the United States and digital magazines like Pitchfork are still influential, but have to take the streaming services in account when in the market of music discovery as a new competitor.[82]

Now, in the modern digital era, the non-music geek music listener trusts computational, algorithmic power in combination with a more humanly curational consultant, all shaped in the structure of *playlists.*[83] The former is based upon an ever-growing 'all-knowing' computer that could characterise its users moods and musical taste better than they can themselves.[84] This growing personalisation isn't only found in the music industry but also in other forms of media. Platforms like Youtube, Netflix and Instagram build their imperium around the same principle. As shown in previous sections of this thesis, Spotify's aim wasn't always getting this much curational power in the music industry. Still, due to the *curational turn,* the streaming giant seem to have lost itself to it. For approximately five years, we've stepped into a new, profoundly personalised music world. Of course, there are loads of other methods of discovering new tunes, but one can't deny that Spotify's curational influence has become the most influential. The occupation of the gatekeeper is still active; only now, it's put in the hands of Big Tech employees via editorial playlists and data-fuelled algorithms.[85] This new popular and admired method connected loads of artists with like-minded listeners, who otherwise would never have heard of each other in such a short period of time. But it isn't free from criticism. This subject will return in the next section of this thesis.

From a solely post-digitalised and financial point of view, Spotify has also shown to be of great help for artists. Despite a massive amount of criticism of underpayment of the musicians, one could easily forget that this has been the only alternative to the contemporary music consumers's behaviour where almost everything seems to be 'overpriced'.[86] Users are now acclimated to free-to-use media, boosted by the piracy era, and, if possible, would like to pay nothing for their cultural and media usage. In the age of music piracy, musicians were already designated to live gigs as the primary source of income.[87] The new revenue model Spotify introduced to musicians with their launch isn't free from condemnation, but it definitely is a helping hand.

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[82] 'Muziekjournalistiek anno 2019: wat staat ons te wachten?', *The Daily Indie/Ricardo Jupijn,* https://www.thedailyindie.nl/muziekjournalistiek-anno-2019-wat-staat-ons-te-wachten/ (Accessed 31-05-2021).
[83] Bonini and Gandini, *First Week Is Editorial, Second Week Is Algorithmic,* 2.
[84] Ibidem, 1.
[85] Ibidem, 2.
[86] Hannes Datta et all, 'Changing Their Tune: How Consumers' Adoption of Online Streaming Affects Music Consumption and Discovery', in: *Marketing Science* 37:1 (2018) 5-21, here 5.
[87] Marshall, *Do People Value Recorded music?,* 145.

Spotify has been an excellent lifeboat for the music industry. It changed revenue models, it changed the way we discover music and actualised the rise of musical DIY culture, but it is still far from perfect. We should be glad that a lifeboat is offered to us. But, before we fully settle on the new boat and start to navigate thoughtless on an endless sea of the musical future, we, the academics, music journalists and professionals, should at least investigate whether the boat is watertight, if the right paddles are present and, most importantly, if the new captain has their license and knows what he is doing. The latter isn't only an allegory for the CEOs of Spotify but also for its structured interface and algorithmic powers. Which charges are the new ship and its captain accused of? In the next section, I will explain these allegations in more detail.

The three major unfavourable scenarios

Spotify can best be seen as a player in the *everything-is-possible* capitalistic culture of the Silicon Valley companies. This means that Spotify also has to deal with the main problems these Big Tech corporations are accused of. David Hesmondhalgh, professor of media, music and culture, summarised these sociologists' observations of the media and software conglomerates: (1) there is unequal access to digital networks in the world, as it seems to be (2) new dynamics of centralisation of power that is associated with the internet, (3) Big Tech is believed to intensify commercials in the sphere of culture, (4) the power and surveillance by Big Tech companies are questioned, (5) the corporations are accused of developing new forms of unpaid labour and (6) there is an alarming interference of Big Tech in national and global politics.[88] However, the scenarios that seem to be forthcoming for this industry are much more specific to music's culture. That does not mean these six main problems addressed and summarised by Hesmondhalgh are non-applicable to Spotify - they can be. Still, it is only noted as an overview of technologies meddling with media and culture.[89] This is a small sketch of the bigger culture Spotify grew up in. This all captured in the philosophy of *dataism*, where advocates believe that anything that exists could be translated into digital data.[90] This data is an all-knowing entity and could both make our lives as easy-going as possible and could even push the world in the right direction in a way that the traditional religions claim to do. Spotify is also part of this new aged faith but doesn't concern the whole

[88] Hesmondhalgh, *The Cultural Industries*. 274.
[89] 'Big Tech's Backlash Is Just Starting', *New York Times/Shira Ovide*, https://www.nytimes.com/2020/07/30/technology/big-tech-backlash.html (Accessed 31-05-2021).
[90] Yuval Noah Harari, *Homo Deus: A Brief History of Tomorrow* (Thomas Rap, London 2017) 428.

world, only the musical aspect. The scenarios that are tested in this thesis, the devaluation of music, homogenisation of music and the anonymisation of artists, are much more specified to music culture and will be explained in the next section. These are both based upon academic and journalistic works (devaluation and homogenisation) and my own interpretation of said criticism (anonymisation). The material might seem quite relentless and forthright in the following three sections but are based on academic findings.

The devaluation of music

Firstly, let's be clear. Due to the scientific nature of this thesis, *cultural devaluation* should not be measured in financial terms. Of course, economic devaluation is the most well-known and the easiest quantifiable, but a sole focus on the monetisation of art ultimately diminishes the most vital quality of art: its cultural value. To define the debate around the devaluation of music in the digitalised era, this thesis must first outline which value is diminished. Economist David Thorsby, influenced by the notion of *capital* introduced by cultural author Pierre Bourdieu, agrees. While Throsby argues that cultural value is often echoed in economic value because 'in general the more highly people value things for cultural reasons, the more they will be willing to pay for them', but he also advocates for the idea that 'there are some aspects of cultural value that cannot realistically be rendered in monetary terms'.[91] Therefore Throsby divides cultural value into the essential components: aesthetic value, social value, symbolic value, authenticity value, spiritual value and historical value.[92] In this thesis, the former four principal cultural elements are the most applicable.

So why shouldn't essays on the devaluation of music focus on its economic value? As shown in previous sections of this thesis, there has been an enormous dramatic decline in the economic value of music in the 21st century. This has incited a debate around the 'perceived *value gap* between music's socio-cultural and economic values'.[93] However, why should we measure everything in terms of financial value in the cultural industries? Besides Throsby, other economists, like Michael Hutter and Bruno Frey, criticise this manner as well. They explain that 'exchange value exhausts the meaning of the notion of cultural value'.[94]

Furthermore, one shouldn't forget that music is a *public good,* with two significant characteristics: it is both *non-rivalrous* (two users can consume the same piece of music at the

[91] Marshall, *Do People Value Recorded music?,* 144.
[92] David Throsby, *Economics and Culture*. (Cambridge University Press, Cambridge 2001) 28-29.
[93] Marshall, *Do People Value Recorded music?,* 144.
[94] Michael Hutter and Bruno Frey, 'On the influence of cultural value on economic value', in: *Revue d'économie politique* 120:1 (2010) 35–46, here 37.

same time without having to debate who can use it), and it is *non-excludable (*people who haven't paid for the musical commodity can still enjoy it, because others paid for it or because an illegitimate free alternative is available on the world wide web).[95] This means that commodities that are *public goods* always end up having a lower economic value than cultural value.[96] On top of that, possibly the most noteworthy obstacle in comprehending (cultural) value, culture, and therefore music, seems to exist whether there is an economic market or not.[97] Think about it; is it fair to indicate music in economic relations rather than a standalone matter? Acknowledging these views, sociologist Lee Marshall stated that 'there is thus no price that can act as a proxy for social value'.[98]

The alleged *value gap*, which in the first sense seemed to be a notion of a left-wing cultural academic, can also be seen as an atrocious attempt at substituting cultural value for economic terms. It can be the latest attempt of the oligopolistic recording industry to lobby for more monetisation of music, advantageous for its business model, to be set in stone through international laws. The more they claim a value gap in music is being created, the better their argument for upscaling the price of a single song or subscription fee. With this in mind, we arrive at the power (media) companies have over this perceived *value gap* between the economics and culture of music. The subscription models, and the free advertisement-based alternatives, are subjected to another economic term. The $9.99 a month nowadays, like the price range of a new album in the twentieth century, which static conditions surely benefitted the assumed value gap, is an example of *uniform pricing*. The one-price-fits-all makes it impossible for the consumer to know which 'product', i.e. a song, is the best. There is no 'best' song. This subjectiveness can again be an argument against the seemingly impossible task of defining music as economic value. That's why we define the devaluation in cultural terms, as Throsby described.

In the age of the physical music commodity, songs could be enjoyed both sonically (listening) and physically (e.g. reading the liner notes and observing the artwork). Nowadays, music and other media formats seem to be short-lived, fleeting and intangible.[99] This *de-contextualisation* of music is based on two other changes that co-occurred with the rise of iTunes and, later on, Spotify. Both the removal of consumer experience (we don't go shopping for an album) and the loss of consumer ownership of music (we do not own any

[95] Marshall, *Do People Value Recorded music?,* 143.
[96] Corey Allan et all, 'Value and culture', *Social Science Research Network* (New York 2013) 1-46, here 5-6.
[97] Marshall, *Do People Value Recorded music?* 143.
[98] Ibidem, 144.
[99] Marjorie Kibby, 'Collect Yourself: Negotiating personal music archives', in: *Information, Communication & Society* 12:3 (2009) 428- 443, here 431.

music anymore) in the subscription-based model make sure that the music has lost its way to the physical form.[100] However, this *frictionless digitalized experience*, or 'instant gratification of music consumption', where everything plays at the click of a button, seems to be adopting dataism's believes but isn't necessarily beneficial for music. This music consumption without resistance or struggle is thought to devalue music to 'meaningless art', because an effort that builds towards the consumption of music, thus the payoff, is almost entirely absent.[101] This can be seen as a sign of the devaluation of music.

On top of that, music consumption, and therefore music production, has additional social issues to deal with, initiated by the changing landscape. For example, the 'seamless auditory experience', combined with the ever-growing usage of headphones, can provide a sense of control over your personal environment. Nowadays, people no longer seem to talk to each other in public buildings and public transport, but rather wear their headphones while only obtaining social cues from each other through visual and tangible information. However, this social mechanism is also a setup for music consumption as a sonic wall around us from the 'evil' world, more than it is as art.[102] In other words, music can be *depreciated to a service* to protect us and to shut ourselves off from the world, rather than it can be a song as art that accompanies and amuses you. Lastly, when writing about the devaluation of music this thesis shouldn't forget the problem of the *tyranny of choice.* Abundant options of choice often make for misery.[103] Spotify tries to rectify this by pushing its curational powers since the turn. But is that enough to conquer this tyranny of choice? Is Spotify's interface devaluing music? Besides devaluation, another process is alleged to be a game-changer for the music industry: the homogenisation of music (production).

The homogenisation of music

The world has globalised a lot in the past century. This is eminently visible in music. For example, pop songs in the western world are getting more and more influenced by the rhythms out of Latin American, most notably the reggaeton and samba. On the contrary typically western genres such as techno and drum and bass are building fan bases in countries

[100] Robert Prey, 'Nothing Personal: Algoritmic individuation on music streaming platforms', in: *Media, Culture & Society* 40:7 (2017) 1086-1100, here 1093.
[101] 'Fans Aren't Going To Pay For Music Anymore. And That's Ok.', *Digital Music News/Ari Herstand* http://www.digitalmusicnews.com/2014/09/08/fans-arent-going-pay-music-anymore-thats-ok/ (Accessed 31-05-2021).
[102] Kibby, *Collect Yourself*, 438.
[103] Patrick Vonderau, 'The Politics of Content Aggregation', in: *Television & New Media* 16:8 (2015) 1-17, here 11.

such as Japan and Russia.[104] In short, (almost) every style of music can these days be accessed everywhere around the world. The emergence of streaming services accentuated this trend, as shown in previous sections. The promise of higher diversity in the supply of music has seemingly been granted, but there is still a dark side to this ostensive success story.

Diversity in music production is a lot more complex than solely mixing up different genres and having access to every style. The idea of the *long tail*, introduced by businessman Chris Anderson in 2006, has long been seen as the future of the heterogeneous music industry. The main idea is that the music industry, and every other type of digitalised industry, will increasingly be oriented towards the niche market.[105] This notion, a typical example of '*David-versus-Goliath* digital optimism', says that the cumulative plays of niche songs could exceed the number of streams of hit tunes.[106] All sorts of media studies quickly criticised this digital utopia for music. The deduction that people highly value products that are widely consumed by others and the mentioned curational turn isn't auxiliary to Anderson's notion of the *long tail*.[107] On top of that, the current payment system Spotify is utilising, the *pro-rata system*, is accused of paying more to the big fish in the musician's pond per play by centring the pay-out on how many plays a track has in relation to all other tracks played simultaneously.[108] This is accused of making the superstars even wealthier and simultaneously leaving the smaller artists behind, eventually resulting in a homogenised music production culture, where only the celebrities that passed a certain bar of income can live off their streaming-based income. According to a growing group of critics, this could be a level playing field if Spotify followed its rivals, Soundcloud and Deezer, and switched to a *user-centric system* of payment.[109] However, this economic discussion is too large for this thesis to cover in detail, but certainly calls attention to a homogenisation of the music industry.

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[104] 'Fan Study: local music travels the world', *Spotify*, https://fanstudy.byspotify.com/insight/local-music-travels-the-world (Accessed 31-05-2021).
[105] Chris Anderson, *The Long Tail: Why the Future of Business Is Selling Less of More* (Hyperion, New York 2006).
[106] Hesmondhalgh, Cultural Industries, 278.
[107] Ibidem, 278.
[108] Patrick Vonderau , 'The Spotify Effect :Digital Distribution and Financial Growth', in: *Television & New Media* 00:0 (2017) 1–17, here 3.
[109] For more information on the debate on these different types of payment systems see:
David Hesmondhalgh, 'Is Music Streaming Bad for Musicians Problems of Evidence and Argument', in: *New Media and Society* 20:9 (2020) 1-24, here 17.
'What are user-centric music streaming payouts? Start here…', *Music Ally*, https://musically.com/2020/05/13/what-are-user-centric-music-streaming-payouts/ (Accessed 31-05-2021).
'It's a better way': Deezer unveils UCPS ambitions, *Music Week*, https://www.musicweek.com/digital/read/it-s-a-better-way-deezer-unveils-ucps-ambitions/077381 (Accessed 31-05-2021).

As shown in the previous scenario on the devaluation of music, the economics of music is a whole different area of research but should not be neglected. On a cultural level, there are also many cases of musical homogenisation. Liz Pelly, a cultural critic and music journalist, talks about the emergence of a new genre of music, *Spotify-core*, with songs that are chilled and have attention-grabbing hooks for the first thirty seconds that end when the monetisation mark is reached or, entirely on the other side, 'music that strategically requires no attention at all.'[110] At first sight, this doesn't seem to encompass the decrement of the diversity of music, but Liz Pelly continues. 'The problem is not the chill-pop musicians or the attention-grabbing hooks, but a self-replicating system in Spotify that continuously rewards the same styles - the ones that users will stream endlessly, whether they're paying attention or not.'[111] Pelly seems to imply that Spotify has a particular incentive towards a standardised, homogenised listening experience because it keeps people engaged and, therefore, stays longer in its ecosystem.[112] On the other side of the war of attention in the music streaming world, the system of 'Streambait music', the audio equivalent of clickbait, certainly points in the direction of the homogenisation of music production initiated by the way we consume it.[113]

Other research that encircles these views points out that other aspects of music production are slowly getting lost. Cultural academic Joan Serra and her co-authors revealed that via the increasing use of digital equipment as synthesisers and Auto-Tune, respectively, replacements for analogue instruments and more or less our voices, there is a loss of *timbre,* a concept that succinctly can be explained as; the distinguishable personality of an instrument.[114] This can result in homogenised music production as well. In the same normalising way, Serra claims that the 4/4 time signature, well-known through its *four-to-the-floor* use in disco, is taking over the world and could be making music more homogenised than ever.[115] Genre in itself, as a distinctive feature to 'box in' music, and the way we use it on Spotify are also claimed to be homogenising music. Tom Johnson, professor of music theory, noticed that 'artists like Rihanna or Drake get only a few genre tags, while Dirty

[110] 'Streambait Pop', *The Baffler/Liz Pelly*, https://thebaffler.com/downstream/streambait-pop-pelly (Accessed 31-05-2021).
[111] Ibidem
[112] 'How Spotify is Built On Artist Exploitation'*, Tech Won't Save Us*, https://www.stitcher.com/show/tech-wont-save-us/episode/how-spotify-is-built-on-artist-exploitation-w-liz-pelly-79712510 (Accessed 31-05-2021).
[113] Streambait Pop', *The Baffler/Liz Pelly*, https://thebaffler.com/downstream/streambait-pop-pelly (Accessed 31-05-2021).
[114] Joan Serrà et all, 'Measuring the Evolution of Contemporary Western Popular Music', in: *Scientific Reports* 2:521 (2012) 1-6, here 5.
[115] Joan Serrà, *Measuring the Evolution of Contemporary Western Popular Music*, 4.

Projectors get twenty-six. Dr. John has over forty genres affixed to his metadata', the style-information that accompanies a song.[116] This culminates, according to Johnson, in a system of racism, where the so-called 'urban' newfound artists are all piled on a massive dump under one or two genre tags (i.e. 'rap' and 'hip-hop'), while the conventional older, 'white', styles of music are getting more detailed nuanced distinctions in their metadata (for example the difference between americana, bluegrass, country and folk) and are therefore way more easily discovered by consumers and could be housed in more idiosyncratic playlists. Eventually, this could result in the homogenisation of underground music, simply because some genre tags aren't distinctive enough.

The same issues are found in the gender debates around Spotify's classification and recommendation systems. Liz Pelly calls Spotify 'a data-driven echo chamber where the most agreed-upon sounds rise to the top, subtly shifting us back toward a more homogenous and overtly masculine pop music culture', because of an already existing 'relentlessly male-centric status quo in streaming culture'.[117] During its curational turn, Spotify always needs to organise gender and race in music for its data-(fuel) to feed the 'all-knowing' algorithms, simply to make the listening experience as seamless as possible. This categorisation isn't as harmless as it seems at first sight. Many studies, like Ann Werner's *Organizing music, organizing gender: algorithmic culture and Spotify recommendations*, are backing Pelly's wild claims on the increasing uniformity of music, with quantifiable results that say that Spotify's systems are a way to reinforce patterns of power like the masculine social and cultural surplus.[118]

Are we moving towards a dystopian capitalistic mass culture like Theodor Adorno once feared we would, or is this destructive criticism merely a wrinkle in the fabric of a musical streaming culture that needs to be ironed out? I once again ask myself; what is the role that the interface of Spotify plays in the development of these tendencies? Before moving on to the actual research of the interface, a last big scenario for the future of musicians needs to be addressed: The anonymisation of artists. Or better: alienation between the consumer and the musician.

[116] Tom Johnson, 'Chance the rapper and Spotify and Musical Categorization in the 2010's', in: *American Music* 38:2 (2020) 176-196, here 183.
[117] 'Discover Weakly', *The Baffler/Liz Pelly*, https://thebaffler.com/latest/discover-weakly-pelly (Accessed 31-05-2021).
[118] Ann Werner, 'Organizing music, organizing gender: algorithmic culture and Spotify recommendations', in: *Popular Communication* 18:1 (2020) 78-90, here 87.

Anonymisation of the musician

This newfound notion of anonymisation of the musician resembles the ideas of devaluation and homogenisation of music quite well. However, this idea goes a step further. In the early days of the record industry, the pre-digitalised era, we would go actively to the record shop or listen, slightly more passively, to a radio station and find our new favourite artist. In the case of the radio, the DJ would announce every other musician that was played. Even in the digitalised age, iTunes made sure you knew who you listened to: The purchase of music was still, even though less effort was needed, an active process. Nowadays, in the best case for musicians, consumers still listen actively to an album or an artist. Still, half of the time, even myself, a self-acclaimed responsible music fan, don't know which artists are playing on my Spotify account. I 'throw' half-heartedly a song that I like in my corresponding playlists, only to put on that playlist because I'm in the mood for that particular vibe. Accumulated, I've got approximately a thousand hours of music saved in my personal playlists, but I guess, based upon a rough estimate, I only know half of the music's artists. This passive engagement seems to be the status quo in the current consumption of music.

Anahid Kassabian, a music scholar at Berkeley, hypothesised that this newfound type of consumption produces 'a mode of listening dissociated from specific generic characteristics of the music', which she describes as *ubiquitous listening*.[119] This trend is, of course, highly reflected - if not created by - in the change of business model of Spotify; from a massive database of music to the personal music assistant that realises the effortless music consumption. However, Kassabian goes further. She says that music is becoming *sourceless* due to the lack of easy-to-find liner notes and other background information unique to this ubiquitous listening. Kassabian fears that music comes from the plants and the walls and, potentially, our clothes in the near future. It comes from everywhere and nowhere. Its projection looks to erase its production as much as possible, posing instead as a quality of the environment.'[120] This, of course, reminds me of *Muzak,* indifferent music that can be found in lifts, telephone queues and retail shops, which has a particular psychological effect on its listeners.[121] The once distinct songs are, via streaming services and their tremendous focus on playlists, blended into a large sausage of sound. Mark Mulligan, a renowned music industry analyst, researched the music consumption of the millennial. His results confirm Kassabian's

[119] Anahid Kassabian, *Ubiquitous Listening: Affect, Attention, and Distributed Subjectivity* (University of California Press, Berkeley 2013), 9.
[120] Kassabian, *Ubiquitous Listening,* 9.
[121] Marshall, *Do People Value Recorded Music*?, 152.

views: ‘Music is becoming increasingly like the torrent of continually updated and essentially transient content that fills their social feeds’.[122]

Another way of describing this development is the split between two types of listeners: The *lean-in* and the *lean-back* listener. At multiple conferences for musicians, like Eurosonic/Noorderslag, I’ve heard of this separation and the importance of artists knowing which type is listening to you. In the digital age, the primary source of income for musicians are loads of live shows. The payment of streaming is so low that nowadays, the music on Spotify is merely seen as a business card for artists to lure fans to their live shows.[123] That makes the *lean-in* listener way more valuable for the music industry than its passive equivalent. But then, at the same time, studies show that solely listening to music as a solitary act encompasses merely 2% of all music consumption.[124] There seems to be a gap between the connection musicians try to make with their listeners and the effort a consumer puts into this relationship. In other simpler words: the consumer is unknowingly playing hard-to-get with the musician, who will perish if not fed with love and attention. Of course, this bold statement needs a certain and evident nuance; not everyone produces music that has the quality of millions of fans, but a proper balance in the nature of this relationship seems to be missing.

This *alienation between the consumer and the musician – Anonymization of the musician* – seems to match with the renowned socialistic eponymous theory of Karl Marx. When we don’t see the labour of a musician, we, the consumer, don’t realise how much work releasing a song (on Spotify) is.[125] This undervalues the work an artist has to do.[126] In addition to all the aesthetic decisions that have to be made (e.g. writing a song, recording, mixing, mastering, creating artwork, creating an image, choosing colour schemes, shooting a press photo and writing a biography), administrative duties (like managing copyrights, licensing, syncs and other bureaucratic monetisation of the songs) and promotional tasks (like interviews, plugging, radio live-shows etc.) fill at least half of the time spent on a single song. This labour, which generally hasn’t increased or decreased since the digitalisation of the music industry, is often underestimated by the music consumer. However, the problem is that this earlier mentioned relationship did devalue and, therefore, the production side of the music industry is having a hard time.

[122] Mark Mulligan, *Gen Z: Meet the new millennials* (London 2017) 19.
[123] Jean Paul Simon, ‘New players in the Music Industry: Lifeboats or Killer Whales? The role of Streaming Platforms’, in: *Digital Policy Regulation and Governance* 21:6 (2019) 525 – 549, here 529.
[124] Marshall, *Do People Value Recorded music?*, 152.
[125] Christian Fuchs, *Digital Labour and Karl Marx* (Taylor & Francis, London 2014) 156.
[126] Ibidem, 156.

Daniel Ek made things worse in a recent interview he gave to Music Ally.[127] The podcast on Covid-19, artists incomes and podcasting, where the CEO of Spotify mentioned that 'it's not enough for artists to release albums every 3-4 years', received a lot of backlash from the artists.[128] This reaction seems logical. In Marxist understandings, the musician seems to be the autonomous worker, while the bourgeoisie in this philosophy symbolises the modern music consumer.[129] In this story, the worker was, and still is, easily replaceable. There has already been an incident involving 'fake artists' in 2016, in the form of ghostwriters, pushing the real artists out of the spotlight in the 'Piano & Chill' curated playlist by Spotify. The artists which filled this playlist didn't have any other online social presence and therefore seemed fake, and soon the music industry raised the alarm.[130] Spotify denied the accusations, but a former employee confirmed the embedding of this new-age type of Muzak later on, and the circle of trust between the musicians and the Swedish tech giant showed cracks for the first time.[131] This rumour indicated that Spotify wasn't only the celebrated lifeboat for the music industry, but that it has shown signs of being a Silicon Valley Big Tech conglomerate that doesn't care about its 'employees'. Because if you own the songs made at your costs, you don't have to pay a royalty fee and therefore more profit is made. This reminds us again of Marx, who spoke about 'anonymous, cheap, and profit-maximizing goods'.[132]

However, Marx's ideas can be applied to an even more severe side of musical production. Marx claimed that automation could quickly transform the relationship between consumption and labour.[133] Since the rapid development of artificial intelligence (AI), people have been questioning the overhauling abilities of this supercomputer. AI, in Spotify in the form of algorithmic power, have already taken over the way we consume music to such an extent that I've asked myself the question for who we, the artists, make music. Do we make music to feed the 'all-knowing' algorithm or the people on the other side of this machine? Has

[127] For the interview:
'Spotify CEO talks Covid-19, artist incomes and podcasting', *Music Ally*,
https://musically.com/2020/07/30/spotify-ceo-talks-covid-19-artist-incomes-and-podcasting-interview/
(Accessed 01-06-2021).
[128] The reaction of artists:
'Musicians criticise Spotify CEO for saying it's "not enough" to release albums "every 3-4 years"', *NME/Rhian Daly*, https://www.nme.com/news/music/musicians-criticise-spotify-ceo-album-release-comments-2719827
(Accessed 01-06-2021).
[129] Fuchs, *Digital Labour and Karl Marx*,156.
[130] Eriksson, *The editorial playlist as container technology*, 423.
[131] 'Spotify denies it's playlisting fake artists. So why are all these fake artists on its playlists?', *Music Business Worldwide/Tim Ingham*. https://www.musicbusinessworldwide.com/spotify-denies-its-playlisting-fake-artists-so-why-are-all-these-fake-artists-on-its-playlists/ (Accessed 31-05-2021).
[132] Eriksson, *The editorial playlist as container technology*, 423.
[133] 'Did Karl Marx Predict Artificial Intelligence 170 Years Ago?', *Medium/Micheal McBride*,
https://medium.com/@MichaelMcBride/did-karl-marx-predict-artificial-intelligence-170-years-ago-4fd7c23505ef (Accessed 31-05-2021).

AI already taken over music consumption in a certain philosophical way? These are just some rough thoughts for future research. A development that we can see now is that AI has the potential to take over the production of music. The songs that are now entirely created with algorithmic power are eerie and impersonal to me. Still, knowing that AI's strength grows somewhat exponentially, this could soon be exceeding the creativity of human musicians, making these autonomous workers obsolete. This reminds us of Marx' *The Fragment of the Machines*-theory.[134]

A great modern example of this development is the *Lost tapes of the 27 club.* This is an AI-generated music composition, still played (with emotion) by human musicians, that tries to revive the genius of the club of 27, passed musicians like Kurt Cobain, Amy Winehouse, Jim Morrison and Jimi Hendrix, who all died at age 27, by creating new songs that sound exactly like them.[135] Of course, this music is nothing more than a musical monument to these hall-of-fame artists, and they reassure their listeners on their homepage that 'even AI will never replace the real thing', but it discloses the power AI is already potentially having over music production. So, while the artists are all having a scramble over consumers' attention and the process of anonymisation is already in motion, alternatives for music production, like AI and ghostwriters, are knocking at the musical composition door.

I'm not claiming that all this will definitely happen, but I am saying that it is a possible outcome for the future of music production and consumption. I'm also not claiming that all these three future scenarios are already happening or are ahead; I'm merely trying to disclose the possible future scenarios. I do declare, aligned with the ideas of Kassabian and Mulligan, that, to a certain extent, we can talk about a process of *anonymisation of the musician.* In the next chapter, this thesis will investigate if the interface and the corresponding back-end and patents of Spotify (unconsciously) contribute to the development of this scenario and the other two scenarios.

A deep dive into Spotify's interface

Freemium vs Premium

Spotify's interface is clear-cut, elegant and highly accessible. The dark theme, a recent trend in other interfaces designs, has always been the standard in Spotify, which is nice to

[134] 'Did Karl Marx Predict Artificial Intelligence 170 Years Ago?', *Medium/ Micheal McBride*, https://medium.com/@MichaelMcBride/did-karl-marx-predict-artificial-intelligence-170-years-ago-4fd7c23505ef (Accessed 31-05-2021).

[135] 'Homepage Lost tape of the 27 club', *Lost Tapes Of The 27 Club*, https://losttapesofthe27club.com/ (Accessed 31-05-2021).

overstimulated eyes.[136] When analysing an interface, a clear division between the ways we could access the interface needs to be made. This is split into the *freemium* and premium version (and later on mobile versus desktop app). In this thesis, the analysis will mostly be done on the latter, but the former needs to be addressed as well. Worldwide, the freemium model, an advertisement-based free version with burdened accessibility, has over 190 million active users, while the premium version, with a monthly fee of around ten euros globally, topped at 155 million active users[137]. Of course, the focal point in this thesis lies on the paid version; mainly because the freemium model is built to try out Spotify and eventually steer users towards the premium, likely more profitable, version (the ads come frequently bundled with a message of a woman saying things such as 'do you find these ads annoying? If you try premium, your songs won't be interrupted anymore'). Due to the high numbers of freemium users, the cultural impact of the free alternative couldn't be underestimated. The following notions are based upon a side-by-side comparison of my free account and my premium account.

On the freemium desktop app, besides for some ads that load after a minimum of every song (or, in the best case, after three songs) and the inability to download songs, the differences aren't that big with its paid equivalent. However, the mobile freemium version, which accounts for approximately 50% of the free users, is seriously restricted.[138] Where the premium version can play anything you like at any time, the free one is limited to a randomised playback of the album, artist or playlist you're listening to, meaning that making a certain selection of specific songs that are coming out of your speakers is impossible. In this randomised playback, a maximum of six skips of tracks per hour is applied. However, these two restrictions, usually visualised by a blue *shuffle* icon, randomisation and limited skips, are lifted when one of Spotify's fifteen curated playlists, like Rap Caviar, is selected to play out.

Now one could say: 'who cares? It's the try-out version of Spotify, and the people who can stand to listen to music this deprived way, get exactly what they signed up for'. I don't deny this, but due to the high numbers of users of this freemium version, and since mobile OS seem to surpass the desktop as the most popular operating system, the cultural impact seems

[136] 'Dark Mode Once Again Tops Web Design Trends In 2020', *Axiomq*, https://axiomq.com/blog/dark-mode-once-again-tops-web-design-trends-in-2020/ (Accessed 31-05-2021).
[137] Spotify Technology S.A., *Shareholder letter Q4 2020* (3 February 2021) 3.
[138] 'Spotify Revenue and Usage Statistics (2021)', *Business of Apps*, https://www.businessofapps.com/data/spotify-statistics/ (Accessed 31-05-2021).

significant.[139] At first sight, the two mobile restrictions seem to be insignificant, primarily when seen in the context of the three scenarios. Still, a link between the mass use of this free restricted version and a certain homogenisation of music couldn't be ruled out. The curational power of Spotify is amplified. Only songs that are the top of their genre - or better said: their mood – can be repeated. This limited unrestricted listening results in a handful of songs, 750 to be precise, that can be played on a constant loop. The listeners are discouraged from playing albums and artists, which are restrained behind the blue shuffle icon; therefore the users are lured to the unhindered Spotify playlists.

The freemium users might not even see this as restricting, but as helping to navigate the unlimited supply of music Spotify has to offer. But, due to the mass-utilisation of this free listening experience, more than the unrestricted premium version, is could effect on the homogenisation of music. The 'few' songs that could be played on a loop gain more and more plays and thus are placed more and more in these 'top' playlists; the algorithms pick up on this momentum and put them in the personalised algorithmic playlists as well. This is a case of songs that bounce around in an algorithmic *echo chamber* and is a prime example of an *uneven level playing field*, where only the songs that fit perfectly in a certain mood-playlist, or are the prime hit example of a genre playlist, are getting exponential growth in attendance. If fewer people turn over to the paid version and are contented with the freemium restrictions, it could turn into a more homogenised musical future. However, the embedment of personalised playlists could be a door in the closed-off *echo chamber*, like Discover Weekly and Daily Mix, which could be counter-effective to the homogenisation of music. But, as will be shown in a later section, these algorithmic lists have got their own drawbacks.

On top of that, the restriction of the freemium mobile version provides another change in the musical landscape. Usually an album is the profound showpiece of a musician's expression, but in the free version of Spotify, an album could never be played as a whole, only shuffled. This challenges the idea that an artist focuses on its masterpiece and directs them into writing clickable hit-singles. To write a coherent sounding album, with a few solid songs and some *fillers*, is always seen as the musicians greatest achievement and milestones and could be seen as the *Magnus Opus* of composing music, let alone to write a record that has around twelve outstanding tracks, that will win the musician a Grammy.[140] Writing an

[139] 'Android challenges Windows as world's most popular operating system in terms of internet usage', *Statcounter*, https://gs.statcounter.com/press/android-challenges-windows-as-worlds-most-popular-operating-system (Accessed 31-05-2021).
[140] 'Pazz & Jop: The Dean's List', *Village Voice/ Robert Christgau*, https://www.villagevoice.com/2019/02/07/pazz-jop-the-deans-list/ (Accessed 31-05-2021).

album defines the artist and makes a snapshot of their artistic career. Most of the times a tour, where the money is modern day, is planned around the release of an album. With the decreasing listening time to an entire album and the active discouragement in Spotify's freemium interface design, this container of music seems to become extinct slowly, and the focus will lay on writing singles that people want to put on repeat. This latter method makes the most money in today's musical streaming culture. 'Repeat, repeat, repeat, when people are hooked to a song, the money will come.'[141] I don't want to underestimate the work that could be done optimising a single song, but doing it twelve times and still have a coherent story and sound is another level of music production and takes an outstanding musician and a whole web of team members around them, like recording engineer and visual artists to name a few. Is the slow decline of the album a devaluation of the production of music or is it merely a change in the landscape?

Interface layout

Now, the premium version of Spotify, the actual product they sell, isn't free from this steering of the users towards certain directions in their ecosystem. From now on, since we've addressed the freemium model, every analysis of Spotify in this thesis is done on a premium subscription. However, since writing and analysing this, Spotify has made some small adjustments to its interface design. These changes are not significant for the research, but it is obligatory to mention that these findings are based on the interface pre-May 2021. When something did change for better or for worse, it will be mentioned. The most obvious one is how Spotify, on their mobile app, on the desktop version and on the web player, makes the playlists much more visible on their interface than the artist, albums, or songs.[142] This will lead to people rather clicking on the playlists because it catches the eye instead of searching for an artist in their own subheading. On the mobile version in the 'library' subheading, you are directly sent to playlists (an extra swipe is needed to reach the artist section and another one for the album division), and on the web player and desktop version, different saved playlists are always visible in the left side of the screen in the navigation bar. The artist and albums are as crucial as podcasts are for Spotify. They both need an extra click to be reached and are still beneath the 'made for you' heading. Since the May 2021 update artists, albums and songs have been completely removed from the homepage, and the clickable artist icon in

[141] This quote was once overheard at a congress I visited. I can't actually remember the name of the speaker, but I found it too striking to withhold it from you.
[142] Best seen in screenshot 1 and 5 in the attachements

playlists has been reduced from an own column to a smaller size font header underneath the song. On top of that, the difference between being on an album page or artist page is hardly distinguishable in the new interface. In the Web App, this is less distinctive. The headings Artist, Albums and Songs don't even make it to the home screen and can only be accessed after two clicks of a button. With these clear notions, we see that Spotify's controlled digital ecosystem, on all three faces (mobile, desktop and web app), isn't built around giving artists the spotlight they might deserve (or could use the best), but rather constructed to centralise their playlists, the musical containers of the future, which are organised by Spotify.

Furthermore, the home page, the first screen when starting up the application on every type of Spotify's interface, always starts with 'recently played' and automatically generated 'shortcuts' to the playlists and artists that Spotify thinks you need a bypass to.[143] These are guiding the consumers of music, especially the lean-back ones, which are shown to make up most of the users and play music on repeat. Or at least, repeat the artists and moods they had the last time they opened up Spotify. This seems to be contradictory to Spotify's attempt at being the primary discovery tool for new artists, as will be explained later on. On top of that, since the update, 'Your top shows', the podcasts you like is shown before 'your favourite artists', which needs an extra scroll.

On another note, the *browse* feature, or in the mobile app this is found under the *search* section in the middle of the navigation bar, seems to be centred the most and is, therefore, the most influential.[144] Again, it is remarkable and no surprise that we see no sign of artists and albums after the first click, but a sea of curated and algorithmic playlists.[145] The playlists are pushed to the front, and complex systems of musical style are diminished to merely moods of 'chill', 'workout' and 'focus', or in the best case, the classical genres and billboards, because of Spotify's compulsion to categorise everything. Even Podcasts that on the navigation bar took the same rank as artists and albums are on this page estimated as having more significance. This is not that surprising given that Daniel Ek speaks of Spotify as an audio company, not a music company.[146]

Then on a more micro-design scale, we also see some design choices that might have an effect on one of the scenarios. The following two paragraphs on this subject are exaggerated to amplify the psychological methods for a better understanding how the

[143] Best seen in screenshot 3
[144] Best seen in screenshot 2
[145] Best seen in screenshot 5
[146] 'Audio-First', *Spotify/Daniel Ek*, https://newsroom.spotify.com/2019-02-06/audio-first/ (Accessed 31-05-2021).

interface influences us. The first highly remarkable one is, once you've finally arrived at the page of all the saved or liked artists or albums, the large play button, when hovering over your set choice of music, appears immediately. It symbolically says: 'play me without entering the artist page or the album itself. Play me, without finding out more.' This is de-contextualising music. It also discourages consumers from visiting the artist's page, resulting in a weakened connection.

Once you've found the artists page two things directly stand out. The first is the colour coding of the page. Everything is in monochrome greyscale, even the 'follow the artist' button, except for, yet again, a green play button.[147] This is enhancing the same issues of forming a connection between the user and the artist again.[148] According to Spotify, the user wants to play music, not find out what's behind that what they want to play. To identify if this idea is true isn't necessary. Spotify insinuates that most users don't want to find out about their artists and steer them towards this seamless experience, which seems to effect the noted scenarios. Spotify's drive to smooth out every form of music choosing and discovery is increasing, as shown in a later section. This seamless experience is best shown in the ever-changing nature of the visual media interface. Spotify's layout is always shifting, based on contextual data such as time, weather and temperature. More summer-related playlists are recommended when the thermometer is at a high level, and Christmas playlists are featured prominently in the winter. The interface moves with me even on the same day: more "Coffeehouse" playlists are recommended in the morning. At the same time, the "Party Playlists" are highlighted in the evening, and Running playlists come up when I've been behind my laptop for quite a while. I personally find this eerie but is nothing new in the ecosystem of Big Tech. On an auditory level, the possibility to Automix, allowing 'smooth transitions between songs', is the AI version of a disk jockey but could solely be used for playlists.[149] Artists and albums could only enjoy a simple non-algorithmic 'crossfade'.[150] This makes the auditory experience of playlists listening even more seamless.

On another note, the number of streams of the top five (or ten when interested) songs of the artist is directly visible under the heading 'popular'.[151] Of course, not every song always has equal streams and having hit songs is not new to the music industry. However, due

[147] Best seen in screenshot 4
[148] 'How Spotify's user experience is helping them win the streaming wars', *Chris Watkins,* https://uxdesign.cc/ux-ui-analysis-spotify-31f3855a1740#_=_ (Accessed 31-05-2021).
[149] Spotify → preferences → Automix
[150] 'Spotify Now Auto-Mixing Tracks In Playlists, Gets Phrasing Right (Usually)', *DJ Tech Tools,* https://djtechtools.com/2018/03/12/spotify-now-auto-mixing-tracks-in-playlists-gets-phrasing-right-usually/ (Accessed 31-05-2021).
[151] Best seen in screenshot 5

to the digital landscape standards where streams seem to be equal to the quality of your music (I've experienced this directly with my own band where the rapidly growing amount of 'lucky' international streams resulted in the sudden interest of the music industry in working with my band) having sub million streams might result in the disinterest of the mass audience, that thinks you're 'not there yet'. But, as consolation, the deep musical diver in Spotify's sea of music that's not scared of trying out new music might discover you first. In other words, the bar to be picked up by the mass audience might be set higher (or on two completely different stands via playlists-discovery) with this visibility of the number of streams on the artist's page. I've seen musicians in my direct circle trying to get past the 1000 plays by repeating themselves (then the <1000 indication will disappear), only to make them look more professional. Since the update in May 2021, the amount of plays on a song has become more prominent. It is now added when visiting an album.

Of course, everything described here in this section gives the users the least amount of thinking and deciding what to play and just let them listen to whatever as long as the user is in Spotify's ecosystem. Every decision in the design is about making Spotify as seamless and frictionless as possible, but the users still have agency over their practices of music consumption. I'm merely trying to point out the underlying designs that steers the users in a more subconscious way. The focus in the interface on the seamless experience doesn't come without the cultural kickbacks and has an influence over the cultural devaluation of music, the homogenisation of music, and the alienation between the musicians and the fans.

Other noteworthy features

The first feature that pops up after every right-mouse-click, or in the mobile application after ticking the options-button, on any clickable feature is the *radio.* There is an option to automatically generate a radio for a certain artist, album or song, and even a chosen playlist. This is nothing more than being a *Similar To*-feature. Spotify Radio promises a deep dive into the gigantic back-catalogue of a certain sound or genre.[152] As quite a devotee of finding new post-punk bands, I've experienced, like several other users, that it merely scratches the surface of this genre and only plays the most well-known acts on a loop.[153] Pelle Snickars, Professor of Media and Communication Studies, noticed this as well. After quantifying the Spotify

[152] 'Spotify Premium gets personalized artist radio stations and better search', *The Verge*, https://www.theverge.com/2018/10/18/17992758/spotify-premium-personalized-artist-radio-search-update-2018 (Accessed 31-05-2021).

[153] For the others:
'Spotify Radio is an Echo Chamber!', *Spotify Community*, https://community.spotify.com/t5/Your-Library/Spotify-Radio-is-an-Echo-Chamber/td-p/5026586 (Accessed 31-05-2021).

Radio with 160 bot listeners, which were fed certain songs on a loop, so no interference was done, Snickars noticed three remarkable things.[154] *Spotify Radio* (1) did loop, (2) 'did not really take advantage of the archival infinity of the service', and (3) the radio feature wasn't as personalised and user-controllable as Spotify claimed it was.[155] The latter is supported by the fact that (dis)liking or skipping radio-recommended songs did not create substantial alterations in the radio's list. Playing only the top musicians, when saying otherwise, is having an effect on the long tail of music production.

A feature that is influential and diverse, however, is the *Queue*-section. Besides giving the option to view the history of played songs for the time period in which Spotify has been active, which can be seen as counteractive to the alienation between musician and fan (in other words: it is easier to see the songs that were played, even can be saved as an playlists itself and therefore the connection between musician and fan is more regularly made), the Queue is always in reach with one click of a button and can be modified. Another remarkable innovation of this feature is the *shared queuing,* now only available on mobile applications, where multiple phones could build one single queue. This is an ideal option to revalue music to be the centre of the conversation, by not skipping songs to play the one spoken about. This social listening is also reflected on the right side of the screen exclusively on the desktop application. The *Friend Activity* bar can be ticked off (in the quite hidden *preferences* tab) but is present by default.[156] In this segment of the screen, you can see what your friends are currently listening to, which artist has made the song, and via which digital 'container' (i.e. album, playlist or page) they play it. Not making the name of musicians more visible when they are constantly shown in a special bar, made me think of a completely different cultural theory: Michel's Foucault's notion of the 'Panopticon' or 'state of surveillance.[157] My friends can always, except when an *offline listening* box is ticked in the quite hidden preferences tab, see what I am listening to. In my own experience, I've found this quite restricting, and even in some extreme cases, I've received screenshots of friends jokingly asking me: are you really listening to this? I don't fear that this is the death of the 'guilty pleasure' in music and that the sociocultural impact will be significant; one's guilty pleasure is another one's top song.

The partnership of Spotify with social media platform Facebook, via whom you can find these friends, doesn't either seem to contributed to one of the three described scenarios. On the contrary, the embedment in the so-called Stories on Facebook's Instagram and on

[154] Pelle Snickars, 'More of the Same: On Spotify Radio', in: *Culture Unbound* 9:2 (2017) 184–211, here 192.
[155] Snickars, *More of the Same: On Spotify Radio*, 205.
[156] Best seen in screenshot 1
[157] Michel Foucault, *Discipline and Punish: The Birth of the Prison* (Pantheon Books, London 1977).

Facebook's timeline itself makes it possible to play music while not even entering Spotify's ecosystem. This makes the artists a lot more visible and centralised. However, songs shared on these pages and stories are reduced to a maximum of thirty seconds, and the sound quality is harshly reduced to be embedded in these compressed posts. This seems to diminish music to be bit-crushed background music for a post, even if the song and artists are mentioned or if they are the topic of the message.

Spotify is everywhere on social media. Especially at the end of the year when your personal *Spotify Wrapped *insert year** is released, giving the company a big free global advertisement campaign when they ask their users if they are brave enough to share their listening history. Both consumers and artists get their personal JPEG file with their play counts, much-loved artists and favourite moods that fit perfectly in the standard Facebook and Instagram photo ratio.[158] Now, this is just a clever marketing strategy; it not only creates a certain FOMO (*fear of missing out*) effect for the people that don't share their listening activity but is even a form of social control: If you don't share your stats, what are you hiding? In June of 2021 they recreated this effect with the *#onlyyou Audio Birth Card*. However, this fear of missing out is not what I find most problematic. Even when artists get to shine in the spotlights on everyone's top five of the year and get the attention they deserve, the agreement of everyone that the quantity of streams is the primary measure of value is too straightforward. The Wrapped-campaign implies that the cultural value of music grows as it scales. This notion seems too blunt when it comes to art. Liz Pelly sees this trouble as well: 'Spotify wants us to share these metrics because it low-key encourages us all to think that these metrics are valuable or meaningful'.[159]

This is in line with the earlier mentioned ideas of the play count on an artist's page. However, my band is one true example that millions of (fairly attained) streams does not necessarily have to equal a high cultural value. While our monthly listener-count can be compared to the more prominent names of the Dutch music industry, and behind the scenes some influential persons reached out to us, this picture is highly distorted, and our reputation has got far from the same level of fame when measured in the size of live gigs and the amount of live-audience. The plays we've got came from scattered listeners all over the world, meaning that even when we share our yearly Wrapped image, and people are impressed when seeing these numbers on our socials, we are far from making it in the Dutch music world and

[158] Best seen in screenshot 6
[159] '#Wrapped and Sold', *The Baffler/Liz Pelly*, https://thebaffler.com/downstream/wrapped-and-sold-pelly (Accessed 31-05-2021).

still play live shows for an average of twenty people. However, our stream count equals to other Dutch artists that have a sold-out venue, with a capacity of a thousand people, every show. I'm not mentioning this to promote anything; I'm saying it shows that the relationship between play count and fame (i.e. making a living of music or even having a certain reputation) is often skewed.

The option to 'play on other devices', one of the last tools to mention in Spotify's interface, makes it not only easy for consumers to switch between the devices (web app, desktop and phone), making the listening and interface experience again as continuous and seamless as possible but serves as an alternative for Bluetooth connection with third-party devices as well. The dashboard or navigation screen in modern cars can be turned into a quick visualisation of the song, artists, album and playlists which are playing and on other media devices such as Sony's Playstation and Google's Chromecast, an auditory connection is rapidly made. However, these two devices, both for playing media on television, are counteracting the process of anonymisation. With over 1.5 million users instantly after its launch back in 2015, the first is letting you play Spotify in the background but has a temporarily tiny pop-up showing the details of the song which is currently being played, which is really noticeable but not distracting when playing a game.[160] It grabs your attention, but not enough to distract you from your game. This is such a small mechanism, absent on the earlier mentioned interfaces, but with the number of users listening to Spotify via Playstation, is it something against the anonymisation process. The embedding of Spotify into Chromecast, which is making any television a so-called smart-TV, the industries default selling flat screen, is also quite beneficial for the recognition of musicians. Besides that, the television, often centred in a living room, shows the artists' names, albums and songs on full-screen display beneath the centred album's artwork when Spotify is cast. The playlists names are, quite contrarily to the rest of Spotify's media interfaces, reduced to the small upper left corner. However, this type of music playing has the most remarkable feature: the collaboration with Genius, the world's most extensive collection of song lyrics and musical knowledge.[161] This goes further than making the lyrics visible on the television screen; it scrolls through background information, fun facts on the artist and lyrical explanations while playing the song. This makes the artist in the attention economy a lot more detectable and thus opposes the notion that there is certain alienation between artists and consumers.

[160] 'Spotify Adds 1.5m Users On Playstation In A Day', *Music Business Worldwide*, https://www.musicbusinessworldwide.com/spotify-adds-1-5m-users-on-playstation-in-a-day/ (Accessed 31-05-2021).
[161] 'Homepage Genius', *Genius,* https://genius.com/ (Accessed 31-05-2021).

Playlists

Now, let's address the elephant in the room: The massive playlistification of music. It's where Spotify seemingly wants its users to be with both their visual senses as with their ears when the programme runs in the background. Playlists are the showpiece of Spotify. Their data-driven billboard ads worldwide and the previous section show how much they love the playlists.[162] Other older gatekeepers of music, like radio stations and music magazines, have also turned to the green and black playlists to bundle the music they've praised in their articles or which are on radio airplay rotation. The ones that can be found in Spotify can be divided into three main categories: the user-generated playlists, the curated playlists and the algorithmic playlists. The division is quite unclear when staring at the interface.

The former seems to be free from any cultural or social implications and even might cast listening to music in a new social mould. User-generated playlists are the ones that we make ourselves. Anyone could categorise anything in any way they want. This results in quite some funny or peculiar playlists. There is even a social option in Spotify, reached within a click of a button that makes this type of playlist collaborative. This ends in a new way of sharing and listening to music with loads of agency for the users: co-hosting playlists. However, users on Spotify are not, in particular, merely individuals. User-generated playlists are also made by artists who can show all their musical inspirations in only one playlist, which can be highlighted (otherwise, they are at the bottom) on the artist's page. This gives a quick peek into the artist's life, namely what they're fond of, resulting in a reinforcement of the marriage of fan and musician. In other words, this contradicts the notion of the artist's anonymisation—especially when seen in combination with another tab on the artist page: the 'about' section-. Even though the information is minimal, and the about tab is not within the first few clicks or scroll, fans who are willing to learn more about what they are listening to can do so. Nevertheless, the context of the artists is tough to reach on every device. Since the update, this section has even become less visible. It requires some scrolling to the bottom of the page to get to the about section, and the option to highlight certain playlists or song has been removed.

However, ('normal') consumers and artists aren't the only types of users. There is a third party that can easily create an account on Spotify: companies. The branded playlist seems to be on the edge of the blurred lines of publishing rights. A controversial company

[162] 'Campaign of the Week: How Spotify showed the power of data analytics in their marketing campaign', *Smart Insights*, https://www.smartinsights.com/traffic-building-strategy/campaign-of-the-week-how-spotify-showed-the-power-of-data-analytics-in-their-marketing-campaign/ (Accessed 31-05-2021).

could easily place any type of music in their playlists without checking with the composer for endorsement. Type in any brand you know; they probably have a few user-generated playlists that define and contours their brand. For example, Primark, known for cheap clothes, high profits and global controversy, has got lists as 'Mood Booster' and, quite ironically, 'Songs Good for the Soul', filled with all kinds of top-notch songs. Do you think Pharrell Williams ever saw a single penny (besides the $1/10^{th}$ of a penny per stream) from any publishing contracts for his song 'Happy' from Primark? Even if these exemplar playlists have only 500 followers, they're free digital image-polishing sponges for brands without an artist having any involvement.[163] Musicians should be happy they're getting more plays and recognition via yet another playlist. This is even better seen in the second main category of playlists, the curated one, where these branded playlists are stipulated in big deals when a company has a new, precise *mood-fitting* campaign launch. The best-known example of a truly branded deal is the Spotify integration with Nike's *Run Club*-application, where Spotify gets financial compensation from the sports company, but the artists that are used in Nike's '*insert BPM that corresponds with your tempo* running playlists' on Spotify need to be happy with the extra attention and streams. Critic Liz Pelly has called this the *automation of selling out* or, in other sturdier words: 'Spotify's interpretation of *corporate personhood.'*[164]

The curated playlists usually are all types of playlists hosted by the employees of Spotify, or better: the modern gatekeepers of the global music industry. Every country where Spotify is active has got their own headquarters with influential music industry folks behind the controls. This is reflected in Spotify's interface: every country has got its own arrangement of the *browse*-section. In some, 'Rap Caviar' is more placed in eyesight; in other parts of the world, the 'Coffee Tunes' playlists are more applicable to the country's average audience. The thing that directly catches the eye is the centralisation of the mood playlists. Even when avoiding the mood section and turning directly to the traditional genres, it is again filled with moods associated with that specific genre when entering this new page. It is clear that Spotify while giving the illusion of choice, centralises not only the playlists but is also very fond of its taxonomy of musical moods.

Now, of course, music is mood, and music is emotion. Music affects your mood and mood results in what you're listening to.[165] So why shouldn't we categorise it by the way

[163] Prey, *Locating Power in Platformization*, 6.
[164] 'The Problem with Muzak', *The Baffler/Liz Pelly*, https://thebaffler.com/salvos/the-problem-with-muzak-pelly. (Accessed 31-05-2021).
[165] Ian Anderson, 'Just the Way You Are: Linking Music Listening on Spotify and Personality', in: *Social Psychological and Personality Science* 12:4 (2020) 1-12, here 3.

most people experience music? This focus on moods provides the increasing chances of both the devaluation as the homogenisation of music. When categorising music in these moods, like 'focus', 'chill' and 'workout', directly in the eyesight on the *browse*-page and therefore likely to be more clicked on, Spotify is forcing music to be in the background, the role that Muzak played for decades in, for example, elevators and supermarkets. Pop music on Spotify is now for the majority of users, especially for the commonly found *lean-back* ones, merely emotional wallpaper instead of being an art form. It has got to the point where music can cautiously be compared to be the equivalent of simply painted walls relative to the art painting industry. Both are a vibe in the room instead of an art piece itself. These playlists are paradoxically the best chance for musicians to make a proper living of their (recorded) song(s). Additionally, Spotify's turn to a more mood-based taxonomy of music could also lead to a more homogenised production (and thus consumption) of music. It seems that 'the more vanilla the release, the better it works on Spotify', as experienced by an anonymous label owner who pitched loads of music to Spotify curated playlists.[166] This mood oriented playlists business model seems to be leading towards all three of the undesired scenarios.

The last type of curated playlist that seems to draw the focus in the interface of Spotify is found after entering a name in the *search bar,* which is since the curational turn diminished to a small white bar at the top of the screen on the desktop app. After the 2021 interface update, the searchbar became even harder to find. The search bar is only accessible when clicked and is hidden most of the time spending on the application. When searching for a successful artist or a rising star, Spotify creates a 'This Is' playlist. It is unclear to me if this is curated or algorithmically generated. Due to the hard task of finding out in which formation the artists have made music over the years and learning an algorithm to search Google for this information to make these playlists as all-encompassing as possible, seems a bit excessive, I assume it is curated. Those types of playlists might seem to canonise and preserve our greatest artists' discography, but the placement is again uncomfortable. When searching for a certain artist, the artist page is placed in a slightly smaller circled icon. The 'This Is' playlists of the corresponding musician is next to it in a somewhat larger squared picture under the unifying design and logo of Spotify. Since the update, this has changed and artists-pages pops up as 'top result', instead of the 'This Is'-playlist. However, that doesn't change the nature of these artists-generated lists. It seems to be a shortcut to the greatest hits of the musician. Still, it is in reality merely again a prime example of how much Spotify seems to promote the

[166] 'The Problem with Muzak', *The Baffler/Liz Pelly,* https://thebaffler.com/salvos/the-problem-with-muzak-pelly. (Accessed 31-05-2021).

playlistification of music. 'This is'-playlists seem to have an effect on homogenising the music of an artist. For example, Spotify's curator decides which Paul McCartney songs (and the Beatles and Wings songs) are the best, lean-back listeners who like to listen to him put on this playlist and think that these songs represent McCartney the best. This leads to an *echo chamber* of music, but now only solely filled with the tunes of only one artist. The 'This is'-playlists make sure that, besides newly released singles, entire discographies can now be curated by the company, without Spotify signing any licensing deal.

But then, the last type of playlists deserves a special place on the navigation bar on both the mobile application in the desktop version. When clicked on the heading 'Made For You', a world of new algorithmic music discovery opens up. Besides the 'Genre mixes', 'Artist mixes', 'Decade mixes', 'Daily mixes' (Spotify fancies the old-school mixtape, I guess), the most prominently placed are Spotify's showpieces: Discover Weekly and Release Radar. The former is the *Magnus Opus* of the software development team of Spotify. The other, Release Radar, is updated every Friday with the newest releases of that week combined with tunes 'picked just for you'.[167] The fact that this playlist is refreshed once a week affected the music industry heavily. In the modern digital streaming era, new releases are aimed to be put on a curated playlist. The goal is eventually to be on as many algorithmic playlists as possible. Here, the audience is in comparison to the curated playlists much more directly targeted. The first days of the launch of a song are highly important – and therefore Release Radar is essential - This means that everyone found out that Thursday or Friday is the best day to release your new tune because it will appear directly on the Radar and is, therefore, ready to be picked up by the algorithm compared to songs that already aged a couple of days. This result in a flood of new songs every week that is entirely coherent with the *attention economy*.[168] Every artist needs you to hear their song, but they all require you to listen to their song at the same time. If your song won't get picked up on Release Radar, then it is highly likely that it also won't fit in the curational playlists. This stimulates songs to be clickbait or *Streambait*.[169]

Then, in the algorithmic playlists Discover Weekly, Spotify truly reveals what they know about you. Since its release in 2015 we have come to expect that new discoveries of music should be provided to us on a silver platter. Let's first explain how Spotify builds your so-called *Taste Profile* for their algorithm to give you the best recommendations possible. In

[167] The message underneath the title of Release Radar says this.
[168] Kassabian, *Ubiquitous Listening*, 9-10.
[169] Streambait Pop', *The Baffler/Liz Pelly*, https://thebaffler.com/downstream/streambait-pop-pelly (Accessed 31-05-2021).

their method of quantifying a subjective thing as taste, Spotify has three pillars. The first, *Collaborative Filtering,* finds out what people with tastes similar to yours like.[170] This isn't based on a system of ratings but on implied feedback we give them. Think of when you skip or turn up (or down) the volume for a song or when you put it on repeat. Everything is saved in data structures. The second is *Natural Language Processing* (NLP), which scans the internet to see what it has to say on an artist or track.[171] The latter is *Raw Audio Processing* (RAP) and picks up where NLP seems to fail. When a new artist releases music, the RAP compares its sonic features to hit songs. If a song is similar, there is a high chance it will be heard once alongside this top song. If liked, or better, all the features that Collaborative Filtering offers (skip rate, volume etc.) check the boxes positively, the ball automatically starts rolling for the NLP when people start talking about it.[172] Spotify seems to have, with this innovative system, hit the jackpot in music discovery. However, even when I'm genuinely fond of Discover Weekly, there are still some flaws that need to be addressed.

While having our music spoon fed to us, we aren't challenged by the unique combinations of frequencies, the colour of sounds and unexpected time signatures anymore. To stay in the analogy of the art painting industry: if we are constantly staring at a yellow wall because Spotify knows we like yellow-ish walls, why should Spotify ever feed us the opposite complementary colour purple? If we hate that colour, we might leave their platform for a while. That goes against the unwritten rules of *the attention economy*. We might be fed a little green or some orange to see how we react, but this spoon-fed method is barely challenging music listeners. Yes, music discovery is easier and way more accessible, but it seems to be a double-edged sword, only delivering music that we already listen to and that we've always somewhat liked. The role RAP plays in this notion is not overlooked. When the sonic features that are compared to hit songs have passed this 'exam', the newly released song has a hit that it could pull itself upon. This idea does not only reinforce the algorithmic echo chamber, it is also paving the way for more copycats in music, making it lucrative to copy a refreshing artist's sound.

On another level, Spotify's *Taste Profile* seems to have certain performative capacities. We seem to think that we are what we are measured. This is best shown in the way I talk about Discover Weekly with my musical friends when it has not met our expectations of

[170] Eriksson, *Spotify Teardown*, 143.
[171] Ibidem, 151.

[172] 'Spotify Has a Secret ''Taste Profile'' on Everyone, and They Showed Me Mine', *Business Insider/Alex Heath,* http://www.businessinsider.com/how-spotify-taste-profiles-work-2015-9; (Accessed 31-05-2021).

that week. We're not disappointed by the algorithm; we're disappointed by our own listening behaviour that led to this prediction.[173] On the plus side, I am also very proud of my music consuming behaviour if my algorithmically playlists are giving me goosebumps. This is described in more detail by John Cheney-Lippold. The professor in Digital Media argues that, in the age of streaming, algorithmic identity is based on *measurable types*, or simpler said: we are perceived in terms of data patterns, which, on its own turn, creates new norms and taste all by itself, by which we, the users behind those patterns can be categorised.[174] But, as Cheney-Lippold described, this data does not automatically resemble our non-datafied real-world self. With this information, Spotify tries to predict and shape our user experience of the application as best as possible. However, it is not based on us; it is based on a data structure that's built around us.

In my own experience I've found something witty in the wake of Lippold's notion of algorithmic identity in combination with Spotify's personalised playlists. Since a year Spotify is testing out to make their curated playlists personalised as well.[175] A song, that is a year old, was added to 'Indie Festival', a curated playlist with over 25.000 followers, probably because of its danceable character and because we were releasing a new song a week later – I can't be sure, because we simply get an e-mail with the title 'Good news! You've been added to a Spotify editorial playlist' and the corresponding playlist. This playlist for the 'festival feeling with indie and alternative' is a personalised one, as we could see in our back-end application (more on that later on). This means that more songs can fill the playlists, but will be hidden for some of the audience. Theoretically the songs are better targeted to an audience that would actually enjoy the song. Spotify says that with this method more artists (growth of 30%) and more songs (growth of 35%) can fit in one playlist.[176] Now, something conspicuous has happened that matches with the theory of algorithmic identity and *measurable types* of Lippold. For none of my bandmates – we are a four-piece – was our song enlisted in the

[173] A quick search in the Spotify Community shows that me and my friends aren't the only ones that talk about Discover Weekly this way: Spotify Community, *Spotify*, .https://community.spotify.com/t5/forums/searchpage/tab/message?advanced=false&allow_punctuation=false&q=discover%20weekly (Accessed 01-06-2021).
Besides that, this article shows how we think about algorithmic recommendation:
'Spotify Knows Me Better Than I Know Myself', *FiveThirtyEight/Walt Hickey*, "https://fivethirtyeight.com/features/spotify-knows-me-better-than-i-know-myself/ (Accessed 01-06-2021).
[174] John Cheney-Lippold, *We Are Data: Algorithms and the Making of Our Digital Selves* (NYU Press, New York 2017) 179.
[175] 'Spotify is personalizing more playlists to individual users', *The Verge/ Jacob Kastrenakes*, https://www.theverge.com/2019/3/26/18282549/spotify-personalized-playlists-curation-more-songs (Accessed 01-06-2021).
[176] 'Our Playlist Ecosystem Is Evolving: Here's What It Means for Artists & Their Teams', *Spotify For Artists*, https://artists.spotify.com/blog/our-playlist-ecosystem-is-evolving (Accessed 01-06-2021).

‘Indie Festival’ playlist. This means that either Spotify feels that we don’t like the music that we make, or, a better explanation, the data does not match completely with us and our *Taste Profile* is based on a data structure that encircles us, but doesn’t equals us.

Instead, the data produces frequently refreshed taxonomies that are usually difficult to get to, or if accessed challenging to comprehend, by non-specialists. Since writing this thesis, I’ve tried to download my data multiple times on Spotify's official data-request page.[177] After their indicated thirty days maximum waiting time was far exceeded, I’ve received the files, only to find out that my computer is not compatible to read the files. In theory, everyone could see everything, but the high bar to read and understand it makes viewing your data in reality inaccessible. The lack of transparency in the Big Tech companies on their patented technology hasn’t been unnoticed. Human Rights organisation AlgoTransparency released a manifesto with a cry for openness about the data that companies like Spotify collect. They say that (1) algorithms are gatekeepers of our information. (2) Yet, they don't have our best interest in mind because they exploit human biases for financial benefits. Therefore, (3) transparency is necessary to make algorithms trustworthy for the future of the internet and the experience of media content.[178] Spotify is one of the companies they’ve addressed. It is yet to be proven by Spotify in the future that their incentives also lay with the musicians, fans and music, and not only with profit-seeking investors. The financial managerial world is far from that simple, and Spotify seems to extend their seamless experience ever more in futuristic plans that are slowly uncovered.

New features and patents

Now I’ve described everything in a manner in which it seems that Spotify thinks of its interface as complete and static. But the thirteen years old application is far from finished and in an ever-changing state. Take the May 2021 update, for example. However, this does not mean that in addition to that, Spotify is going to address the scenarios described here. On the contrary, futuristic plans have shown otherwise.

The first idea that caused uproar in the music industry and with consumers was a combination of two, filed in 2018, patents discovered by the magazine *Music Business Worldwide*, the self-claimed ‘leading information service for the global music industry’.[179]

[177] ‘Privacy’, *Spotify*, https://www.spotify.com/us/account/privacy/ (Accessed 01-06-2021).
[178] ‘Our manifesto’, *Algo Transparency*, https://www.algotransparency.org/our-manifesto.html (Accessed 01-06-2021).
[179] ‘What we do’, *Music Business Worldwide*, https://www.musicbusinessworldwide.com/what-we-do/ (Accessed 01-06-2021).

The first one is about the way audio ads are played back to the consumer. Their mood could be changed or enhanced by a soothing voice reading the commercial or a pumped-up voice shouting the ad.[180] In this new method, Spotify has a particular influence over how we feel and, therefore, what we listen to. Pelly's article on Spotify's *mood machine* is highly applicable to this new patent: 'we should admit that it's good for business for Spotify to manipulate people's emotions on the platform toward feelings of chillness, contentment, and happiness.'[181] As culture and society are more and more influenced by companies like Spotify, what does this mean for the world as they gain the power to control moods? I know it seems quite far-fetched to claim this, but the patent stands. Especially when the second patent on this subject was revealed, Spotify's plan to over-personalise their interface sounds like something out of Orwell's bibliography. The patent for 'speech recognition' will be used to get to know their users even better. This monitoring of background noise and dialogues, again reminding me of Foucault's *state of surveillance,* but this time on corporate level instead of friendship, is used to define users 'emotional state, gender, age, or accent'[182] With this, they claim that the collected attributes are used to recommend content, but it can of course also be used to further perfect their 'emotional user profiles', or in more unyielding words: better data structures for higher sales. This results in the possibility for Spotify to not create a static profile of you but a data structure that moves along with your emotional state. Could this result in music being devalued as art to build this mobile profile? Music seems to become a means to another end rather than an end in itself.[183]

Another patent, where songs do seem to become the centre of attention, is appearing more lightweight. In 2015 Spotify filed a patent for a karaoke system where one device linked to Spotify could serve as a microphone (i.e. phone) and another as playback of the singed notes (desktop).[184] This shows how much Spotify wants to be a company that transcends being the musical database. However, the karaoke system would be accompanied by another part: Auto-tune and other effects. The vocals would be automatically sharpened and fitted into the song. This shows signs of the devaluing of music as art. The songs are ripped from their

[180] Spotify AB, *Patent no. US10,798,214B2*, (2020) https://www.musicbusinessworldwide.com/files/2020/10/Spot-personality-patent.pdf (Accessed 01-06-2021).
[181] 'Big Mood Machine', *The Baffler/Liz Pelly*, https://thebaffler.com/downstream/big-mood-machine-pelly (Accessed 01-06-2021).
[182] Spotify AB, *Patent no. US10,891,948B2*, (2021) https://www.musicbusinessworldwide.com/files/2021/01/SPOT-Patent.pdf (Accessed 01-06-2021).
[183] Keith Negus, 'From Creator to Data the Post-Record Music Industry and the Digital Conglomerates', *Media, Culture & Society* 41:3 (2019) 367-384, here 376.
[184] 'New Spotify Patent Sheds More Light On Potential Karaoke Mode – Including Auto-Tuned Vocals', *Music Business Worldwide*, https://www.musicbusinessworldwide.com/new-spotify-patent-sheds-more-light-on-potential-karaoke-mode-including-auto-tuned-vocals/ (Accessed 01-06-2021).

voice and replaced by the consumer's voice like a game. It could also potentially increase the alienation between consumer and musician. If the former finds it easy to sing along, with the deceptive help of the Auto-Tune and effect algorithms, they realise less and less how hard it is actually to sing and mix the song.

So, the artists could already be replaced by the consumer themselves in the near future on Spotify's interface, but what about the fear of AI and the replacement of the working process. *Music Business Worldwide* found another patent granted to the Swedish company that shows actual signs of the replacement. At first sight, the patent is for a plagiarism interface for artists, where they could check, with the help of an algorithm analysing a song's melody, chord structure and lyrics, if their newly released song is a magnet for copyright lawsuits.[185] When looking more critically, it seems to be a technological kick-off to generate AI-music and possibly enter the harsh playing field of millions of musicians without having to pay for content. Suppose the plagiarism detection is trained not on existing content, but on its own generated content. In that case, the loop is broken, and new combinations of sounds, harmonic and rhythmic structures can be discovered.[186] Spotify can make samples or compositions, which can be sold to labels or independent artists. In the future, in combination with the vast amount of data Spotify already collected over the years on its users, their taste and their moods, the company can have the power to create music and sounds that you personally would mark as a hit. This could make the consumption of music more personalised and more segregated than ever and, not unimportantly, could make real-life musicians or composers redundant. But, is there still a possibility that Spotify's incentives lay with giving 'a million creative artists the opportunity to live off their art' and not with the moneylenders, investors and the company's stock market value, like they market themselves to be?[187]

Another patent on Spotify's interface and massive data back-end answers this optimistic question straightaway. The even-levelled playing field, the conditions where diversity in music production, or the *long tail,* could thrive, is threatened by a new patent, which seems to already be in its *beta-phase* (testing it with a group of users). The new tool *Discovery Mode* is made for artists 'to better reach new audiences on Spotify' via new

[185] 'Spotify could soon replace real artists with AI music', *Input/ J. Fergus* https://www.inputmag.com/tech/spotify-could-soon-replace-real-artists-with-ai-music (Accessed 01-06-2021).
[186] Spotify AB, *Patent no. EP 3 620 991 A1,* https://patentimages.storage.googleapis.com/37/5b/98/d10f04c6d69748/EP3620991A1.pdf (Accessed 01-06-2021).
[187] 'Company Info', *Spotify,* https://newsroom.spotify.com/company-info/ (Accessed 01-06-2021).

algorithmic discoveries.[188] The streaming giant claims that it is 'great for the democratisation of music for independent artist', but I state the opposite.[189] When opting for *Discovery Mode*, artists agree to be paid less per stream in exchange for being in more algorithmic and curational recommendations as *Spotify Radio*. The timing of releasing this plan couldn't be worse. A few days before the announcement, the UMAW demonstrated against the already low payments.[190] Once in the early years of Spotify, the pay for play system was already in illegal use via bots and streaming farms, but Spotify tackled this issue.[191] Now it wants to create an authorised system like this itself. This, of course, reminds me of the banned *payola* system with hush money for DJs paid by so-called plugger in the golden age of radio.[192] It has only rolled out in early testing-phases for Radio and AutoPlay, but it could be expanded to playlists as Discover Weekly and Release Radar if working correctly.

On another note, Spotify mentions that with this system, they will include artist in choosing which song of their discography is recommended and highlighted in playlists, giving the artist more power and control over their discography. But is it necessary to attach a *pay-for-play* model to this feature? This could easily lead to anyone who has the funds to downgrade their income for a while could do so. Thus it would give more power to the high-capital label records, which are not disapproving if their invested money is directly redeemed for fame (i.e. pushed in the recommendations) or indirectly in the current system (hoping that the marketing strategy around an artist is a success), and reduce the way independent artists could keep their head above the musical water. Even if the new discovery system isn't available for direct targeting at certain musical taste, the option for an artist that could be placed in more recommendation lists more than others who might not have the financial back-up to let slip of some income of the already low payment-rate, is truly unleveling the playing field of musical promotion in the marketed democratic world. The more Spotify overlooks the consumption, production and promotion of music, the more their capacity grows to charge producers for the opportunity of being played.[193] If Discovery Mode passes the testing phase,

[188] 'Discovery Mode', *Spotify for Artists*, https://artists.spotify.com/blog/discovery-mode-odie (Accessed 01-06-2021).
[189] 'Discovery Mode', *Spotify for Artists*, https://artists.spotify.com/blog/discovery-mode-odie (Accessed 01-06-2021).
[190] 'Homepage: Justice at Spotify', *Justice At Spotify*, https://www.unionofmusicians.org/justice-at-spotify (Accessed 31-05-2021).
[191] 'How Streaming Bots Are Ruining Careers of Independent Musicians', *VENTURE*, https://www.venturemusic.com/blog/streaming-bots-will-ruin-your-career (Accessed 31-05-2021).
[192] Robert Prey et al, 'Platform pop disentangling Spotifys intermediary role in the music industry', in: *Information, Communication & Society* 23:8 (2020) 1-19, here 2.
[193] 'No, sharing your Spotify year-end artist stats is not a good idea – here's why not', *CDM*, https://cdm.link/2019/12/no-sharing-your-spotify-for-artists-wrapped/ (Accessed 31-05-2021).

it could directly result in an unleveled playing field of independent artists and label-backed musicians. Spotify claims they are doing this for the artist, but it seems that the rich labels, who also own shares in Spotify, will benefit the most from this development.

Spotify For Artists

Launched in 2013 but enhanced with data analysis tools in 2017, *Spotify for Artist* (SFA), available in your browser and on your phone, is the main back-end app for musicians. On the home screen of this app, linked with your personal Spotify account and available for anyone who's invited on the team of a certain artist (managers and labels as well), musicians get overloaded with tips and tricks and a live play count in the top corner.[194] The former is what catches the eye. It's not tips and tricks in general for a musician, but tips and tricks in how to be the best Spotify user-musician in their ecosystem, like 'metadata, why it matters' ,'set your next release up for success' and 'how playlists work'. This is leading towards musicians and labels trying to be their best Spotify-self via all these tricks. Spotify is trying to be the main online hub of musicians and their surrounded teams. This brings loads of opportunities. The connection with *Soundbetter*, where anyone who's got access to SFA, is able to meet (professional) sound engineers, designers, marketing strategists, session musicians and songwriters, and view their price and portfolio, makes the music industry less who-knows-who and the professionals more reachable for anyone - if the right price is paid obviously.

However, in all of these headings, the most noteworthy is 'pitch a song to our editors', where any song could be pitched to the curators of your country. They mention that 'the more metadata they receive about the song, the better chance it has'. However, for smaller musicians, this feature feels much like a lottery.[195] Before, when my band was truly DIY, and we pitched the songs ourselves via this method, the hopes of getting on and mostly staying on, a curated playlist was close to zero. With the help of an influential manager, I don't worry about if we get on a playlist, but on how many and for how long. I want to show how much this system is still not that democratised as Spotify claims their discovery playlists are. It doesn't seem to be about the quality of your song; it still seems about the fame of your name. Of course, when an unknown artist produces a good song they've got chances, but I don't think their chances are better than in the age where mailing to record labels would do the job. Spotify, and all media partners, claim that this online pitching system has radically

[194] Best seen in screenshot 7
[195] Hyojung Sun, *Digital Revolution Tamed: The Case of the Recording Industry* (Springer, London 2019) 161.

democratised music release, but I see no significant differences besides it being online instead of a physical mailbox, and the receiver has changed.[196]

On the contrary, I guess music releases have become instant and volatile since the rating by a curator. Once you've completed your pitch, the only thing you can do is to hope that it reaches one of these playlists; if not, the chances are high that it will fade in oblivion. In contrast to the methods in the past of music promotion (without label help), this lottery feels like a one-shot, and after that, it seems pointless to try anything else with the song. In the pre-digitalised age, one could push their best single over and over again at radio stations, magazines, and labels to be picked up, now the instantaneous pitch diminishes (or praises) the tremendous effort that's put in writing, mixing and mastering a song (in most cases between one and two years). Of course, multiple roads lead to Rome. Still, with the ever-growing influence and importance of Spotify's curated playlists, some streets seem to become extinct in the near future, and the newly laid out interstate appears to get you there the quickest. The smaller artist, who does not seem to be compatible with riding on this highway, is soon discouraged from trying to find the way via other smaller, harder roads.

A step previous to the above is getting your release on the SFA page. It isn't based on a simple 'click and upload'-plan but gets distributed by aggregators like CD Baby and Distrokid. They are 'a conduit to help you distribute your music globally through digital stores and streaming platforms. They make their money by charging upfront fees and charging a percentage of revenue earned from the streaming and downloading of your music.'[197] This means that uploading your songs fully 'label-less isn't an option. Aggregators are yet another intermediary that hinders the process of democratising music, but on the other side bundles all streaming services into one upload, thus not democratising music releases but centralizing it. However, the record labels 'entertain a direct business relationship with the service'.[198] This makes the playing field uneven yet again. Spotify experimented with direct uploads to their platform to level things out and making uploading to their platform ever easier so more artists would join their ecosystem, but due to the complexity of upload rights on monetisation and not to hamper its partners, both financial motives, the idea beached in beta testing.

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[196] 'How Do You Get a Hit Song? Spotify Says to Pitch It', *Rolling Stone/Amy Wang,* https://www.rollingstone.com/pro/features/spotify-artists-playlist-submission-958384/ (Accessed 31-05-2021).
[197] 'How to get your music on Spotify, Apple Music, YouTube Music and beyond', *Apra Amcos* https://www.apraamcos.com.au/about-us/news-and-events/how-to-get-your-music-on-spotify-apple-music-youtube-music-and-beyond#:~:text=is%20an%20aggregator%3F-,Aggregators%20are%20a%20conduit%20to%20help%20you%20distribute%20your%20music,and%20downloading%20of%20your%20music. (Accessed 31-05-2021).
[198] Erikson, *Spotify Teardown*, 111.

I could claim that the modern digital distribution chain is the remnant of the old, pre-digitalised way of distributing music. But the internet promised us democracy over this process, right? Aggregation means, in simple words, that the distribution chain gets extended or more or less to be the same for independent musicians and shorter for record labels via their direct line. On top of that, the aggregators are also taking part in the share-out of the $1/10^{th}$ penny of a stream. Maria Erikson found out that an artist who chooses a pricey aggregator, because it promises the best results, often releases music at a loss, 'since revenue per played track is almost insignificant'.[199] She adds that 'after all, Spotify monetises usage, not units.'[200] It seems that the procedures of uploading, aggregating and pitching, isn't as democratised as claimed since the rise of the internet and the attendance of the 'saviour of the music industry'.[201]

Another part of the 'Spotify For Artist' application seems to be more neutral: the data analytic tools and pages. The back-end application is mostly built around the insights in various data, divided into 'Music', where you can see statistics for individual songs and albums and the playlists they're in, and 'Audience', where a more general profile of your listeners is graphed in 'source of streams', gender, age and locations. However, these numbers seem a bit trivial for the vast majority of artists. The ones backed by labels, with hired educated data analysts, might shape a certain marketing plan around the figures, but for others, it is numbers without meaning. On top of that, the data is very limited. While Spotify grasps all kinds of data on consumers, artists are denied access to this sea of statistics. A possible addition could be timestamps on the released songs, which shows where consumers most likely will skip the song, or turn up the volume. Spotify collects everything to be used by the algorithms, as revealed by Paul Lamere of 'The Echo Nest'.[202] The question is whether we want that at all because it makes the power Spotify has over songwriting and composing even stronger. Nonetheless, it shows that Spotify gives just a tip of the iceberg to artists to make them feel welcomed in their data collecting ecosystem. Still, musicians are kept away from a genuine involvement of all the data Spotify has gathered. This is again the sign that Spotify is not built for music and the artists, but for itself and its investors.

Other features on the SFA application seem to be more focused on addressing the problems created by Spotify's mission to *playlistificate* music, instead of being true helping

[199] Erikson, *Spotify Teardown*, 114
[200] Erikson, *Spotify Teardown*, 115
[201] 'No, sharing your Spotify year-end artist stats is not a good idea – here's why not', *CDM*, https://cdm.link/2019/12/no-sharing-your-spotify-for-artists-wrapped/ (Accessed 31-05-2021).
[202] Prey, *Musica Analytica*, 12.

hands for the musicians. The possibility to add an 'Artist Fundraising Pick' to an artist page since the Covid-19 crisis made it possible for consumers to support their favourite artists directly. It is now removed due to the new interface but got loads of criticism from artists. Singer-songwriter Jack Garratt described it as 'a platform owning up to the fact that there's an issue, and the Band-Aid they are putting around that issue is to make it the consumer's problem to fix it'.[203] James McGovern, the lead singer of the postpunk band The Murder Capital, was less subtle: "It's a load of fucking horseshit… a PR cover-up for a situation where we're not being paid clearly for having our music on their platform.'[204] This is one sign of Spotify acknowledging the issues surrounding the payments. Still, another feature, 'Spotify Marquee', the light, already launched version of the earlier mentioned 'Discovery Mode', shows that Spotify is beyond recognising the alienation between fan and musician.

This feature is a paid campaign tool to 'turn listeners into fans'.[205] It is a 'full-screen, sponsored recommendation of your new release to Spotify Free and Premium listeners who have shown interest in your music and have the potential to listen more'. They add: 'When a listener clicks on a 'Marquee', they are guided to your new release—and your release alone. This means they can focus solely on your music and discover more of you.'[206] Spotify acknowledges the problem that holding and obtaining more true fans is more complicated than ever – and more critical than ever - in their digital ecosystem. Still, the solution they supply is again pay-for-play, making the playing field uneven. This notion is especially true when you know that there is an entry fee floor of $5,000.[207] This 'expanded targeting capability to turn casual and lapsed listeners into dedicated fans' works discriminatively against smaller labels and artists.[208]

Thus, Spotify seems to see all these problems but appears to be lagging on fixing it or does not (want to) see what is causing it. After analysing the interface and compatible back-end, I could conclude succinctly that it shows signs of affecting the future of the music industry, as described by these three scenarios. However, a certain nuance to these firm accusations made in this chapter of analysis certainly needs to be pointed out.

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[203] Spotify's artist donations feature attracts more criticism, *Music Ally*, https://musically.com/2020/05/26/spotifys-artist-donations-feature-attracts-more-criticism/ (Accessed 31-05-2021).
[204] Ibidem
[205] 'Marquee', *Spotify For Artist*, https://artists.spotify.com/marquee (Accessed 31-05-2021).
[206] Ibidem
[207] 'A New Tool From Spotify Walks the Line Between Advertising and Pay-For-Play', *Rolling Stone/Elias Leight* https://www.rollingstone.com/pro/features/spotify-marquee-ad-cost-5000-915990/ (Accessed 31-05-2021).
[208] 'Marquee', *Spotify For Artist*, https://artists.spotify.com/marquee (Accessed 31-05-2021).

Conclusion

Analysis of the results

Spotify is a worldwide conglomerate and needs to adhere to the rules of the modern economy and capitalism. At the same time, it's becoming a leader and innovator in streaming music and via three interweaved ways they are able to grasp more power over the music industry: curationally, via playlistification and throughout the reclassification of moods. Since a company's primary goal is to make a profit, pull in new investors, and keep these stockholders happy, these three things might overshadow the initial and marketed purpose of music streaming: an answer to the free digitalised piracy market of the first decade of this century.[209] However, the way Spotify tries to rejuvenate the music industry to a more stable and substantial economy for a more significant number of people seems innovative. Still, there are also some significant holes in this approach.

In the interface analysis I've found that Spotify tries to become the modern gatekeeper of the music industry. This is seen in the way the company is promoting its curated playlists, its mood playlists, and its playlists in general subtle above the artists-pages. This is changing the musical landscape heavily. In an ideal world for Spotify's financial gains, they would become the only curator of music; therefore musicians and consumers cannot ignore the platform, and music becomes one with their ecosystem.[210] The interface, mainly 'Spotify for Artists' and the patents for futuristic interfaces, points towards Spotify trying to become the only curator of music and the controller of this online musical ecosystem. On top of this playlistification and *moodification*, Spotify tries to make music consumption as seamless and frictionless as possible. This could, in a sense, again be seen as a way Spotify tries to regulate not only the consumption via their playlists but also in the way the interface is experienced. If the practice of playing music can be done indifferently, the influence on this inattentive consumption is even more significant. In short, Spotify is controlling their ecosystem more than the producers and consumers of music realise, and the patents don't point towards Spotify moving in another direction.[211] What does this mean for the three scenarios of the future of music?

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[209] 'The Democratization of the Music Industry', *Medium/ Sheldon Rocha Leal,* https://medium.com/@shelrochaleal/the-democratization-of-the-music-industry-9e3e38b1bb1d (Accessed 31-05-2021).
[210] '09: Building the future of audio 20:04-27:13', *Spotify Podcast,* https://open.spotify.com/episode/4TSF3dCz5BUJmJoDn3d71V?si=YTukutIbSGq61RR1pM6Y7w (Accessed 31-05-2021).
[211] Ibidem.

The first, the cultural devaluation of music, seems to be effectuated by the ever-growing frictionless experience. The drive towards every musical piece being a mood, like a vibe in the room, seems to devalue music to the background of our existence.[212] On top of that, numbers support that we've been listening to music more and more as contextual white noise, as lean-back listeners, than that we appreciate music on its own.[213] One could say that Spotify is merely following our dissociated listening needs, but I argue that this also works the other way around. Spotify's interface is actively steering us towards this unresponsive music consumption. On top of that, the widespread availability of music in combination with this seamless experience makes sure that consumers devalue music on itself. If a feeling of effort is missing, depreciation seems to follow. The de-contextualisation of music is decreasing music's social value, symbolic value (i.e. music has become the 'painted wall') and aesthetic value (due to the background-position, details in the music and lyrics in the art are missed/unappreciated), made possible by the described features on the interface of Spotify. But yet another deeper motive for Spotify could be connected to this drive to de-contextualise music. Their own context, the playlist musical container is more important.[214]

Of course, there will always be musical geeks that are examples of the opposite, but in general, Spotify is herding our music consumption patterns in that direction. It is questionable whether if we can talk about devaluation or if we should talk about change. Isn't this the 21th century digital equivalent of Mark Katz's *phonographic effect?* This notion describes the subtle ways new technology influences the production of music, such as the invention of the phonograph, which made sure the vibrato in a human voice could be picked up and therefore singers would sing differently.[215] This decontextualisation and seamless experience could be result of very fast changes in music consumption and production. The industry isn't able to fully adapt that quickly.

The homogenisation of music is in comparison to the devaluation of music much more ambiguous. Some prime examples in Spotify's interface are leading to loss of the long tail of the music industry but are primarily based on economics and the unlevelled playing field.

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[212] It is thus no surprise that the genre that has the highest 'Average Increase In Streams After Being Playlisted' is the background Ambient genre.

'User Playlists lead to a lot more than streams', *Spotify*, https://fanstudy.byspotify.com/insight/user-playlists-lead-to-a-lot-more-than-streams (Accessed 31-05-2021).

[213] Marshall, *Do People Value Recorded music?*, 152.

[214] 'How to Be a Responsible Music Fan in the Age of Streaming', *Pitchfork/Damon Krukowski* https://pitchfork.com/features/oped/how-to-be-a-responsible-music-fan-in-the-age-of-streaming/ (Accessed 01-06-2021).

[215] Mark Katz, *Capturing sound: How technology has changed music* (University of California Press, Chicago 2004) 56.

This notion, however, couldn't be neglected. Many things like *Marquee*, the aggregation of music of independent musicians versus the direct pitching line of labels to Spotify, and *Discovery Mode*, are leading to an unlevelled playing field. This could turn into the disappearance of the long tail because, in monetary terms, the smaller musician couldn't keep their head above the water. But, financial inequality doesn't automatically lead to cultural homogenisation. The drive towards a new taxonomy of music, where everything needs to fit in a mood, is leaving some, experimental, music styles behind. This does seem to lead to cultural homogenisation. It is not that because they don't fit in a nice 'coffee mood' they are unreachable, but the profile-raising qualities of these curated mood playlists are often underestimated. This slowly resolves in music that fits a mood to being played more and songs that don't fit get fewer streams. Furthermore, the democratisation of music, an essential aspect of music becoming less homogenised - as Spotify has claimed and has been praised by media to be - isn't as much achieved as I thought beforehand.[216] The record labels are more than alive and the release and discovery of music isn't free from racial and gender prejudices (via the algorithmic playlists) and the meddling of power relations.[217] However, for a true sense of music's long tail disappearance or growth, this notion needs more quantifiable results on the homogenisation of both sonic features and sociocultural traits.

The last scenario, the alienation between fans and musicians, is the most clear-cut. Yes, this seems to be happening, and Spotify's interface appears to be the culprit. Music as art and the industry around it has always been good in following the rules of the capitalistic world. The art isn't entirely free from subsidised production. Still, it is compared to other crafts quite good at adapting to systematic economic changes with the help of the high-tech companies, like Apple's ITunes and, in the most recent case Spotify. However, in the latest fashion of the fleeing streaming world, the anonymisation of the musician might be the death blow for music production. The full seamless experience that Spotify desperately is trying to achieve is unfavourable, and even offensive, to musicians. While there is an increasing need for producers to stay close to their fans and have as many *lean-in-listeners* as possible, only to get a steady income from live performances, the interface is causing the opposite. It is making its playlists more visible in comparison to artist's pages, its widely-used freemium version is

[216] '05: When a winning bet becomes your losing bet 35:59-45:00', *Spotify Podcast*, https://open.spotify.com/episode/4TSF3dCz5BUJmJoDn3d71V?si=YTukutIbSGq61RR1pM6Y7w (Accessed 31-05-2021).
[217] 'We've got more money swirling around': how streaming saved the music industry', *The Guardian* https://www.theguardian.com/music/2018/apr/24/weve-got-more-money-swirling-around-how-streaming-saved-the-music-industry (Accessed 01-06-2021).

steering towards playlist-listening, and patents show signs of a future where musicians could become fully obsolete.

Besides the inconspicuousness of the musician in Spotify's interface and front-end ecosystem, there is something even harsher going on. In ten years' time, Spotify has grown to be somewhat of a menace to music production. In some ways, algorithms have already taken over the consumption process (i.e. pop music is composed to be the best fit in these algorithmic playlists, so in a way, they make music for the algorithms and not for the consumers behind the AI-wall. Or in other words: *SpotifyCore* is growing), but they are also finding their way to the production side of music. This is also in line with Marxists understandings, where the workers, the musicians, are always in fear of being replaced by machines.

Musicians are now a prime example of a modern version of the nineteenth-century Marxists-titled labour economy, the *gig economy*, not to be confused with the actual live performance gigs. As an exemplification I wanted to compare Spotify's relation with its workers to another digital platform and ecosystem. Uber and its drivers as independent contractors, with loads of flexibility and freedom, but no safety net provided by the platform, are prime examples of the modern *gig economy*. But when researching the (dis)similarities, I stumbled on another feature Spotify and Uber offer: Rider Music. Here, both vastly criticised platforms on their contracts with their workers are joining forces.[218] Spotify seems to be copying Uber on how to control the 'self-employed' workers and how to subtlety heighten the workload for them, (i.e. artists needs to produce more 'content' a year because that is the new nature of music, according to Ek and Uber's drivers need to work more hours to pay their rent). In a world characterised by this gig economy, predicted by Marx, who claimed that 'continuous technological and organisational restructuring are critical to the expansion of capitalism', both Uber and, particularly in this thesis, Spotify place development and innovation first and the workers second.[219] However, it is quite interesting that musicians in Spotify's environment are treated as nineteenth-century workers but are also customers of the platform. The company sells their ecosystem to listeners and artists, but the former is the king, and the latter is the worker. Why aren't both treated as king? This notion supports the application of Marx' alienation theory on the modern profession of musicians in Spotify's interface.

[218] 'Rider Music, *Uber*, https://www.uber.com/newsroom/ridermusic/ (Accessed 01-06-2021).
[219] 'How Marx predicted the worst effects of the gig economy more than 150 years ago', *NS Tech*/*Amir Anwar* https://tech.newstatesman.com/guest-opinion/karl-marx-gig-economy (Accessed 01-06-2021).

Some final remarks

Spotify brought us a lot. After the Wild West in the earlier years of the internet, Spotify became a player in the music industry that has brought stability to the consumption and distribution of online music. Of course iTunes paved the way in earlier years, but Spotify truly legalized a mass consumption of digital music. After the decades where the piracy of music trove and the musicians and the team around them could hardly keep their head above the water, Spotify offered the lifeboat. This is, in short, both beneficial for the consumers and the producers. The former has now an almost endless database of music and on top of this low entry-level to become music consumer, there are many novel ways of discovering new music throughout the platform. If we would have discovered our hidden gems of songs without the help of Spotify's algorithms and curators still remains the question. For the musicians Spotify has also brought a lot. The globalised world is in reach and local musicians could easily be discovered at the other side of the world, where there music might fit a lot better. On top of that, a new, or revised, revenue source was found for the artists. Spotify, and other digital platforms, connected the cultural-aesthetic polarised world. Subcultures, and the enclosed subgenres, can now be formed globally, via Spotify and other social media apps, instead of locally. However, Spotify surely seems to be aware of this influence they've got over the music industry and is trying to become a more influential key-player.

In short: Spotify is trying to be the main curator and gatekeeper for music, and makes the experience of putting on music as frictionless as possible. This causes music to be reduced to background noise, but by saying that we are dealing with a true devaluation of music is a bit short-sighted. On an economic scale musicians seem to be competing on an unleveled playing field in Spotify's interface, but this does not lead to significant features that lead to cultural homogenisation of music (or: the disappearance of the long tail). However, the alienation between fan and musicians is the case when analysing Spotify's interface. Some of the findings that lead to this are more substantial and therefore hard to change, like the playlists in the limelight and the seamless experience, but others can seemingly be mended in a future update of the interface, like making the artist-page more easily reachable. However changing things aren't that easy for the platform. Making infrastructural alterations to the interface can withhold Spotify from fulfilling the overall objectives of the platform. In the next (two) decade(s) we have to see what kind of company Spotify is going to be: for musicians, or mostly for itself.

When these trends are seen in the lights of our bigger digitalised culture, in the philosophy of *Software Studies*, it can be confirmed that the interface of Spotify is indeed

more than a layer of skin over a complex system of software; it is also an influential navigator. Moreover, Spotify's ecosystem is, like Johanna Drucker mentioned, a prime example of an interface that work like a *zone of affordance*: Spotify definitely 'organises data in particular ways and thereby foreground some things rather than others', and this has consequences for the music industry. But did things change that much with the rise of the streaming services? Or is it better that Spotify's interface is seen in the light of *technological determinism*, where the technology determines society's cultural values and social structure?

That's immediately one of the pitfalls of this research. We never know if some changes have been beneficial for a medium like music until we've undergone it. Or to stay in the analogy: the lifeboat is here, but once we've reached safe lands (or even more sea) we'll know if these holes were negligible in the journey. Another complication in this analysis was the on-going contemporary character of the topic. During the last months of research Spotify changed their interface once and introduced loads of new themes, applications and features. This unstable entity of research made it hard to draw conclusions. Future research could investigate a line of older interfaces (as well as the interface of other streaming services) to establish a trend in design choices, which could underline or contradict this research. Other research could be focused on the devaluation and homogenisation of music in combination with the rise of the streaming services. The latter scenario could best be researched by an analysis of data to see if the long tail is growing or disappearing. It seems to be more difficult to backed the devaluation of music by quantitative research. Nevertheless, up-to-date data on the way we (culturally) value music in 2021 are another point of interest for future research on the influence of streaming services and the music industry.

The rise of the internet changed every media (and non-media) landscape. The musical ecosystem would undergo this development sooner or later, so we'd better follow. In other simpler words: there is no good or bad prospect for the music industry, there is only a different music consumption and music production. With this in mind, we might think that we're powerless on these big waves of changes. However, I would like to embed these finding in a milder academic ideology: *Soft Determinism*.[220] With the ideas of this philosophy, I still acknowledge that technology is the driving moral force in the development of music culture, but would also like to recognise that fans, musicians and the music industry have agency over the outcome.

[220] Jeremy Wade Morris, 'Music Platforms and the Optimization of Culture', in: *Social Media + Society* 20:7 (2020) 1-10, here 3.

So what can we do? Is it our passive consumer behaviour that weakens the connection between fan and musician? I would argue that it is interplay, lost in a vicious circle of music getting ripped of their old context and placed in a new package. The more we like and listen to it massively, the more the algorithms and curators will follow with its laidback playlists, the more we will listen to music as background, and so on. It is up to us, the consumers, to break this cycle which is harmful for the musicians? And if yes, how would we even do that? Or is it a new lean-back popular music culture, with exceptions to the rule found in alternative music? Whatever answers these questions, I think it is time for the music industry, the producers and the consumers, to question the lifeboat provided and force some alterations.

The shift in the infrastructure of musical production and consumption make sure that musicians will always adapt to a certain point that their music best suited to be the best on the platform.[221] This means that the freelance workers aren't that 'free' at all; they, and their music, are dependent on the business models and features of Spotify. The interesting question isn't therefore a binary one: is streaming good or is it bad for the music industry? No, the questions should address the on-going friction between musicians and commercial gatekeepers, which appears to be solved since the streaming services claimed they've brought democracy in musical discovery. However, in reality gatekeeping has shifted to opaque forces, like data-mining algorithms and anonymous playlists curators. After all, music can't be created by Spotify itself (yet), but by the musicians. Spotify would be nothing without its 'content creators'. Why should they follow, instead of decide?

One way to solve an aspect of this is to create a levelled playing field on economic scale (i.e. try out the earlier mentioned *user-centric system* of payment), give labels and independent musicians equal access to upload music, be honest about where your incentives lay and, last but not least, adjust the interface to shine more lights on artists-pages instead of centralising playlists. Could we, or Spotify, change course and steer towards this socialistic utopian direction? Another, more futuristic option is to turn to the *blockchain* technology, where in one implementation users, both consumers and musicians, would receive tokens alongside their membership and could vote on proposals which the company's board would introduce, 'collectivising ownership and control'.[222] Platforms like Spotify-blockchain-

[221] David Nieborg and Thomas Poell, 'The platformization of cultural production: Theorizing the contingent cultural commodity', in: *New Media & Society*, 20:11 (2018) 4275–4292, here 4282.
[222] 'Can We Imagine a Socialist Spotify?', *Tribune/ Robert Barry*, https://tribunemag.co.uk/2019/01/socialism-technology-spotify (Accessed 01-06-2021).

alternative *AUDIUS* and the more hand-tailored *Catalytic Soundstream*, are already attempting to make this work and are also trying to put music back in the foreground.[223]

Another application of the technology, *NFT's* (non-fungible tokens), could, and already did, revalue digital music to be the equivalent of the painting instead of the painted wall, referring back to the analogy made on page 45 and 58.[224] NFT's are digital certificates of authenticity, a proof of ownership, which could change the nature of the endless copies of digital art -music is digital art nowadays- to be 'one of a kind' again. They create a sense of scarcity, controlled by the maker (i.e. they could say how many digital copies would count as official NFT), that's fundamentally digital. While everyone could still hear the music on platforms like Spotify for free, the collectors of the NTF's of a specific song or album, could call themselves the owners of that art piece. While the entry level might be high and therefore not really addresses the democratisation-problem of the music industry, loads of musicians already successfully sold their digital albums as token.[225] However, in the present day the nature of the blockchain technology, and the attached digital crypto currencies, are unstable and their environmental impact is often underestimated.[226] Whatever is offered, every solution has got its own drawbacks. Music is getting devalued, and it is being revalued. Music isn't getting homogenised, but it shows no signs of being more heterogeneous either. But, most importantly, the musician's job is getting devalued in Spotify's digital ecosystem which, self-proclaimed, could give 'a million creative artists the opportunity to live off their art'. I wish that Spotify would pursue this notion more actively. The world is getting datafied.[227] Music seems to be one of the first to be hit.

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[223] 'Meet the Experimental Musicians Who Built Their Own Streaming Service', *Pitchfork/Andy Cushvice* https://pitchfork.com/thepitch/meet-the-experimental-musicians-who-built-their-own-streaming-service/?mbid=social_facebook&utm_brand=p4k&utm_medium=social&utm_social-type=owned&utm_source=facebook (Accessed 01-06-2021).
'Een muzikale revolutie hangt in de lucht met Audius: hoe blockchain-platforms Spotify verleden tijd maken', *The Daily Indie/Ricardo Jupijn,* https://www.thedailyindie.nl/een-muzikale-revolutie-hangt-in-de-lucht-met-audius-hoe-blockchain-platforms-spotify-verleden-tijd-maken/?fbclid=IwAR1-KlIBEvoGMWckOg-wTpbM4MXum0_RU7bH0bLbqYVMUog-JblnvsQuF6g (Accessed 01-06-2021).
[224] 'Aphex Twin Sells NFT Artwork for $128,000', *Pitchfork,* https://pitchfork.com/news/aphex-twin-sells-nft-artwork-for-128000/ (Accessed 01-06-2021).
[225]'Musician NFT Projects, Ranked by How Many F's I Can Give ', *Vulture,* https://www.vulture.com/2021/03/music-nft-projects-ranked.html (Accessed 01-06-2021).
[226] 'NFTs Are Hot. So Is Their Effect on the Earth's Climate', *Wired,* https://www.wired.com/story/nfts-hot-effect-earth-climate/ (Accessed 01-06-2021).
[227] Yuval Noah Harari, *21 Lessons for the 21st Century* (Random House Publishers, New York, 2018).

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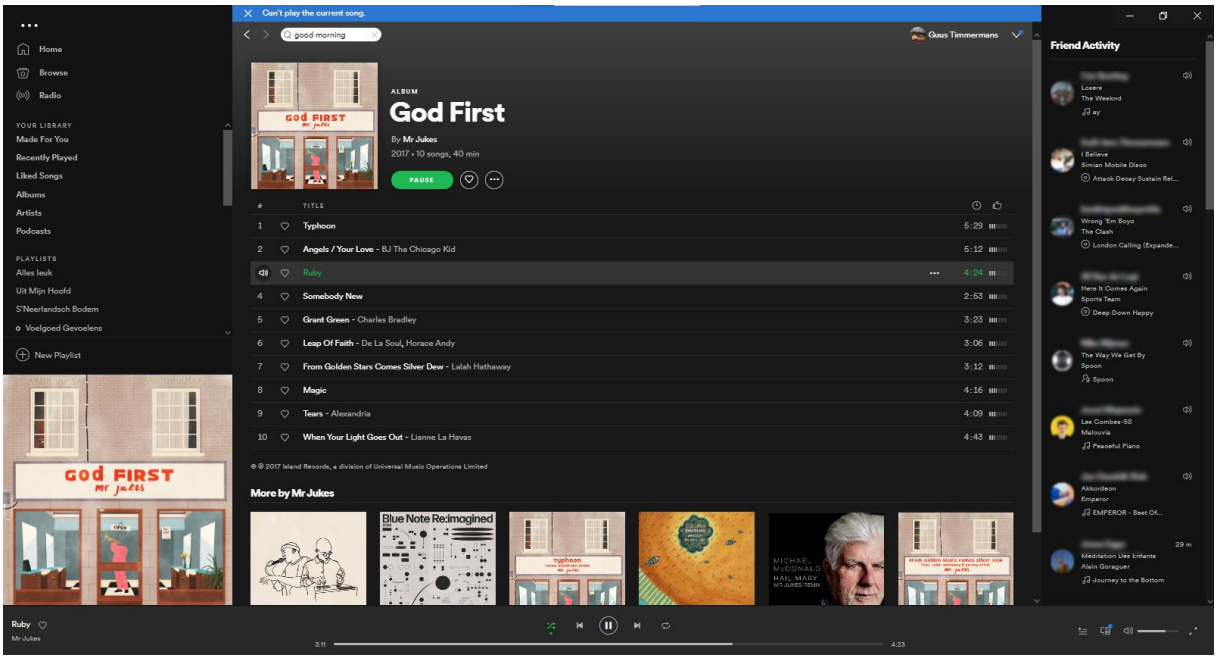
Appendix

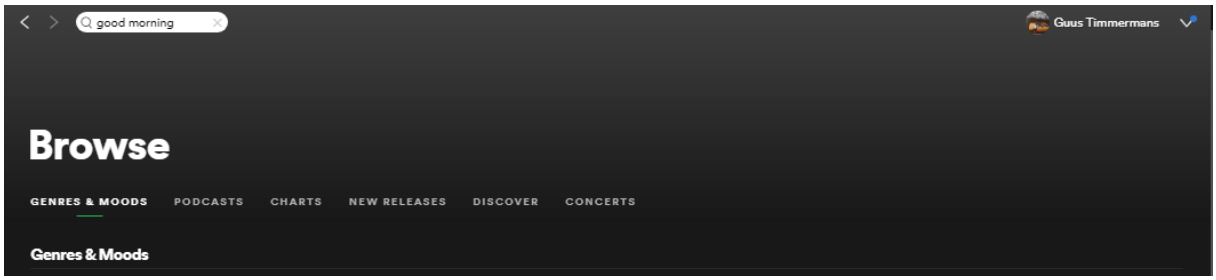
Screenshots

*These are sometimes blurred for both privacy reasons, and recommendation from my band's manager.

Screenshot 1



Screenshot 2



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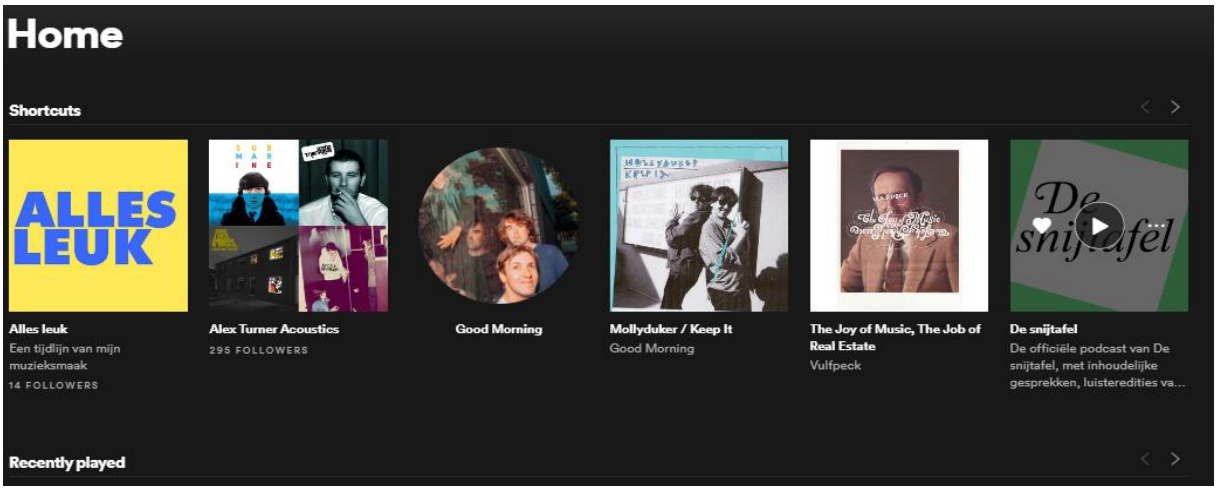

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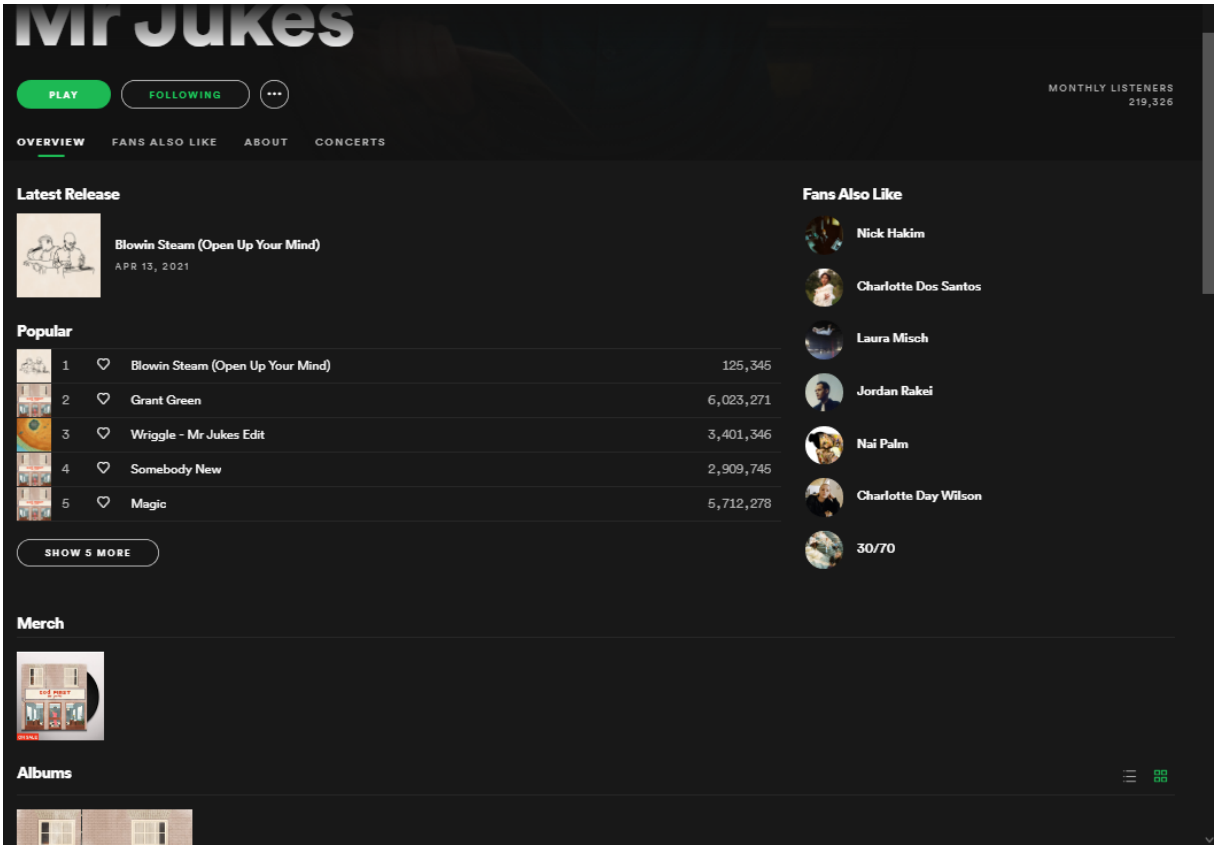
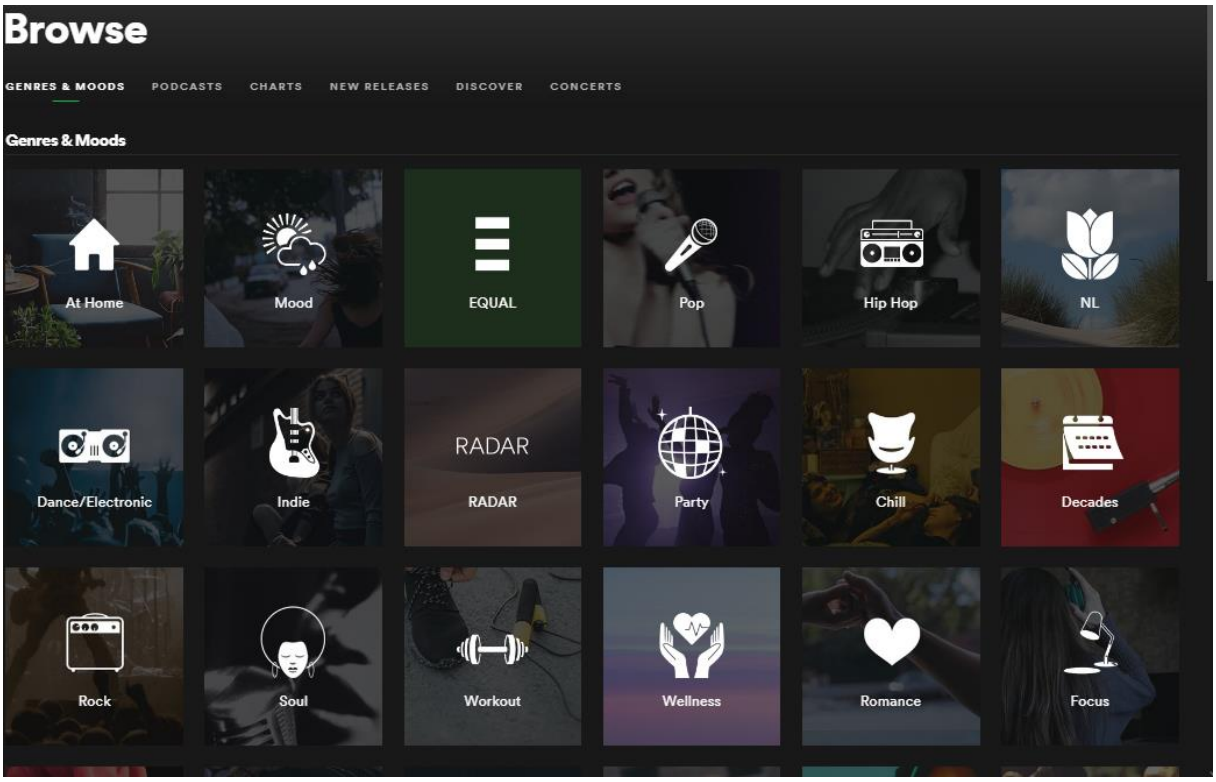
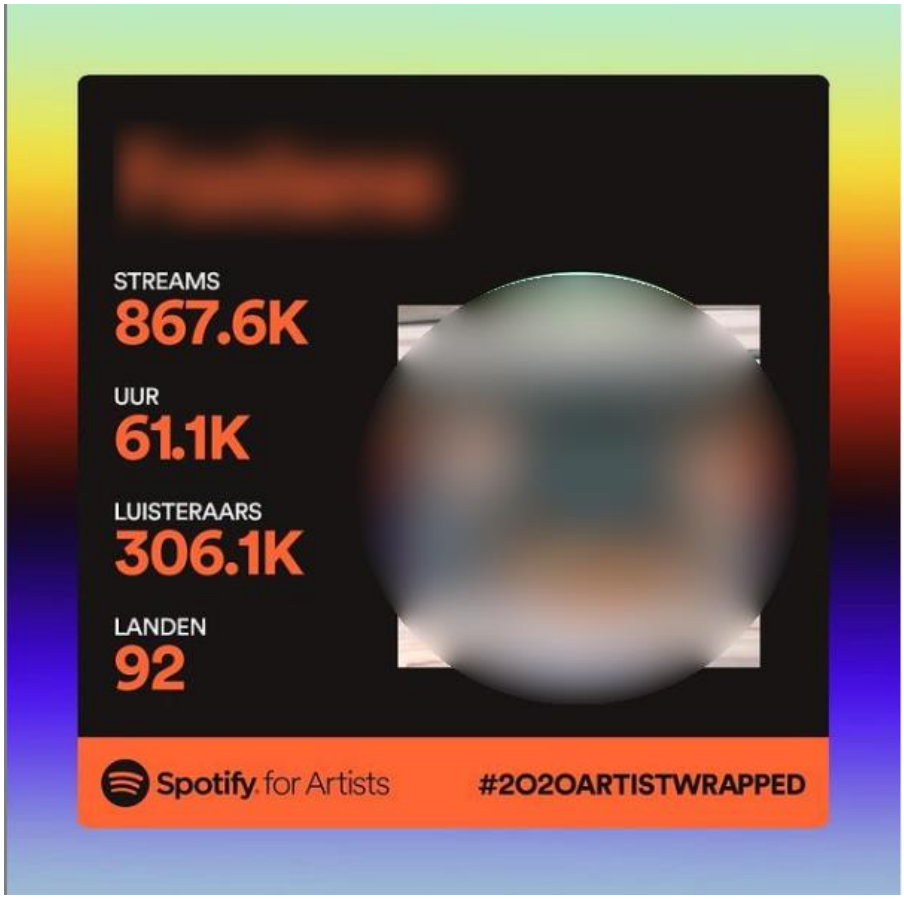


Screenshot 5



Screenshot 6



Screenshot 7