Abstract: 1

This thesis explores how Spotify users perceive the platform's music recommendations and the impact these have on their autonomy and agency in music consumption. In an increasingly digitized world, individuals engage with platforms that shape their interactions, often without a full understanding of the underlying mechanisms. This phenomenon is evident in highly digitised societies, where digital infrastructures are deeply embedded in daily life, leaving users with little choice but to participate in technological systems they may not fully comprehend or agree with. Applying a Techno-Anthropological approach, this study investigates the socio-technical dynamics of Spotify's recommendation system, focusing on how users navigate the balance between convenience and autonomy.

Through qualitative methods, including interviews and workshops, we identify a recurring concern among users: the lack of transparency in how music recommendations are generated. While Spotify's curated playlists and recommendation features enhance accessibility and personalization, they also shape users' musical choices in ways that influence music discovery. Our findings indicate that many users feel uncertain about how their musical preferences are influenced due to the lack of transparency in the recommendation process. Some users passively engage with suggested content, while others actively assert control over their music consumption by manually curating playlists or using search functions.

By applying Actor-Network Theory, we examine Spotify's role as an Obligatory Point of Passage in the digital music ecosystem. The platform aligns diverse actors, i.e. users, recommendation systems and commercial interests within its network, for example by reinforcing its dominance by offering a vast catalog and promoting social sharing features. Analysis and discussion of user perspectives suggests that the visibility of lesser-known and niche artists may be impacted by how content is prioritized within Spotify's recommendation features.

The study also draws on social contract theories to explore the implications of these dynamics on user autonomy, fairness and moral agency in music consumption.

Findings highlight user concerns regarding transparency, suggesting that increased clarity in how recommendations are generated may enhance user autonomy and promote diversity in music discovery. This study thus aims to add to the broader discourse on digital platforms by examining the relationship between recommendation systems, user agency and cultural consumption in the context of music streaming.

1 Introduction

In contemporary society, individuals are constantly confronted with new technologies that reshape how they interact with the world. From smartphones and digital banking to artificial intelligence and algorithm-driven platforms, technological advancements are introduced at an accelerating pace, often with little room for user choice or understanding. This rapid integration of technology into everyday life is particularly evident in highly digitized societies such as Denmark (the current number one ranked country in the world in 2024), where digital infrastructures like *borger.dk* or *MitID*, the national digital identification system, are imposed as mandatory tools for accessing essential services (Veileborg 2024). While such systems promise efficiency and security, they also highlight a growing trend: users are increasingly required to engage with digital platforms they do not fully comprehend, effectively enrolling them in technological networks with limited agency or control.

This phenomenon reflects a topic in contemporary digital environments, for example, the Collingridge dilemma, where users become embedded in technological systems without necessarily fully understanding their structure, function or implications (Verbeek 2019:296). Like the case of Google Glass, where a novel technology was introduced without adequate societal readiness (Verbeek 2019).

Furthermore, the current research gaps in the context of rapid technological imposition are evident with the ongoing EU-funded projects investigating algorithmic transparency, digital autonomy and platform regulation. For instance, the Horizon Europe project ALGOWATCH examines the societal impact of algorithmic decision-making across various sectors, emphasising the lack of user awareness and control over automated recommendations (ALGOWATCH.eu 2025). Additionally, the Fair MusE project specifically addresses the impact of music streaming platforms on fairness, transparency and sustainability within the European music industry, emphasising the need for some legal and corporate accountability in digital music services (European Commission 2023).

These initiatives highlight the growing recognition among policymakers and researchers that users are increasingly enrolled in opaque technological infrastructures without fully understanding their influence.

Other scientific contributions such as "*Recommender Systems and Autonomy: A Role for Regulation of Design, Rights and Transparency"* (Djeffal et al. 2021) and "*Music Recommendation Algorithms and Listener Autonomy"* (Beuscart 2019), focuses on either the

legal perspective and what EU could do in the future to protect the users or a statistical analysis of users and how they are guided on music streaming services.
This thesis aims to contribute particularly to how digital systems shape, influence and sometimes constrain human agency and autonomy through Techno-Anthropological approaches.
It is thus crucial for society and for Techno-Anthropological researchers to understand that technologies are not neutral tools, they are actively shaped user inputs through recommendation systems and developers (Bertelsen & Petersen 2021:55).

Narrowing the scope of the research by focusing on the users' perspectives, agency and autonomy on music streaming services, in this case, Spotify, we propose the following research problem:

> *How do users of Spotify perceive Spotify's music recommendations and its influence on their music consumption and what implications does it have on their autonomy and agency when interacting with the platform?*

To examine the research problem, we will briefly do an introduction to the methodological- and theoretical approaches of the thesis.

Firstly, we look at existing research on music consumption, Spotify, the emergence of music streaming services as well as research on recommendation systems to provide the necessary background knowledge to understand the contexts in which we are examining.

We argue that using qualitative methods such as interviews and workshops provide the necessary empirical data to analyse, discuss and assess Spotify and its recommendation systems as a technology in terms of user perspectives. This aligns with how Techno-Anthropology principles are built, where the context in which a given technology operates is crucial to understand to examine the technology appropriately.
Secondly, from a theoretical perspective, we analyse how users are engaged in a network composed of human and non-human actors from the perspective of Latour and Callon and their contributions to Actor-Network Theory.

With the use of Actor-Network Theory, we aim to unfold Spotify’s role as both a facilitator and an intermediary of music consumption. Through this lens, the platform’s influence on user experience is explored, along with the trade-offs users are facing in their interactions with Spotify.

Lastly, we discuss a few philosophers’ works on social contracts in the context of Spotify's impact on user autonomy, agency and transparency through the lens of social contract theories. Drawing on Hobbes, Kant and Rawls, we explore how Spotify's recommendation system affects user autonomy, moral agency and fairness in the context of music consumption.

1.1 Contents

2 Background

This chapter provides the necessary context for understanding the digital music ecosystem within which Spotify operates. It begins with the evolution of music consumption, first in the era of physical media and then in the digital age with the emergence of streaming platforms gradually becoming the dominant players. The chapter then explores broader themes relevant to the topic of the paper, including shifts in the music industry's structure and the implications of platform-mediated music consumption. We end this chapter by identifying research gaps, particularly on user autonomy in the context of platform design and recommendation systems.

2.1 Evolution of Music Consumption

This following section outlines the shift in music consumption from physical formats (i.e., vinyl, CDs) to digital formats (downloads and streaming), in an attempt for a better understanding of the status quo. It briefly highlights how access-based models, such as (music) streaming services, have replaced ownership-based models, resulting in broader changes in user behaviour and expectations of music consumption. Although our main focus is not of an economic character, this transformation is important for contextualizing Spotify's role in providing access to vast music catalogues on-demand, thereby shaping the digital music ecosystem.

2.1.1 Transition from Physical Media to Digital Media

Before the era of digital media and music, we relied mostly on physical formats such as vinyl records, CDs and cassette tapes for consumption of music (Guo 2023). These formats were the main modes of recording, distributing and of course consuming music during the period before digital media with the releases of; vinyl records (1948), audio cassettes (1963) and compact discs (i.e. CDs) (1982) (Huismann 2006). In this period, record stores, live music and radio were the obvious choices for music discovery, where physical sales and rankings on various charts were good indicators for success (Guo 2023).

The very physicality of music played a much larger role in music consumption from the introduction of the vinyl records and well into the era of digital music, in the sense that many people had their own physical collection and physical retrieval of their records and CDs.

This all changed somewhat incrementally when the digital format of MP3 was introduced in 1995 and it slowly gained traction when more and more people accessed the internet (Guo

2023). The MP3 format allowed audio files to be compressed without hurting the quality of the audio too much. It also allowed for people to buy and share their music on online platforms, where services such as Napster and Pandora made this possible (Guo 2023). However, piracy of music ensued. These services, while they to some degree invited to piracy, not only impacted the music industry but also catalysed digital music consumption. For example, Eumond Forde wrote an article for The Guardian in 2019 that discusses how Napster *nearly killed the music industry*:

> *"Twenty* [25] *years ago, the idea of free music was so compelling that up to 80m users downloaded Napster and broke the law"* (Forde 2019).

Thus, services like Napster and Pandora disrupted traditional models by making music more immediate and flexible (Forde 2019, Guo 2023). So, while it compelled users to obtain music illegally, it at the same time sparked the digital market for music. Not many years later than when Napster (1999) came onto the scene, Apple's iTunes (2001) emerged as a new and legal way of obtaining and consuming music (Guo 2023). This generally paved the way for MP3-players like the iPod to become a household recognized product for listening to music on the go, following earlier products that used physical CDs or even cassette tapes, e.g. the Sony Walkman (1979 cassette Walkman, 1984 CD Walkman) (Franzen 2014, Hunt & Hawk 2023). These "new" services, such as iTunes and Napster, disrupted the well established physical media in terms of accessibility and convenience (Forde 2019, Guo 2023). Apple's iTunes introduced a legal, purchase-based digital music platform, where users could download individual songs or albums. This ownership-based model was complemented by devices like the iPod (2001), which allowed users to curate and carry their music libraries with them. These innovations, while revolutionary, still required users to manually manage their collections, distinguishing them from the more seamless experiences offered by the later streaming platforms (Hunt & Hawk 2023).

2.1.2 Growing Importance of Accessibility and Convenience

Music consumption has thus undergone a somewhat dramatic shift from physical formats (vinyl, CDs) to digital downloads and streaming services (Guo 2023). Traditionally, users have built music collections through physical media or digital purchases, but streaming platforms have made access to music more immediate and flexible (Hunt & Hawk 2023).

The shift to digital music, i.e. the disruption of the music industry, have reshaped music consumption, with users now able to access a wide range of music anytime and anywhere (Forde 2019), provided they initially downloaded music to their MP3 players or more recently, simply have an internet connection. This shift reflects users' desire for on-demand access and the ability to consume music seamlessly across devices (Hunt & Hawk 2023). Even so with the more accessible and convenient nature of Napster and iTunes, Spotify's launch in 2008 was another significant turning point in the evolution of music consumption. With this, Spotify and other streaming services that shaped the transition from manually downloading music to instant streaming fundamentally changed the way users interact with music (Tseng 2024). MP3-players required careful curation and storage management as users had to select and transfer specific tracks or albums (Franzen 2014). Modern streaming services, on the other hand, eliminate this need by offering virtually limitless access to vast music libraries without requiring any prior downloads (Spotify 2025a).

Several significant players entered the music streaming industry in the mid-2010s, including Apple Music (2015), Amazon Music (2007, with the Unlimited service launched in 2016) and Tidal (2014), each with their own unique features or selling points (Scarrott 2024). The advent of streaming services has introduced real-time discovery features, such as recommendation systems and curated playlists, fostering a culture of constant discovery that was less prevalent in the era of MP3-players (Freeman et al 2022).

The move from ownership-based consumption (buying and owning music) to access-based consumption (streaming) is a defining characteristic of the digital era (Tseng 2024). Services like Spotify allow users to access millions of tracks without needing to own them, changing how people engage with music. Music streaming services have shifted the focus to providing access to vast music libraries. This model emphasises convenience, flexibility and affordability, allowing users to explore diverse genres and artists without the need to commit to ownership (Guo 2023), namely by removing the limitations of physicality and storage space.

Spotify, in particular, leveraged recommendation systems and curated playlists to personalize user experiences. At least according to Spotify themselves, these features not only enable users to discover new music effortlessly but also played a significant role in shaping listening habits and preferences (Spotify 2025e, Freeman et al. 2022). Platforms now play a central role in mediating how users discover and interact with music, leveraging curated playlists and recommendation systems to provide users with content that matches their preferences and

listening habits (Freeman et al. 2022). The role of platforms as intermediaries has thus grown in importance as users seek both convenience and personalization in their music experiences (Beuscart et al. 2019). While users can explore music freely, the system plays a role in suggesting new genres, artists or tracks they may not have otherwise encountered.

2.1.3 Spotify's Recommendation Systems

For this thesis, an explanation of Spotify's recommendation systems is key in order to understand how the systems operate under the hood of the interface. Understanding the exact mechanics of what influences the kind of music that gets suggested on the platform is a difficult task. If we look at what Spotify themselves on how what happens in the recommendation systems, they express it as following:

> *"No two listeners are the same, so everyone's Spotify experience and many of our recommendations are personalised* (...) *As you engage with Spotify, actions such as searching, listening, skipping or saving to Your Library influence our interpretation of your taste"* (Spotify 2025b).

While it is clear that user actions, such as searching for, listening to, skipping or saving songs, play a role in shaping the recommendations, the quote leaves many questions unanswered. Specifically, it does not clarify how much weight each action carries or how the system balances these inputs against other factors, such as general trends, the listening habits of similar users or the inherent qualities of the music itself.

The recommendations can be served to its users in different formats such as:
"1. Discover Weekly & Release Radar Playlists

2. Your Daily Mix Playlists

3. Artist / Decade / Mood / Genre Mix Playlists

4. Special Personalized Playlists (Your Time Capsule, On Repeat, Repeat Rewind)

5. Personalized Editorial Playlists

6. Personalized Browse Section

7. Personalized Search Results

8. Playlist Suggestions & Enhance Playlist Feature

9. Artist/Song Radio and Autoplay Features" (Pastukhov 2022).

According to Pastukhov, these recommendations happen help of their recommendation engines/systems by with the help of metadata categories:
Track Metadata and Details:"

1. *Track Title*
2. *Release Title*
3. *Artist Name*
4. *Featured Artists*
5. *Songwriter Credits*
6. *Producer Credits*
7. *Label*
8. *Release Date*
9. *Genre & Sub-genre*
10. *Tags*
    - *General Tags*
    - *Music Culture Tags*
    - *Mood Tags*
    - *Style Tags*
11. *Primary Language*
12. *Instruments Used Throughout Recording*
13. *Track Typology*
    - *Is it a Cover?*
    - *Is it a Remix?*

- *Is it an Instrumental?*

14. *Artist Hometown / Local Market"* (Pastukhov 2022)

With this rundown of the meta data in mind, Head of North American Advertising Sales at Spotify, Brian Berner, describes in his article that Spotify's recommendation system, BaRT, has three main functions to recommend music:

1. *"Natural Language Processing: BaRT analyses the language, lyrics and contents of a song to see if it would be a good match.*
2. *Raw Audio Analyzation: BaRT can detect the so-called 'vibe' or 'mood' of a song and then place it into a category (upbeat, chill, instrumental, heavy, etc.) before uploading it to a personalized playlist for someone.*
3. *Collaborative Filtering: BaRT can compare new songs to a listener's existing music preferences to decide what artists and songs will best compliment their tastes."* (Berner 2022)

These functions have one main goal, namely, to keep users engaged (Berner 2022). The name Bandits *for Recommendation Treatments* (BaRT) refers to a one-armed bandit, which is a type of slot machine. That suggests that if it starts with a limited amount of data from the user, the recommendations will be somewhat random, in order to see how the user reacts, which in turn creates another set of meta-data to better the personalisation for the user (Carterette 2019).

However, what is interesting is that neither Music Tomorrow, Spotify or anyone else can explain in detail how a specific recommendation is created and to what degree a specific recommendation is influenced by humans or algorithms. Because of this fact, we will not assume how Spotify recommends specific songs or playlists. Instead, we use "recommender system" as an overarching term that implies recommendations from Spotify no matter the human/non-human influence.

2.2 Debates on Platform-Driven Music Consumption

This section reviews key debates within existing research regarding the role of platforms like Spotify in shaping music consumption. The academic world has by now explored the implications of platform-mediated music from several perspectives, including the economic impact on the music industry (e.g., declining revenue for artists due to fractional payouts per

stream, as noted by Faenza in 2024), cultural homogenization (e.g., how Spotify's playlists prioritize mainstream artists over niche genres, as noted by Hagen & Lüders (2017) and shifts in power dynamics between platforms, artists and- consumers (e.g., major labels leveraging licensing agreements to secure playlist placements, as noted by Eriksson et al. (2019).

2.21 Economic Impacts

From an economic perspective, the debate often centres on the challenges faced by artists in the streaming era. While platforms like Spotify have revolutionized access to music, offering listeners unprecedented convenience and libraries, the financial model underpinning streaming raises significant concerns. The Musicians' Union of the United Kingdom argue that the revenue generated per stream is so minimal that it has become increasingly difficult for many artists, especially those who are independent or unsigned by major labels, to sustain viable careers (Musicians Union (UK) 2021). This issue has been further amplified by the fallout of COVID-19, which disrupted live performances, an essential revenue stream for many musicians. The FairMusE project, launched in response to such challenges, seeks to explore, among other aspects, the economic impact on artists, with a particular focus on issues of fairness, with goals of creating legal frameworks that benefit artists and society (European Commision 2023, FairMuse 2025).

2.22 Cultural Impacts

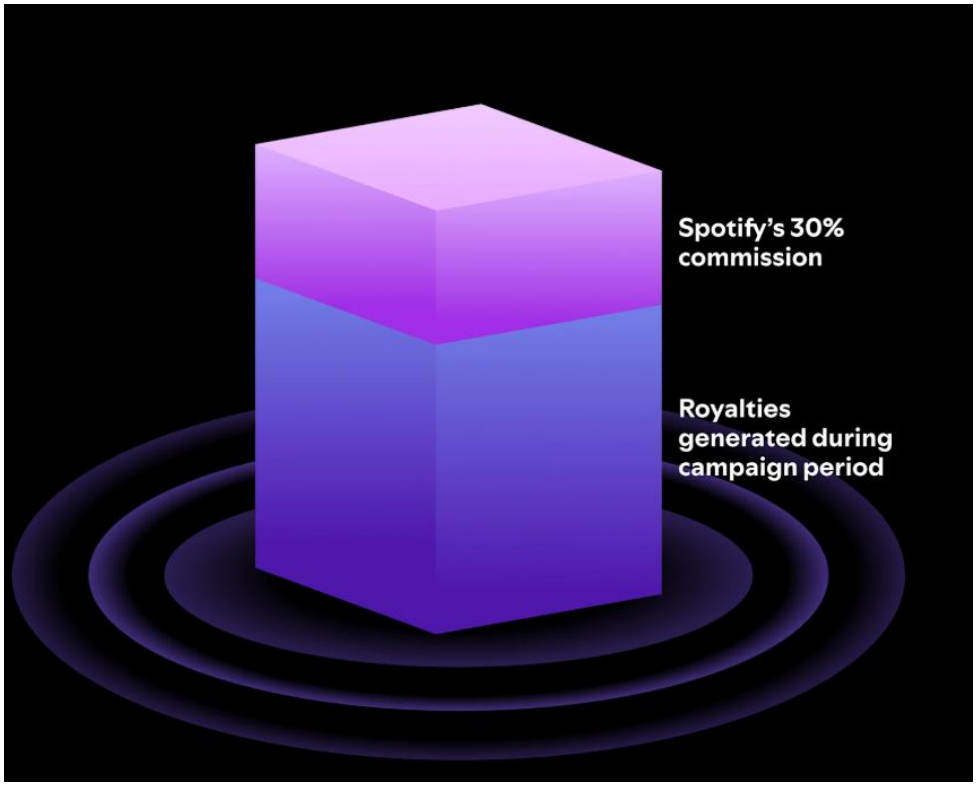
Cultural homogenisation or diversity is another prominent topic within this discourse. Hagen and Lüders (2017) highlight how Spotify's curated playlists and recommendation systems often favour mainstream artists and genres, which in turn leaves niche and local music less visible. This prioritization contributes to a more homogenized global music culture, where exposure to diverse and non-mainstream content is increasingly mediated by platform recommendation systems; it has implications not only for cultural diversity but also for how users define their musical tastes (Hagen & Lüders 2017).

2.23 Shifts in Power Dynamics

Finally, shifts in power dynamics between platforms, artists and consumers represent a critical area of inquiry. Eriksson et al. (2019), in their book *Spotify Teardown: Inside the Black Box of Streaming Music*, describe how major labels strategically leverage licensing agreements to secure prominent placements for their artists on Spotify's playlists. The authors describe their book as an intervention into *"the ethics and legal frameworks of corporate behaviour,"* shedding light on how platforms wield significant influence over the

music industry (Eriksson et al. 2019). Also, the securing of these prominent placements for major-label artists on curated playlists is often at the expense of independent musicians (Eriksson et al. 2019).

Additionally, Spotify has a paid feature for artists called “Discovery Mode”:



Appendix 1, Figure 1: Spotify, Discovery Mode (2025)

With this feature, artists can turn on the mode for one (or more) of their songs when fully released, where Spotify then takes a 30% commission of the generated revenue (Spotify 2025(c)). As it is still in beta phase, *”You have at least 3 eligible songs. You have at least 25,000 monthly listeners”* (Spotify 2025(d)).

In regard to the consumers, the book authored by Eriksson et al. and the example of Discovery Mode, it opens up for questions about transparency and user autonomy, especially if the recommendations or playlists are presented as purely personalised or neutral in some way.

2.3 Identifying Research Gaps

With just these short mentions of some of the existing research on Spotify’s impact on the music industry, we highlight the complexity and multifaceted ways in which this topic can be

discussed.

The topic of user autonomy in music streaming platforms has garnered some scholarly attention, though certain areas remain underexplored.

However, a study in Réseaux by Beuscart et al. in 2019 called "*Music recommendation algorithms and listener autonomy"* found that users predominantly choose their music and prefer autonomous exploration tools like search engines (Beuscart et al. 2019). In that regard, the impact of recommendations systems' effect on user autonomy warrants further investigation. The study underscores the need for further investigation because it highlights a paradox: while users value and actively utilize tools for autonomous exploration, their behaviour and choices are significantly shaped sometimes unconsciously by the platform's recommendation systems (Beuscart et al. 2019). This suggests that user autonomy may not be as robust as it seems, creating an opportunity to investigate more how recommendation systems impact what users listen to, how they discover new music and whether they retain control over their choices.

An article written by Djeffal et al. *"Recommender Systems and Autonomy: A Role for Regulation of Design, Rights and Transparency," (*2021), also examines the impact of these systems on user autonomy and argues for regulatory measures to ensure greater transparency, fairness and user control. This article as well suggests that while recommender systems personalize content to enhance user experience, they also pose risks by subtly guiding choices without users fully realizing it (Djeffal et al. 2021). Recommendation systems can therefore reinforce biases, limit exposure to diverse perspectives and create filter bubbles leaving the users unaware of the missing content (Djeffal et al. 2021). The article argues that lack of transparency makes it difficult for users to understand why certain recommendations appear, reducing their ability to critically assess or challenge the system's influence. To mitigate these risks, it proposes a regulatory framework focusing on three key aspects: design, rights and transparency. Ethical design, such as value design, principles should be embedded into recommender systems to promote fairness, diversity and user control (Djeffal et al. 2021). They argue that by implementing regulatory measures that promote transparency and user control, policymakers can help ensure that recommender systems enhance rather than undermine digital freedom (Djeffal et al. 2021).

While these and other studies provide great insights, acknowledging the role of recommender systems in shaping user experience. However, they do not specifically investigate how Spotify's recommender systems infrastructure operates, influences decision-making and

potentially compromises autonomy, often focusing on either the recommender system or Spotify alone.

Our Techno-Anthropological approach aims to contribute to filling some of the potential gaps by exploring whether and how Spotify empower users to navigate music on their own terms or nudge them toward platform-prioritised content.
Additionally, examining transparency mechanisms such as whether users can meaningfully adjust or understand the recommender systems could reveal whether Spotify genuinely supports autonomous music discovery or not.

3 Theoretical Background

In this section, we will outline the theoretical framework to address the research problem of this paper. Specifically, we will explain Actor-Network Theory (ANT) and associated concepts such as the "black box". We will also engage with the concept of *translation* looking at how music streaming platforms and recommender systems mediate user-platform relations. Furthermore, we explain and interpret a few philosophers' views on social contracts that offer distinct perspectives, reflecting different views on human nature and the purposes of governance.

The theoretical framework in its entirety includes socio-technical theory, philosophical concepts and ethical considerations. This matches well with Techno Anthropology which is a field of study with an intention of promoting sustainability and ethical reflections in multiple aspects. As Tom Børsen explains in *"What is Techno Anthropology?"* (Børsen 2016):

> *"Ensuring the world remains secure for everyone means that scientific and technological progress must be placed in a context of ethical reflection rooted in the cultural, legal, philosophical and religious heritage of all our communities"* (Børsen 2016:45)

This thesis as a Techno-Anthropological contribution to the scientific community therefore aims to combine technology, ethical reflections and cultural/social perspectives through the lens of different theoretical perspectives.

3.1 Actor-Network Theory

Actor-Network Theory (ANT) serves as the central theoretical lens for this analysis. Developed by Bruno Latour and Michel Callon, ANT seeks to understand how relationships between actors, both human and non-human, are constructed and maintained within socio-technical networks. A key feature of ANT is its treatment of all actors in the network as equally significant, including the non-human actors like technologies. This is encapsulated by the principle of *general symmetry*, which holds that technologies can exert the same level of influence as human actors within a network (Justesen 2017).

One of the central ideas in ANT is the concept of *black box*. Technologies that become deeply embedded in society often function in such a way that their inner workings become opaque, taken for granted and resistant to scrutiny (Jensen et al. 2007). Latour observes that

as a technology or machine becomes increasingly efficient, it tends to be black boxed, which means that its inner workings are obscured and users accept it without questioning its underlying mechanisms.

> *"The more efficient a machine becomes, the more it tends to be black boxed"* (Latour 1987).

In such cases, attention shifts to the input and output processes, while the mechanisms that generate these outcomes go unquestioned (Latour 1999).
Latour expands on these ideas in his work *"Technology is Society Made Durable"* (1990), where he introduces the concepts of *program* and *anti-program* to describe conflicting sets of actions within a network. In his story of a hotel manager trying to ensure that guests return their keys, the manager's goal constitutes a program, while actions contrary to this goal form an anti-program. Latour's analysis highlights how technological and scientific artefacts are not merely products of human intention but also outcomes of interactions between human and non-human entities (Latour 1990). These interactions leave traces or *inscriptions* within the technology, shaping the power dynamics that underlie technological and scientific practices (Latour 1979).

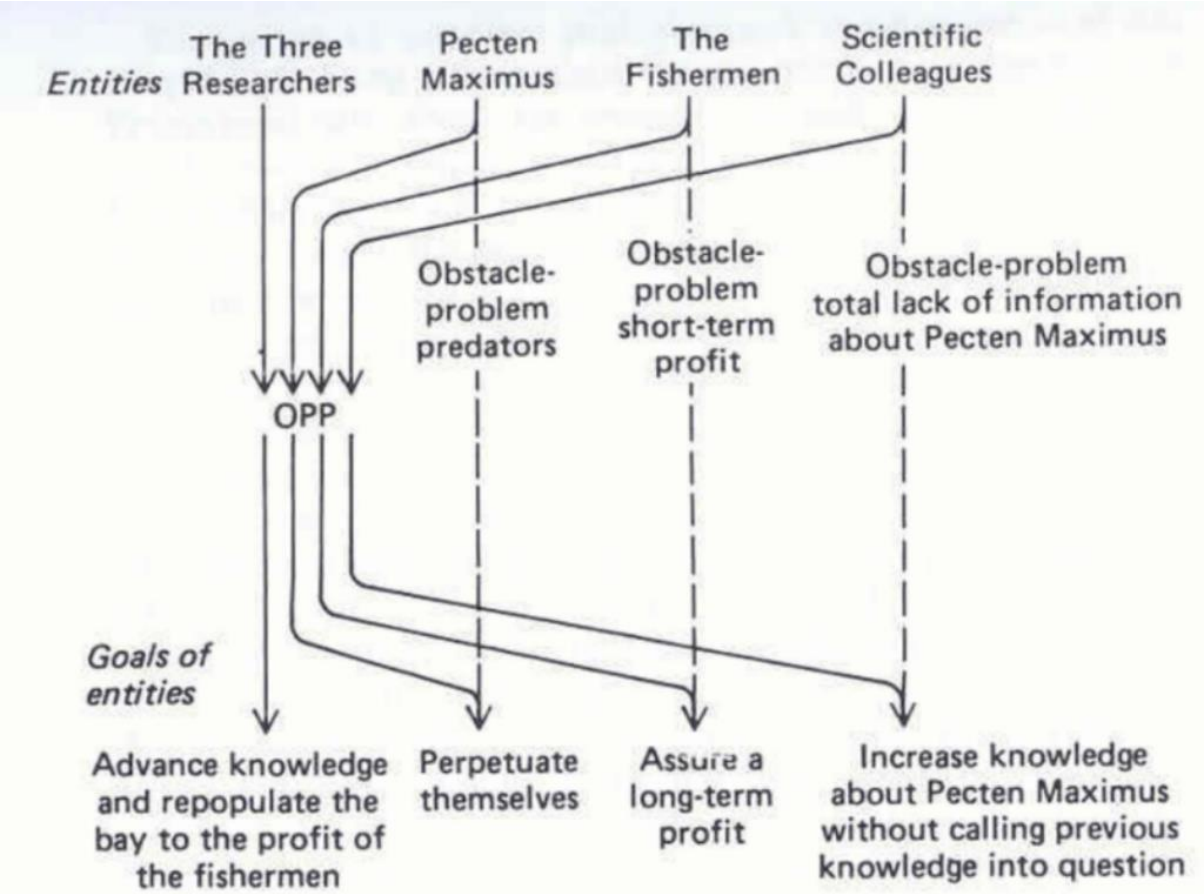
3.2 Translation

Translation in actor-network theory refers to the process by which relations between actors in a network are reshaped, allowing for certain actors to represent and act on behalf of others. Callon (1984) in *"Some elements of a sociology of translation: domestication of the scallops and the fishermen of St Brieuc Bay"* (Callon 1984) outlines four stages or moments of translation: *problematization*, *interessement*, *enrolment* and *mobilization*. These moments form a dynamic process by which networks are formed, stabilized and maintained.

The concept of translation takes on new significance in relation to digital platforms and recommender systems. Platforms such as Spotify function as powerful mediators that shape the interactions between human and non-human actors within digital ecosystems, reconfiguring relationships in ways that mirror, but also extend, classical ANT insights. It extends the classical insights because it might not entirely account for the complexity and influence of algorithmic mediation in contemporary settings (van Dijck et al. 2018, Poell & de Waal 2018).

3.2.1 Problematization

Problematization is the initial phase of translation in which actors attempt to define the problems and interests of others, often by framing a central issue or goal. To achieve successful translation, actors must converge on a common objective, known as the *Obligatory Point of Passage* (OPP). This OPP becomes the necessary route through which all actors must pass to fulfil their objectives (Callon 1984). In Callon's case study of the scallops and fishermen in St. Brieuc Bay, the researchers established the OPP, mediating the interactions between the various actors. The actors are positioned at the top of the model, illustrating their movement through the framework in pursuit of their respective goals.



Appendix 2, Figure 2: Michel Callon's model of Obligatory Point of Passage (OPP) (1984)

In this thesis, Spotify in alliance with its recommendation systems plays a similar role, functioning as the OPP through which all human and non-human actors must engage to fulfil their goals (see 5.2.4). We employed this model to gain insight into the relevant actors within the network surrounding our research focus. This approach aids us in comprehending the influence Spotify potentially exerts on users' listening habits, experiences and objectives.

3.2.2 Interessement

Interessement refers to the process of locking actors into specific roles within the network, often through devices or mechanisms that prevent competing influences from redefining those roles (Callon 1984). It is in this stage translation becomes practical, it describes the actions by which an actor attempts to stabilize the identifications of the other actors in the network established in the initial phase, i.e. the problematization phase (Callon 1984). The essence of interessement lies in its ability to create boundaries that define who is included in the network and how they relate to each other. Callon highlights this when he states:

> *"To interest other actors is to build devices which can be placed between them and all other entities who want to define their identities otherwise"* (Callon 1984:204).

These devices *of interessement* show the importance of establishing a clear assignment of roles and relationships that shield the network from external influences that may disrupt its functioning. The concept of interessement also holds a double meaning of *inter-esse*, meaning both to *interest* relevant actors and to stand *in between* the potential external actors that might have an interest in disrupting the network's functionality (Callon 1984).

3.2.3 Enrolment

Enrolment is the phase in which actors are positioned within the network according to the roles defined during interessement. Successful enrolment depends on the ability of the interessement devices to cut off competing interests and secure actors' participation in the network (Callon 1984). Through enrolment, actors are assigned specific roles and responsibilities that contribute to the stabilisation of the network (Callon 1984). This requires successful negotiations among actors, allowing interessement devices to effectively eliminate competing agendas and programs. It is during this phase of translation that the stabilisation of the network becomes apparent, as actors assume defined roles and establish meanings that contribute to the overall functionality of the network (Callon 1984).

3.2.4 Mobilization

Mobilization occurs after enrolment, focusing on the designation of spokespersons who represent the interests of others within the network. These spokespersons are often selected or legitimized by those who control the OPP (or is the OPP itself), ensuring that the network

remains stable by maintaining a shared problematization (Callon 1984). While interessement focuses on securing the commitment of actors and enrolment involves negotiating their roles within a network, mobilization is about maintaining momentum and ensuring that these actors align their actions with the network's goals (Callon 1984).

3.3 Different Lenses of Social Contracts

- Hobbes' Leviathan (1651)
- John Rawls' Original Position & Veil of Ignorance: A Theory of Justice (1971)
- Kant's The Metaphysics of Morals (1797)

This section outlines foundational perspectives on social contracts from Thomas Hobbes, John Rawls and Immanuel Kant. To analyse user-platform relationships in music streaming services, we apply these theories as interpretative lenses, beginning with Hobbes' emphasis on authority and order, followed by Rawls' view of justice as fairness, ending with Kant's focus on the moral legitimacy of governance. Each of these lenses bring unique insights into the ways individuals relate to some sort of governance, whether through authority, fairness or moral duty.

3.3.1 Social Contracts as a Way to Escape Chaos

In *Leviathan* (1651), Thomas Hobbes presents the social contract as a mechanism to escape the *"state of nature,"* a condition of conflict where life is *"solitary, poor, nasty, brutish and short"* (Hobbes 1651:78). Without a central authority, individuals would be in constant competition for resources, leading to fear and violence. This is because, in the state of nature, every individual has the right to everything, even to one another's life (Hobbes 1651). Hobbes believed that human beings, in their natural state, are driven by self-interest and have equal capacity to harm one another. This leads to insecurity and a pervasive fear of death, motivating individuals to seek peace by forming a social contract (Hobbes 1651). Hobbes' wrote:

> *"* (...) *during the time men live without a common power to keep them all in awe, they are in that condition which is called war; and such a war as is of every man against every man"* (Hobbes 1651:77).

Hobbes posits that individuals, seeking peace, rationally agree to surrender certain freedoms to a sovereign authority, a *"Leviathan",* who wields absolute power to maintain order. This trade-off, where individuals exchange autonomy for security, is justified as it enables the preservation of life and property, protecting citizens from the chaos of the state of nature (Hobbes 1651). Hobbes' theory, often termed "social contract theory," emphasizes the centrality of authority in achieving social order, whereby governance is a necessary institution to secure peace and stability (Hobbes 1651).

3.3.2 Social Contracts as Fairness and Justice

John Rawls, in his work *A Theory of Justice* (1971), revised in 1999, reinterprets the social contract as a means of ensuring fairness and equality in society. He introduces the concepts of *the Original Position and the Veil of Ignorance*, a thought experiment where individuals, unaware of their own advantages such as wealth and status, design principles to govern society. The Veil of Ignorance ensures that no one can tailor principles for personal benefit, as no one knows their social position or natural advantages (Rawls 1999:118). This limitation of information is crucial as political debates and discussions are often shaped by personal circumstances or agendas. The veil thus enables a clean slate from which principles of justice can be derived. Rawls argues that without this veil, a concrete theory of justice cannot emerge. Without it, justice would be reduced to a vague idea of whatever agreement is reached (Rawls 1999:118-119).

According to Rawls, individuals in the Original Position, behind the Veil of Ignorance, would choose principles that ensure justice and fairness for all, especially the least advantaged. This thought experiment leads to two principles of justice: 1) the equal liberty principle, which guarantees equal basic rights for all and 2) the difference principle, which permits inequalities only if they benefit the least advantaged (Rawls 1999: preface).

These principles form the core of Rawls' social contract theory:

> *"*(...) *these principles are to regulate all further agreement; they specify the kinds of social cooperation that can be entered into and the forms of government that can be established"* (Rawls 1999:10).

By trying to ground justice in fairness, Rawls seeks to reconcile the tension between liberty and equality, proposing a model that balances individual freedom with social responsibility. Through the Original Position, Rawls' theory moves toward a conception of justice that aims

to create a stable, equitable society, where cooperation is based on principles that all rational individuals would agree upon if placed behind the Veil of Ignorance (Rawls 1999). The focus is on ensuring that the worst-off people are not left behind and that any social or economic benefits are distributed to improve their position.

Rawls' social contract theory thus serves as a framework for building a society that prioritises fairness and justice. The principles derived from the Original Position and the Veil of Ignorance are thus designed to prevent the privileged from creating societal rules that disproportionately benefit themselves at the expense of others, ensuring that society respects equal rights while promoting the welfare of the least advantaged (Rawls 1999).

Rawls' interpretation of the social contract shifts the focus to fairness and justice. His thought experiment, the Veil of Ignorance, ensures impartiality when designing societal rules, emphasising equality and the protection of the least advantaged.

The social contract is then about creating a fair and just society rather than submission to authority.

3.3.3 Social Contracts as the Moral Basis

Immanuel Kant, in his work *The Metaphysics of Morals* (1797), approaches the social contract as a rational and moral foundation for political authority and justice. Kant views the social contract as a philosophical tool to legitimize laws and governance (Gregor 1997). For Kant, the social contract serves as an idea of reason, a hypothetical agreement that rational individuals would make to establish a just society based on mutual respect and individual autonomy (Kant 1797, Gregor 1997).

Kant's version of the social contract is thus grounded in his broader moral theory, particularly the *categorical imperative*, which demands that individuals act only according to principles that could be universalised. Applied to politics, this means that laws and political authority must be justifiable to all rational beings as if they had freely agreed to them. Therefore, the legitimacy of (political) authority is not derived from actual consent but from the fact that rational individuals, acting morally, would consent to such authority under just conditions (Kant 1797, Gregor 1997:40-42).

The social contract, for Kant, suggests the idea that laws must be grounded in the freedom and equality of all citizens. It reflects the idea that individuals should be treated not merely as means to an end but as ends in themselves, a key point of Kant's moral philosophy. The state, in this view, exists to preserve individual freedom through the rule of law, ensuring that each

person's autonomy is respected. This leads to the concept of the *"kingdom of ends,"* where each person is both sovereign and subject and laws are only legitimate if they could be accepted by all free and rational beings (Kant 1797, Gregor 1997:41).
Kant insists that governments must still respect the dignity and autonomy of individuals (Kant 1797, Gregor 1997:42-43).
With these concepts, Kant's social contract theory emphasizes the moral foundation of justice. It establishes a framework where political authority is grounded in reason and moral duty rather than self-interest or coercion. By basing (political) authority on principles that could be universally accepted by rational agents, Kant's version of the social contract seeks to create a society where freedom, equality and justice coexist in harmony (Kant 1797, Gregor 1997:40-43).
Kant's social contract theory differs from Hobbes and Rawls in that it emphasizes the moral and rational legitimacy of laws and governance. The contract is not based on fear or fairness, but on moral duty and the respect for individual autonomy. Therefore, for Kant, laws are legitimate if they could be universally accepted by rational beings.

3.3.4 Contrasting Hobbes, Rawls and Kant on Social Contracts

Hobbes, Rawls and Kant offer distinct perspectives on social contracts, reflecting varied views on human nature and the purposes of governance. Hobbes sees the contract as a pragmatic response to the dangers of the state of nature, where the need for security justifies the surrender of personal freedoms to an authority. His view highlights governance as a mechanism to protect individuals from violence and instability, favouring collective security over individual autonomy.
Rawls, in contrast, interprets the social contract as a model for achieving justice, grounded in fairness rather than authority. His Veil of Ignorance establishes a perspective that aims to guard against bias, proposing that justice can only emerge from principles benefiting all, particularly the least advantaged. For Rawls, the social contract is not about submission to a powerful authority but about structuring society in a way that balances liberty with equality, creating a cooperative environment that ensures fairness.
Kant emphasizes the social contract as a moral foundation. In his view legitimacy derives not from equitable agreements but from rational principles that could be universally accepted, the categorical imperative. His approach stresses the ethical dimensions of authority, suggesting

that laws must reflect moral duties and respect each individual's autonomy, creating a society where laws and governance align with morality as an ethical imperative.

4 Methodological Approach

In this chapter, we introduce the methodology with an in depth description of how we have gathered empirical data on the topic.

In the first section, we lay out the method of interviewing, as interviews have been the backbone for further investigation of this thesis.
Furthermore, a section with two different approaches to workshops, a *Future Workshop* and a *Design Workshop,* that are based on the interviews we have conducted, prior obtained knowledge and papers on workshop methodology.
The interviews and workshops thus serve as our empirical foundation for the analysis and discussion.

4.1 Interviews

This section contains a practical and methodological overview as well as a reflection on our conduction. With the Danish methods book *"Interview"* by Steinar Kvale and Svend Brinkmann (Kvale & Brinkmann 2015), we describe the different approaches that enable us to gather informants and to obtain a deep understanding of their uses of music streaming services.

4.1.1 Interviews

According to Kvale & Brinkmann an interview is a widely acknowledged method to collect qualitative empirical data from people about their experiences, life-worlds and meaning. As a qualitative method, interviews enable an exploratory and in-depth understanding of our informants' thoughts and experiences on the topic (Kvale & Brinkmann 2015), ensuring a certain quality in the empirical data.

4.1.2 Identifying Informants

To ensure a broader aspect of who to interview for this project, we set up a couple of questions in order to help us find the right interviewees. We take inspiration from Kvale& Brinkmann and ask ourselves the following questions: *who can we reach and why would their information give this thesis good empirical data*? (Kvale & Brinkmann 2015).

Our research inquiry limits us only to people with their own experiences with a music streaming service. Thereby, we can argue that every person who is willing to participate in our research is within the scope of a valid informant.
Furthermore, recognizing that we seek insights of personal experiences and life-worlds of users of music streaming services.

Although, having an idea of our participants helps us distinguish between those who have no experience and lots of experience.
Our ambitions of sampling interview participants could be defined as purposive sampling as we intended to have different levels of experience with music streaming services and some demographic diversity (Aarhus Universitet 2024).

4.1.3 Semi-structured Interviews

An interview guide can take on various structures depending on the context; however, for subjects with room for interpretation (Kvale & Brinkmann 2015), we chose to develop a semi-structured interview guide. As shown in appendix XX, we distinguish between two key elements: research questions and specific interview questions.

- Research questions focus on the theoretical and methodological areas we aimed to explore during the interview. They act as the foundation for the overall structure of the study.
- Interview questions, on the other hand, are practical and conversational. These are the questions directly posed to the informant, designed to encourage open dialogue and gather rich, insightful responses.

This distinction was intentional, ensuring that the interview maintained a clear structure while still providing flexibility to delve into important areas. The research questions kept the interview grounded in its objectives, while the interview questions offered a conversational framework that helped guide the discussion, particularly when the conversation might have otherwise stalled (Kvale & Brinkmann 2015).
We prioritized fostering a natural dialogue between the interviewer and informant, aiming to uncover deeper insights into the informant's experiences with music streaming services. This guide was presented at the beginning of all interviews and continued to serve as a valuable reference throughout the process, also guiding the knowledge we sought to gather following workshops.

4.1.3.1 Conduction of Interviews

In this section, we explain how the interviews were conducted, providing an overview of how most specific interviews were completed. Nearly all interviews took place prior to our workshops, as we aimed to gather insights from users of music streaming services before conducting a workshop focused on exploring users' struggles and overall experiences with these platforms.

The interviews were conducted in and around Copenhagen, as the participants were either living in or near the city. While the interviews were not identical, as semi-structured interviews rarely are, we still aimed to hold each interview in a comfortable setting. For example, we interviewed Nanna at a local coffee shop near her home, which allowed the music and environment to influence her perception of the interview, making her feel more comfortable and familiar. However, not all interviews were done in public places; interviews with Tai, Hanne, Emil and Alexander took place in their own apartments. This allowed them to create an environment where they felt at ease, enabling them to engage more deeply and share how they used music streaming services at home and what activities often followed their use of the platforms.

This physical setting in the interviews provided insights that were visible in different ways. For instance, Emil invited us into his world by showcasing his small but meaningful collection of LPs, which was an important part of his music experience. This physical element added depth to the interview, demonstrating the integration of digital and physical music in his life. Similarly, when interviews took place in bars or cafes, where music was often playing in the background, we took note of how music influenced the space, even though it did not impact the content of the interview itself. These environmental factors provided valuable context, allowing us to offer real-time examples when discussing how participants interacted with music streaming services.While this section outlines who we interviewed, it is also important to categorize the participants to clarify why their insights were relevant. As mentioned earlier, interviews offer a deep look into the lives of informants and finding participants who were familiar with music streaming services was crucial. However, familiarity does not necessarily indicate expertise. To provide context for the diverse users who shared their experiences with us, we categorized them into three groups: regular users, music-interested users and rare users. These categories were created to better understand the participants' relationship with music streaming services.

Navn	Alder	Lokation
Martin	40+	København
Alexander	29	København
Nanna	26	København
Emil	29	København
Tai	30	København
-		
Petrine	32	København
Hanne	62	København
-		

Appendix 3, Table 1

Regular users make up the largest group. This includes individuals like Petrine, Tai and Nanna, along with future workshop participants Emil B, Simone, Astrid and Kristian. These users engage with music streaming services on a fairly regular basis, typically using them daily, though they don't necessarily explore deep features or niche recommendations. They use most of the platform's features and appreciate the service, as they grew up with streaming becoming mainstream, especially Spotify.

Music-interested users include Emil G and Martin (and later, Lukas from the workshops). These individuals engage with music either as a hobby or, in Martin's case, professionally. They tend to use some features of streaming services but also hold recommendation systems to a high standard. As a result, they often bypass these systems in favor of personal music curation, primarily listening to familiar music rather than exploring new recommendations.

Lastly, the rare users group includes Hanne and Alexander. While they both use music streaming services, they do so infrequently and without much engagement. For them, streaming services are mostly used as background noise, where they press play once and rarely interact with the platform unless a problem arises.

Interviews were mostly conducted in pairs. Depending on the interviewee, we alternated roles, sharing responsibilities between interviewer and observer. The observer took notes and followed up with additional questions as needed, while the main interviewer focused on

guiding the conversation according to the interview guide, following the paths the interviewee led us down. This approach allowed us to maintain focus on our main objective while ensuring a high degree of attention to the field of study.

4.1.3.1 Coding and Transcribing

As a continuation of using interviews as a method to collect empirical data, we have processed the interviews by transcribing them. With inspiration from Kvale and Brinkmann (2015) we have utilized Zetland's transcription tool, Goodtape.io, in addition to having listened extensively to the interviews.

Moreso, we have ourselves translated the quotes, periodically contextualizing pieces of missing audio, ensuring an accurate depiction of the interviewees' experiences.

Finally, we coded our interviews as part of the process to gain insights and develop a deeper understanding of the empirical data collected from both the interviews and workshops. Coding serves as a method to sort and categorize data. According to Kristensen (2020), there is no single "true" method for coding, but certain reflections can guide the process. One important question is: *what should we code for?*

Since our thesis aims to understand users' experience with music streaming services, our primary focus during coding was to identify quotes or analytical points that could help us build our arguments, as these are essential for supporting any theoretical claims. Kristensen (2020) describes this approach as theoretical and keyword-driven coding, where prior knowledge of the field is crucial for identifying keywords or concepts before the coding process begins.

In our case, we started by defining broad categories for coding, allowing us to ensure a shared understanding of the empirical data. This approach also made it possible to add more specific codes later if any patterns emerged. As outlined earlier in our interview guide, we initially used three main theoretical concepts, namely autonomy, agency and relations (network), to guide our first round of coding.

However, to deepen our analysis of the empirical data, we also employed in vivo coding, which gave us the flexibility to identify new or unanticipated codes and categories. We used the software program NVivo for this coding process.

4.1.4 Reflection on Interviews

A few words of reflection of our process of interviewing people. There are two different reflections we felt should be mentioned as an important note to be transparent. Firstly, selecting our interviewees the challenges of that. Choosing interviewees can be a daunting

task, as it is never possible to predict the content of the interviews, we therefore chose our interviewees based on casual talks of their use of music streaming services and other prior knowledge of the person being interviewed. We did that as a way to ensure our interviews would be somewhat fruitful.

We argue for the justification of handpicking our interviewees, as a means to create a specific context of people using music streaming services to a large enough degree that analytic arguments could contribute to our analysis.

Another reflective point we would like to highlight is that some interviews ultimately were not included in the project. While this may seem like a mistake, it is rather a consequence of our attempt to capture more than just words by allowing interviewees to play music during the conversation. The idea was that music could serve as a prompt, steering the discussion in different directions. According to Mette Abildsgaard (2018), in materiality-oriented interviews such artifacts can be valuable tools for facilitating dialogue, enriching interviews and prompting memories (Abildsgaard 2018).

However, in practice, the presence of music introduced an unexpected challenge. The background noise interfered with our recordings, making parts of the interviews difficult to transcribe accurately. To ensure we represented our interviewees as faithfully as possible, we later reached out to some of them via email or other means, asking them to repeat key responses. This allowed us to preserve the integrity of their contributions while learning from the experience for future research.

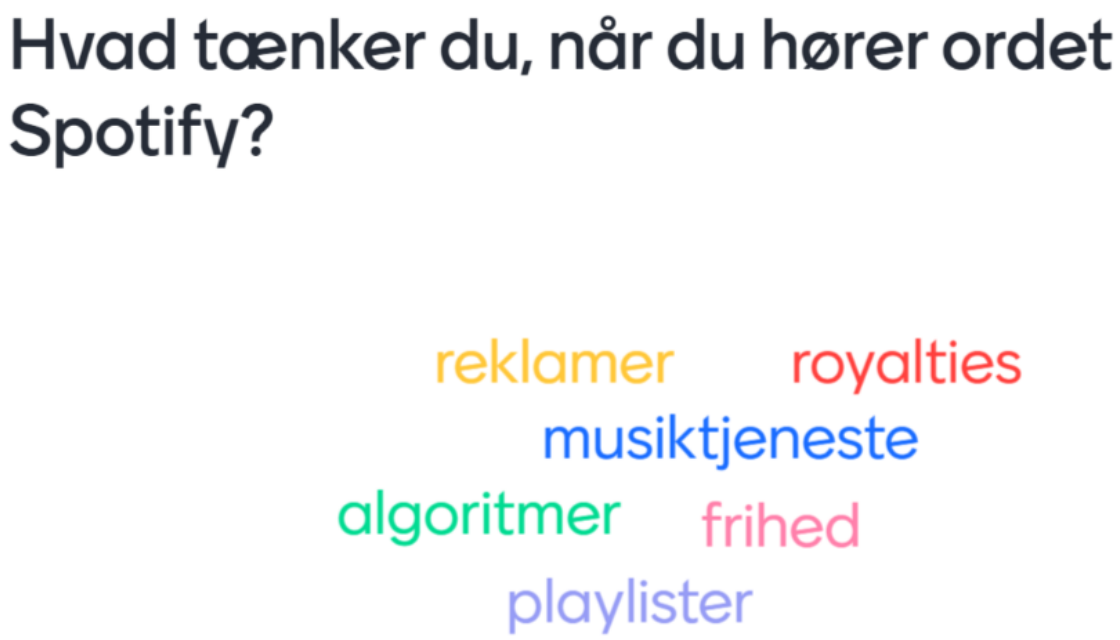
4.2 Future Workshop

The first of the two workshops we facilitated focuses on the use of Spotify among a diverse range of users, at least in terms of their level of engagement with music streaming services. Our aim was to foster meaningful discussions about participants' personal interactions with Spotify or other music streaming services, emphasizing its impact on their music discovery, listening habits and social interactions.

The idea is that this initial workshop functions as a pilot workshop, creating a baseline for a more design focused workshop. However, to kick off this initial future workshop, we started off with a word cloud activity designed to serve as an engaging icebreaker.

Participants are asked to input words that come to mind when they think of Spotify or other

music streaming services.



Appendix 4, Figure 3: Translation: What comes to mind when you think of Spotify?

The exercise helps us capture the individual and collective associations and perceptions they might have and create a more relaxed environment moving forward. It also gives us the opportunity to ask into the words they put up, starting a more casual conversation on different facets of the topic.

The structure and design of the first workshop is inspired by Robert Jungk and Norbert R. Müllert's *Future Workshop* from 1984. It is a participatory method that is designed to empower groups, giving them tools to think creatively and collectively about how to navigate challenges/the future of a certain topic (Jungk & Müllert 1984).

> *"The goal of a future workshop is not only to generate ideas but to empower participants to imagine and contribute to an improved version of the systems they interact with daily." (*Jungk & Müllert 1984:93)

We adopted a framework inspired by Robert Jungk and Norbert R. Müllert (1984), navigating through three distinct phases: 1) Critique Phase, 2) Utopian Phase and 3) Realization/Follow-up Phase.
Participants began by identifying critiques related to their personal experiences with Spotify, transforming these critiques into imaginative utopian scenarios. They then collaborated to develop multiple proposals for potential solutions, exploring how these ideas might be realized in practice. As Jungk and Müllert note,

> *"*(...) *the success of the workshop cannot be measured solely by the solutions it may produce; it is equally about the thoughts and reflections it 'leaves in the minds and behaviours of the participants'"* (Jungk & Müllert 1984:93).

This dynamic creates an environment where users can conceptualize their own interpretations of Spotify's influence, fostering dialogue in a loosely structured forum that encourages diverse perspectives and collective exploration (Jungk & Müllert 1984). It also reflects a somewhat interventionist effect of the workshop, if they afterwards reflect on how they use music streaming services.

4.2.1 Three phases of the future workshop:

4.2.1.1 Critique phase

The objective of the first phase is to identify any issues or challenges that relate to Spotify's recommendations of music. Unlike the word cloud exercise, we here ask the participants to openly discuss the platform of Spotify with the aim to uncover their thoughts or frustrations in that regard.

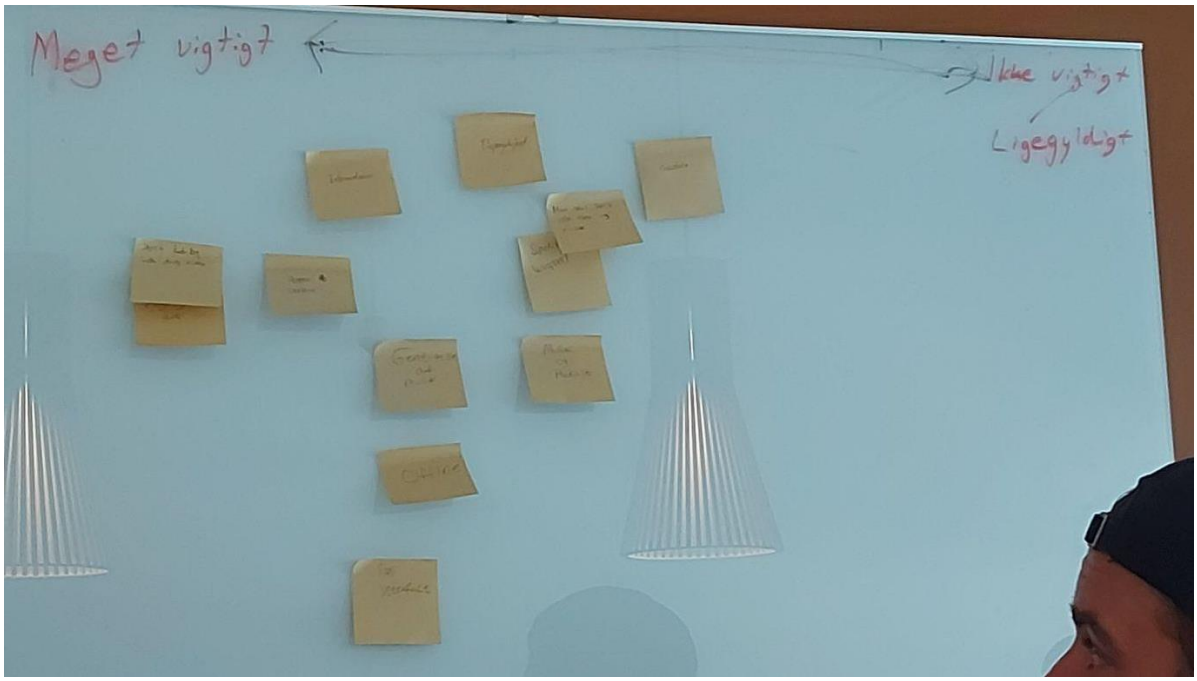
Participants are encouraged to voice their concerns, no matter how critical they may be. This process provides an opportunity for individuals to articulate their frustrations, anxieties and overall experiences (Jungk & Müllert 1984). The participants then discussed their experiences with Spotify's recommendations or anything related to Spotify, what they like, what they find limiting and how the recommendation systems might have shaped their listening habits.
If they struggle throughout, we prompt them with a few perspectives; that could be 1) the discovery of new music through Spotify or 2) Spotify's music recommendations

(Personalized recommendations, playlist continuation, daily/weekly/new music Friday list etc.).

We urged the participants to jot down these experiences in a brief sentence or single word, on the provided post-it notes, to help identify specific issues or challenges users face. We asked the participants if they recognized similar experiences across the board to spark a discussion on what the important mechanics or features of a music streaming service is.

We then asked the participants to prioritize these issues, focusing on those that most significantly impact the user experience, ranking them from least to most important issues.

This was first to be done individually, then to discuss the placements in a collective manner, fostering conversations on their personal view on the issues, see picture below:

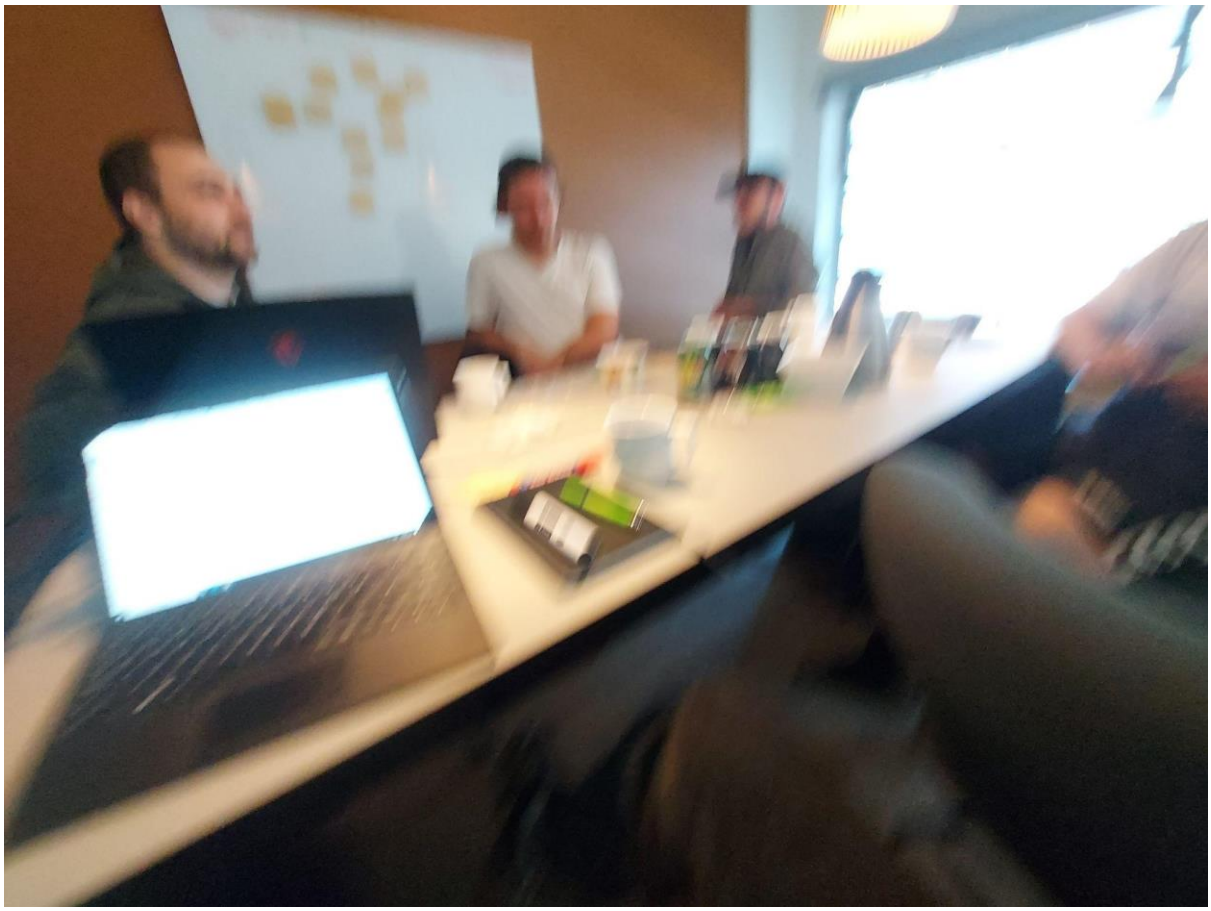


Appendix 5, Picture 1:

Categories are as follows:

Very Important - Important - Neutral/Unsure - Less Important - Unimportant

After the individual placements of issues on the scale, we asked them if something seems off and if they wanted to change anything, hopefully sparking a discussion on what they see as important factors.



Appendix 6, Picture 2: Terrible focus, but participants are almost unidentifiable.

4.2.1.2 Utopian phase

In this second phase, we asked the participants to imagine an ideal future for Spotify's recommender system and other features, without limitations, where users feel more in control and satisfied with their music consumption- and discovery experience. Essentially, what would the perfect version of Spotify look like and how would it function?

Due to the limitations imposed by our everyday routines, envisioning utopian possibilities can often be a daunting task. To facilitate this kind of innovative thinking, it is crucial that the utopia phase incorporates specific exercises that encourage participants to break free from conventional constraints (Nielsen 1993).

We do this through a creative brainstorm where users share their ideas with each other for how the recommender system could be improved. Participants envision and describe scenarios where the recommender system works perfectly for them.

This could include more transparency, customizable recommendation settings, e.g. better integration of user preferences or options to explore outside typical recommendations.
A set of innovative ideas and concepts for a more user-centric and flexible recommendation system.

4.2.1.3 Follow-up phase

The final phase of this future workshop's purpose was to develop actionable strategies to enhance Spotify's recommender system based on user input in some fashion. It was to be a critical trial of the utopian suggestions of the previous phase. Basically, what realistically can be done (Jungk & Müllert 1984).

We ask if they have any concrete suggestions on how to change the status quo of the recommender systems, building on the challenges and ideas from the previous phases. They were asked to assess the feasibility and potential impact of the ideas generated, selecting the most promising ones for further development.

Finishing off, we wanted to create a somewhat detailed set of proposals for how Spotify can refine its recommender system to better meet user needs and preferences, including specific features or changes that could be implemented. However, we decided to keep the flow of the conversation going as it was very fruitful in terms of insights and perspectives on their experiences.

4.3 Design Workshop

The design workshop is a follow-up to the initial Future Workshop conducted with Spotify users. The primary goal of this workshop is to synthesize insights from the critique and utopian phases of the first workshop into (somewhat) actionable ideas for a more autonomous and transparent music streaming service. Therefore, building on the insights from the initial Future Workshop, the design workshop follows another participatory design approach where users actively contribute to the design process.

> "*Participatory design workshops provide a platform for users to contribute their experiences and insights, fostering a collaborative space where ideas can evolve dynamically."* (Sanders & Stappers 2008:8)

The approach that this workshop thus adopted, provides us with a space in which the participants could collaboratively discuss ideas and features. The workshop's goal was to

leverage the collective knowledge and experiences of users to co-create hypothetical ideals of streaming services that prioritizes transparency in recommendation systems and empowers users to have more control over their music listening and discovery experience.
We regret to have to make this disclaimer:
The audio file of the workshop got corrupted before we could process the data. This results in us being limited to our notes taken during the workshop, as well as the subsequent memorable findings and insights, after we discovered the unfortunate circumstances.

4.3.1 Participants

Participants for the design workshop were selected based on their familiarity with music streaming platforms, particularly Spotify, as well as their diverse range of listening habits and personal interactions with recommender systems. The intention was to ensure a broad spectrum of user experiences, ranging from casual listeners to highly engaged music enthusiasts. Nielsen (1993) and Halkier (2020) emphasizes the importance of a diverse group of participants when conducting focus group interviews or workshops to capture different types of user experiences (Halkier 2020:169-170).
Although we wished for an even more diverse group of participants in terms of demographics, we were somewhat limited to our requirement of certain, although varying, levels of engagement with music streaming services.
List of participants:

- Simone, 32
- Emil, 27
- Astrid, 20

The participants were recruited through our own personal connections ensuring they had prior experience with Spotify or similar platforms. Although having a small number of participants has a negative side and a positive side. On one hand, it provides a small sample size of perspectives. On the other hand, it made it more intimate and easier for the participants to share their experiences and thoughts while also allowing us to facilitate in a controlled (yet free) manner.

4.3.2 Workshop Methodology, Design and Findings

As mentioned earlier in 4.3 Design Workshop, this second workshop is more focused on design elements, although building upon insights and issues gathered in the initial workshop. Based on that, we tried to design the workshop with this following question in mind:

> *What features, mechanics or actions would enhance user autonomy and control over music discovery and recommendations in a balanced manner?*

An issue that was identified, perhaps somewhat imposed, in the initial workshop was that the users, the participants, might feel restricted by recommendations that reinforce existing listening habits instead of introducing diverse or novel content or promotion of popular singles instead of albums.

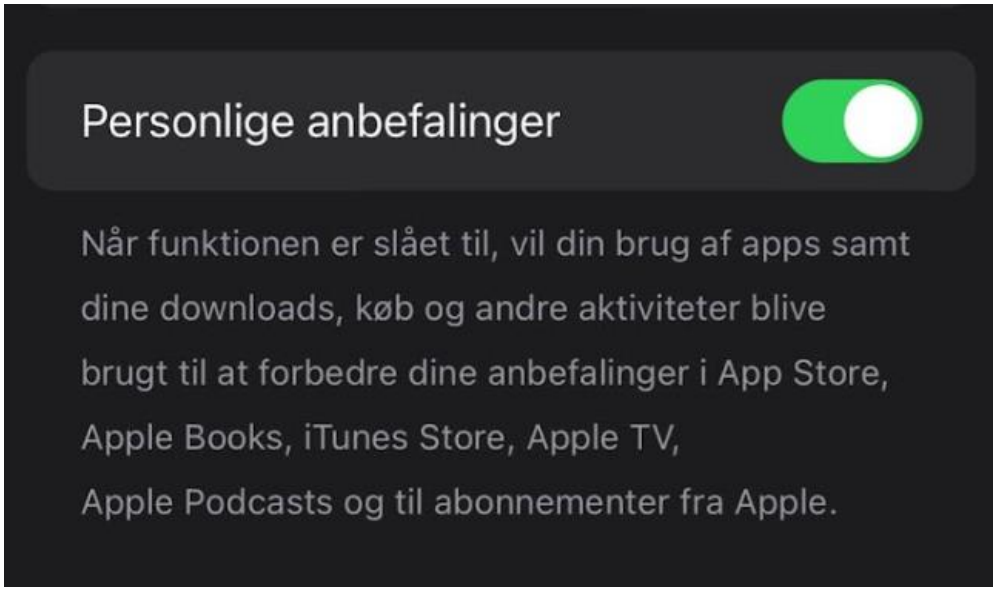
After a brief introduction of the project, we introduced the objective of this particular workshop and what we expected of them, in terms of what exercises we would go through. The participants collectively spoke on their experiences with music streaming services and expectations from this workshop.

Design workshops encourage "(...) *rapid ideation, iteration and user-centered problem-solving, ensuring that solutions are grounded in real user needs.*" (Brown 2008, 2009:42) and as we structure this workshop around vision boards, hands-on ideation and co-creation we align ourselves with the design thinking principles Tim Brown mentions in his work. We provided the participants with cutouts of a large selection of features from popular streaming platforms (Spotify, Apple Music, YouTube Music) to inspire participants and facilitate brainstorming, see picture below:

Appendix 7, Picture 3: 40+ features, mechanics and layouts

As we laid these cutouts out on the table, the participants were explicitly overwhelmed, firstly because of the sheer amount of stuff we imposed upon them and secondly because they were unfamiliar with many of the features.

Though one feature in particular all of them were excited about was the Apple feature of being able to limit (some of) the personalization aspects of the music streaming service, which they wished was available on their preferred platform (Spotify), see picture below:



Appendix 8, screenshot 1: Translation of text on picture: Personal recommendations - When the feature is enabled, your app usage, downloads, purchases and other activities will be used to improve your recommendations in the App Store, Apple Books, iTunes Store, Apple TV, Apple Podcasts and for Apple subscriptions.

An interesting take-away from both the overwhelmedness and the unfamiliarity of the features, is that even though the participants spend a considerate amount of time on streaming services, the platform design of Spotify, in this case, is not transparent in its features (or lack thereof) that might empower its users.

Appendix 9, Picture 4: an example of a layout with suggestions from participants

Many academics promote the importance of managing cognitive loads in workshop situations for effective idea generation (e.g., Sweller 1994, Brown 2008), so while we perhaps cognitively overloaded the participants with the sheer amount of features, it still sparked for them an interest in what features they had not yet discovered and what they might have missed out on.

On that note, participants were shown vision boards featuring different types of playlist layouts and front-page layouts, encouraging them to sketch out ideas using the cutouts, post-it notes with original ideas to visualize their concepts, see picture 4 above.

As participants engaged with the cutouts and vision boards, discussions naturally gravitated toward themes that they found most relevant to their experiences with streaming platforms. These themes were shaped by a combination of frustrations with existing platforms and aspirations for an ideal service.

To translate abstract ideas into tangible concepts, participants were encouraged to create some quick sketches of their envisioned interfaces/layouts using post-it notes, cutout features and the templates of existing UI layouts.

Appendix 10, Picture 5: Vision Board for playlist design

This aligns with Brown's design thinking approach, where externalizing ideas through sketches and prototypes allows the participants to refine abstract concepts into concrete solutions (Brown 2009:89).

One of the recurring themes was greater user autonomy in personalization settings, as we have depicted in the example with Apple offering the opportunity for this. It shows how providing users with control over personalization settings might enhance their autonomy and satisfaction, leading to better or more profound engagement with a given platform.

> *"*(...) *excessive tailoring without considering user input can lead to a narrow and biased view of the user's interests, ultimately diminishing the quality of recommendations"* (Ikezuruora 2024).

So, while the personalization of the recommendation systems requires some user input, the users are not always content with the extent to which they can influence or override these recommendations. Many of the workshop's participants expressed frustration with the "black box" nature of Spotify's recommendation systems, which often prioritizes engagement metrics over user-driven preferences. This frustration aligns with Nguyen's (2016) research on user experience with recommendation systems; they argue that some user control is well received to supplement prediction accuracy.

> "(...) *we should also allow users to adjust the level of popularity and serendipity. By increasing users' sense of control over what recommendations they receive, we can increase the perceived transparency of recommender systems about why certain items are suggested"* (Nguyen 2016:109).

With this we can argue that by providing users the option to adjust or customize recommendation settings, streaming services could empower users and their autonomy, align more closely with their preferences and facilitate a more (or less) personalized discovery experience.

Reflecting on the workshop, we might have overloaded the participants with information in our initial introduction, where we presented the outcomes of the Future Workshop as well as the sheer amount of features laid out, potentially influencing their contributions. It is a fine balance knowing exactly how much a priori information to present. Another reflection is that we could have had more participants, although the amount of participants has its ups and downs.

5 Analysis

The purpose of this analysis is to explore and understand how users perceive and experience Spotify, particularly through the lens of Actor-Network Theory.

On the basis of the information we have gathered through interviews and workshops we aim to contextualize the users' experiences in music streaming services with the theoretical frameworks of this thesis. The theoretical framework is intended to inform the analysis through creating an understanding of the relationships and dynamics within the Spotify ecosystem. It allows for a nuanced exploration of user perceptions and experiences, contextualizes empirical findings and enriches the discussion of ethical and practical implications. The analysis is meant to unfold meaningful connections between user experiences and broader socio-technical concepts, ultimately contributing to a deeper understanding of the user-platform relationship.

ANT provides a comprehensive understanding of the socio-technical dynamics at play, emphasizing the importance of both human and non-human actors in shaping user experiences.

The following discussion on social contract theory highlights the ethical considerations inherent in user-platform relationships, addressing issues of authority, agency and moral legitimacy.

These lenses enable a thorough exploration of how users navigate Spotify, revealing insights that can inform both political discussions and practical considerations for enhancing user experience. The analysis aims to uncover the complexities of user engagement with the platform as well as raises critical questions about the responsibilities of digital platforms in fostering equitable and just experiences for their users.

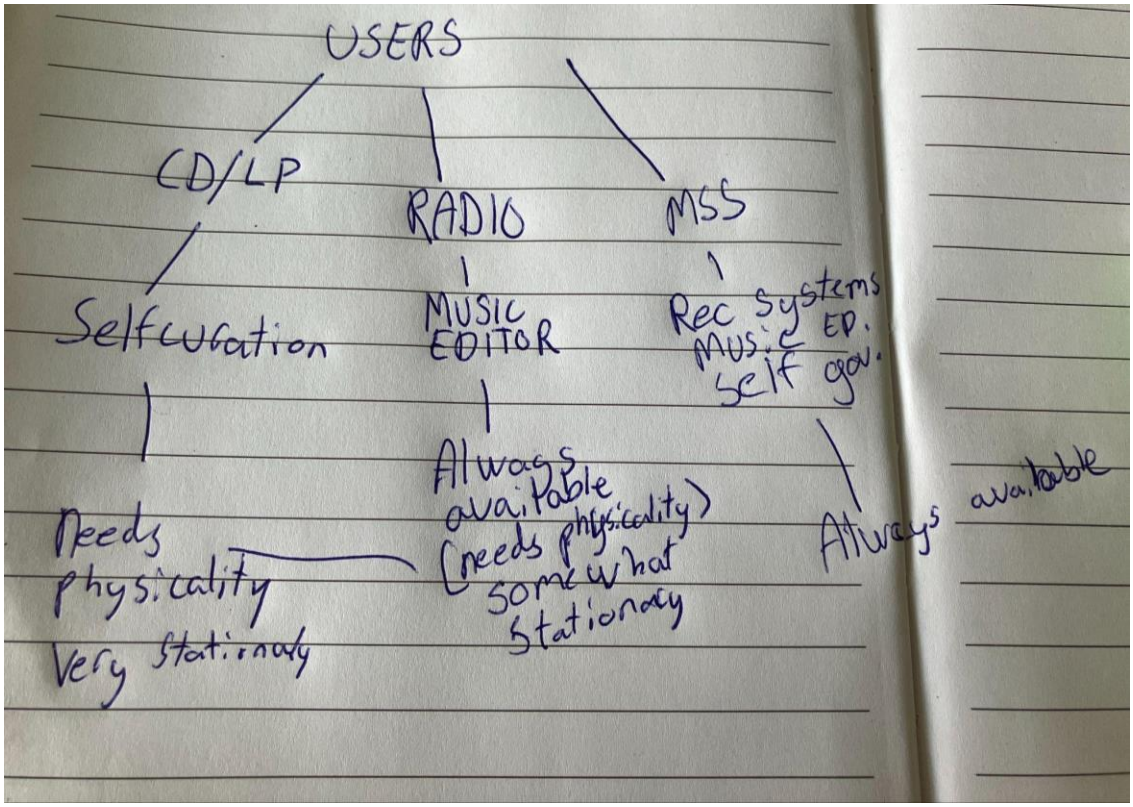
5.1 User-Platform Dynamics through Actor-Network Theory

To understand how users attempt to fulfil their needs for music consumption, we present a visual mapping of how our informants describe their expectations and experiences with different music mediums. A key finding from our interviews is that users' engagement with music consumption has evolved significantly since the pre-Spotify era. As Kristian explains:

> *"I was thinking about it as recently as yesterday, where there are some songs I hadn't heard in a long time, so I could go in and find them. You didn't do that in the old days*

when you had to change CDs. So, it has become much easier now" (Kristian 2024 pers.comm.).

This desire to access music instantly, any song, anywhere is a shift that demands much more from the medium compared to earlier formats, where such flexibility was not possible. By mapping out the dynamics between CDs/LPs, radio and Spotify as key mediums, we can examine how human and non-human actors (technology, platforms and recommendation systems) interact within the evolving landscape of music consumption.



Appendix 11, Figure 4:

CD and LP-based content existed in a network, in an ANT-fashion, where user control was central, although human actors, of course, still are able to navigate in that network. Listeners determined their collections by purchasing physical albums, which in turn dictated their listening experiences. CDs, in particular, allowed users to navigate albums more freely than LPs, offering functionalities like track selection and burning custom playlists (Waniata 2024). However, this system was physically constrained: users needed to own the albums they wanted to hear, store them and have the necessary playback equipment. Achieving the goal of portable, on-demand music required additional devices like a Discman (Hunt & Hawk 2023). This resonates with our informant Tai, who recalled listening to music through a radio/disc

player in his youth and how it enabled his access to music (Tai 2024 pers. comm.). Sony's promotion of CDs reinforced this shift:

> *"CDs reinforced their dominant position in a hit-based industry, as listeners could now fast-forward and song select to their favourite songs and listen to their music on-the-go* (Shapiro et al. 2012:13)*"*

By enabling more user control, CDs partially fulfilled the desire for "music on demand," though still within the physical limitations of the format (Guo 2023). Radio-based consumption, in contrast, operates within a network structured around broadcasters, where users engage with music passively. Traditional radio required access to radio towers and a receiving device, with early radios featuring built-in antennas. Users had limited control, relying on DJs and station programming to determine what they could hear. Over time, technological advancements allowed radio broadcasts to expand beyond traditional receivers to television and mobile phones, significantly increasing accessibility. While radio has always provided an avenue for casual and spontaneous discovery, it lacks the personalized agency that later platforms introduced (Jyoti and But 2018).

With Spotify, the dynamics of music consumption become more complex, incorporating human agency, algorithmic recommendation systems and social interaction. Spotify allows users to curate their listening experiences actively through searches and playlist creation or passively through its recommendation algorithms. This feedback loop, where users' behaviors refine future suggestions, results in a highly personalized experience. Unlike traditional radio, which offers convenience but limited control, Spotify gives listeners autonomy while integrating discovery mechanisms such as genre-based playlists. Similarly, while physical albums allow for personal collection-building, they are constrained by ownership and storage, limitations that Spotify eliminates with its vast digital library accessible on multiple devices. What further differentiates Spotify is its social integration. Songs, playlists and listening habits can be shared across platforms, turning personal music consumption into a socially connected experience. This shift has positioned streaming services as the dominant mode of music consumption. According to the World Economic Forum, 64% of global music consumption now happens via streaming (Alexander 2023). While this is not a direct statistical analysis, it supports the argument that users increasingly prefer platforms where they can shape their listening experiences.

Historically, music consumption was a transparent process: users consciously selected their

music by tuning into a radio station or playing a CD. Today, streaming services introduce additional layers of influence social interactions, user interfaces and recommender systems that subtly shape listening habits. As a result, listeners may become less aware of why they hear certain songs, often relying on autoplay or recommendation-driven selections. This interaction between users and platforms represents a shift in conscious autonomy and transparency. As we have discussed in the background and methodological chapters, the complexity of these systems makes it difficult for users to fully grasp the mechanisms shaping their listening experiences.

5.1.1 Actor-Network Dynamics

Human actors are central to the translation process within networks—they interpret, negotiate and transform the network's goals (Callon 1984). Users modify their listening habits based on recommendations, but also transform the system through their interaction, providing data for the recommender systems' refinement.
Latour (2005) emphasizes that non-human actors (like recommender systems) are as important as human actors in shaping networks. Recommender systems can thus influence user behavior and shape musical tastes, as Emil says:

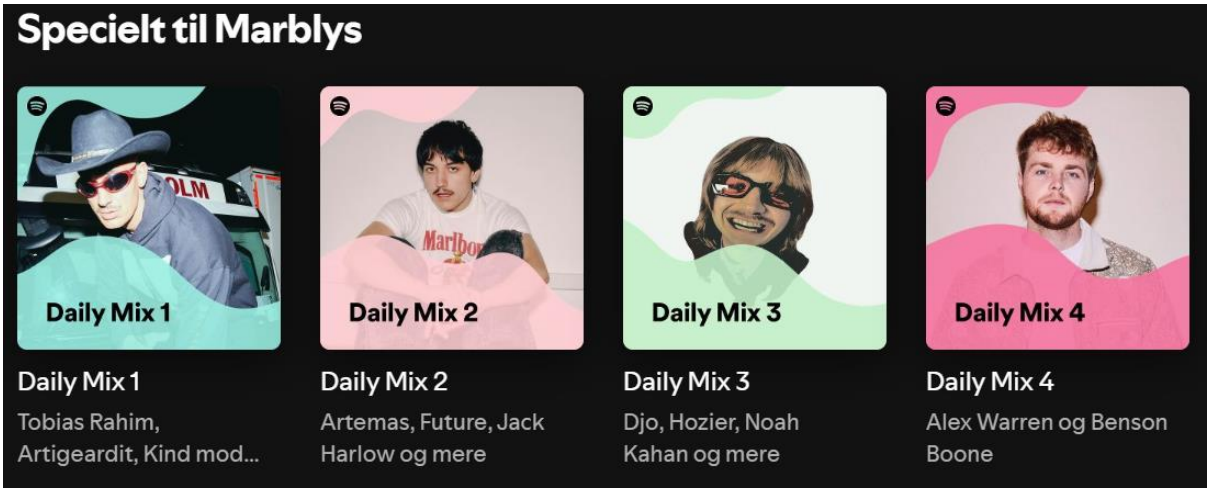
> *"I can't really control that very well. It's very indirect, but that's the style I play a lot. So, it tries to play that way on its own as well and that makes sense."* (Emil 2024 pers. comm.)

Recommender systems have "agency" within the network, producing feedback loops that refine and evolve their own processes, as we have gone over in 2.1.3. This becomes apparent when looking at some of the features of Spotify, take for example "Daily Mix" that creates a playlist for the user based on previous user inputs as well as other identifying factors of the user (i.e. age, gender, location).
Spotify writes:

> *"*(...) *we believe that your taste profile is the most important input when it comes to providing you with the best overall user experience. (...) If you choose German as your language in Spotify, we might recommend podcasts in German to you."* (Spotify 2025e).

> And: *"If many users interact with a specific search result (e.g., a song or a podcast),*

we are likely to recommend that result to other users who search for similar things" (Spotify 2025e)



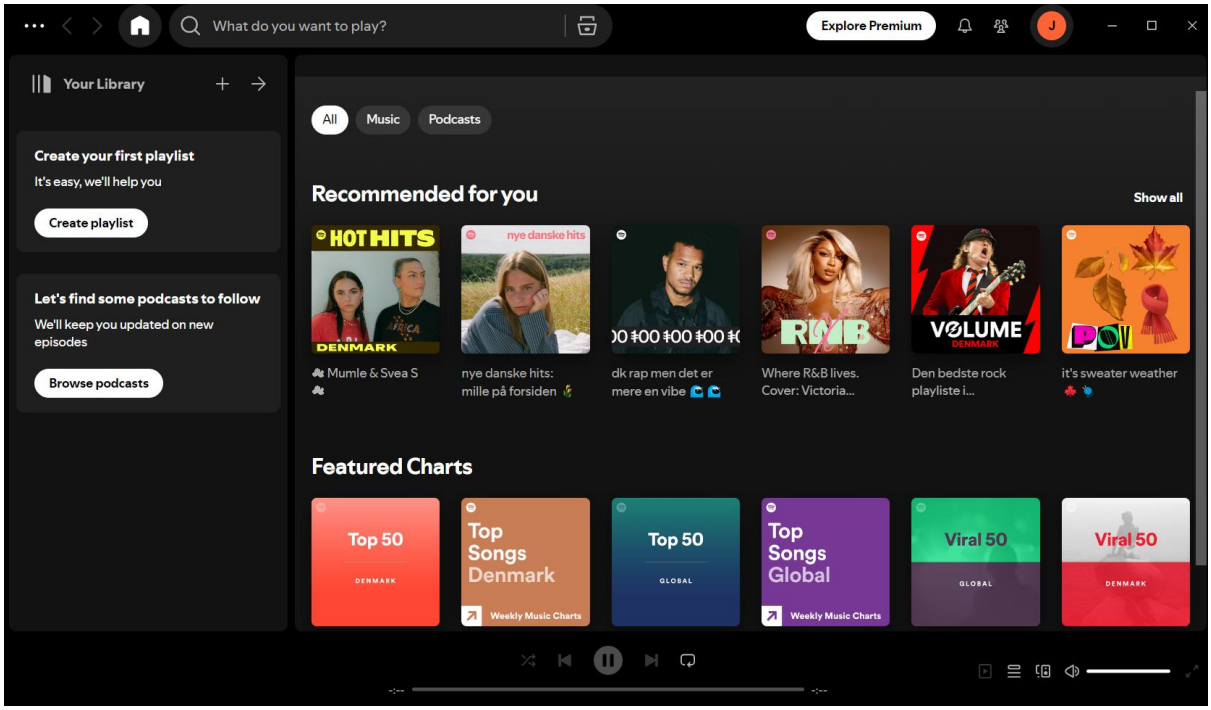
Appendix 12, Screenshot 2: Example of Daily Mix playlists; screenshot of freshly made Spotify account.

These statements above from Spotify highlight how its recommender system adapts and evolves through user interactions and demographics. By using a combination of user preferences, language settings and popular trends within the user base, Spotify's recommender systems create personalized content, such as the “Daily Mix” playlist, that reflects individual tastes, user behaviors and demographic information. It demonstrates how recommender systems possess a form of agency, constantly refining user experiences through feedback loops that integrate both individual and collective data.

5.1.2 The Black Boxes

Through our various interviews and workshops, we can identify when the different functionalities of Spotify become black boxes for users. While Spotify describes in great detail how they personalize content for users (See 2.1.3), the inner workings of the recommendations remain black boxed for the users.

In our experience of creating a new account, as well as on our personal accounts, we are told that we have a taste profile that is personalized to our preferences, but we do not get any introduction or explanation for how we are recommended specific music, only that it is based on our music taste. For example, in the screenshot below of a freshly made Spotify account’s frontpage, we are shown “Recommended for you”-suggestions, but we are not shown what it is basing the recommendations on.



Appendix 13, Screenshot 3: Example of Daily Mix playlists; screenshot of freshly made Spotify account.

To understand which factors it is basing the recommendations on, you are required to research it yourself, locating sources where Spotify explains how, what and why they are recommending specific music. An example of this is Emil, who feels he lacks the ability to influence recommender systems effectively, particularly when it comes to enhancing their personalization.

> "*Yes, well, it's probably that, I don't think I have any way of doing something to make it better. I can't train the algorithm to have a personality, to make it more the way I would like it to be."* (Emil 2024 pers. comm.).

He feels pigeonholed into specific genres or styles by his perceived inability to tailor the recommendations to fit personal preferences. Another informant expresses her view:

> *"That's the problem. I mean, if you listen to some rock music one day, then you're suggested more of it."* (Nanna 2024 pers. comm.)

Nanna's comment on the other hand emphasizes how the recommender systems' perceived reactive nature can lead to an echo chamber effect or a sort of feedback loop.
Emil and Nanna both underscore some effects of recommender systems. However, they are somewhat on the opposite side of the discussion. They both imply an effect of their input, but

not necessarily in a positive way in terms of the output they receive. They recognize it as a somewhat problem, they accept the limitations of the recommender systems as a part of their music experience. This acceptance highlights a tendency to overlook the mechanisms behind recommendation systems. As Latour defines it, *"A black box is a device that has become so widely accepted that it no longer needs to be questioned"* (Latour 1987).
Emil and Nanna's experiences show a tension between reliance on these systems and frustration with their outputs. Emil feels pigeonholed by genre-specific recommendations, sensing that he lacks the agency to influence the algorithm to match his evolving taste. Nanna points out the echo chamber effect, where the system reinforces existing preferences (or listening history) and limits exposure to new music. As a result, users (or us as researchers) often find themselves in a position where *"*(...) *attention shifts to the input and output processes, while the mechanisms that generate these outcomes go unquestioned"* (Latour 1999). We thus remain unclear about how the recommender system generates its output; we only know that it is related to the input of the user and other obscure mechanisms within the system.

> *"The way scientific and technical work is made invisible by its own success. When a machine runs efficiently, when a matter of fact is settled, one needs to focus only on its inputs and outputs and not on its internal complexity. Thus, paradoxically, the more science and technology succeed, the more opaque and obscure they become"* (Latour 1987:304).

In this framework then Spotify's recommender systems serve as black boxes, obscure and abstract technologies that are challenging to unpack. These systems receive data as inputs and produce recommendations as outputs, all hidden beneath layers of complex inner workings that Spotify themselves do not necessarily understand entirely.

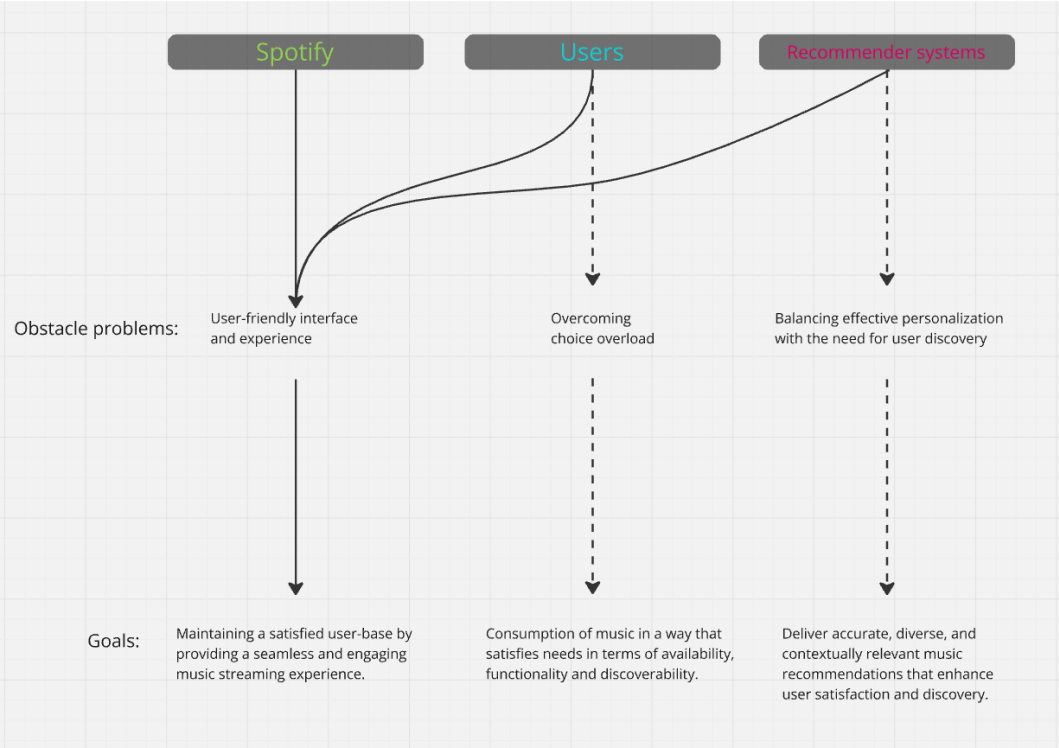
5.2.3 Translation Processes

As we've touched on in the chapter on theoretical background, platforms (like Spotify) function as powerful mediators that shape the interactions between human and non-human actors within digital ecosystems. Building on Actor-Network Theory (ANT), particularly Michel Callon's work *"Some Elements of a Sociology of Translation: Domestication of the Scallops and the Fishermen of St. Brieuc Bay"* (1984), we use this framework to analyze how Spotify translates users' listening habits and music tastes, positioning itself as a spokesperson for these actors. This approach allows us to explore the moments of translation where Spotify

negotiates the identities and roles of key actors, i.e. users, recommender systems and music etc.. We examine how Spotify captures users' behaviours, interprets their preferences and feeds them back into the system to personalize recommendations. It is in these moments of translation, the boundaries of agency and autonomy between users and the platform are negotiated.

5.2.4 Problematization

The first moment of translation is the problematization where an actor can become an obligatory point of passage (OPP) within a network. This means that other actors must navigate through the OPP to reach their own goals or create connections. As a result, the OPP plays a critical role in shaping the network's structure and influencing the process of problematization through translation (Callon 1984).



Appendix 14, Figure 5: Obligatory Point of Passage, Spotify

Spotify’s role as the OPP is to balance between the needs of users and the operation of the recommendation systems to maintain a competitive advantage. Its goal is to offer a user-friendly experience that ensures high user satisfaction and this is achieved by effectively integrating recommendation systems into the platform.

The obstacle problem for Spotify is ensuring that the user interface is seamless, functional

and engaging enough to retain users in a highly competitive streaming market.
Based on our research, one of the user goals is to listen to whatever music they want anytime they want, defined by us as a *"consumption of music in a way that satisfies needs in terms of availability, functionality and discoverability"*. Spotify provides this in a way that physical music or radio listening does not (see 2.1.1 & 5.1.1).
Users approach Spotify with the goal of accessing a vast catalogue of music that meets their needs for availability, discoverability and personalization. However, they encounter a barrier in the form of choice overload, where the sheer amount of content can make decision-making overwhelming. Users rely on Spotify's recommendation systems to navigate this abundance of content. The recommendation systems mediate their interaction with the platform, filtering options and personalizing suggestions. This reliance further positions Spotify as an OPP because users can't fully realize their goals without engaging with the recommendation systems that help them find new music or rediscover old favourites.
The users' goals are to consume music easily and efficiently, with minimal friction. However, overcoming the obstacle of choice overload requires them to trust the platform's recommendation system, thus binding them to Spotify as a way to optimize their experience.
Recommendation systems play a central role in the network. Spotify uses these systems to frame user behaviour and interactions by curating content and personalizing experiences. These recommendation systems act as gatekeepers, mediating access to information and controlling the flow of interactions within the network, thus functioning as an OPP that dictates how users and content creators engage with the platform (Leisewitz & Musgrave 2022). The goal of recommendation systems is to ensure that the user experience is satisfying, varied and engaging. Since they play an integral role in content discovery, these systems act as a gatekeeper and thus, they occupy an OPP-like position between users and the vast music catalogue, in turn making Spotify the true OPP. Spotify's ability to maintain user satisfaction hinges on the success of these recommendation algorithms in filtering out irrelevant content and introducing new music.
During the first workshop both Alexander and Kristian regard the vast catalogue of Spotify to be the most important feature of the platform and is the main reason they utilize the service. For example, this quote from Alexander explicitly states that you're missing out if you do not use Spotify:

> *"Spotify has the largest catalogue, they were the first, so if you're not there, you're missing out"* (Alexander 2024 pers. comm.).

His statement highlights how Spotify's extensive music library and early market presence have solidified its role as the dominant streaming platform. For Alexander, the sheer size of the catalogue is not just a convenience but somewhat of a necessity.

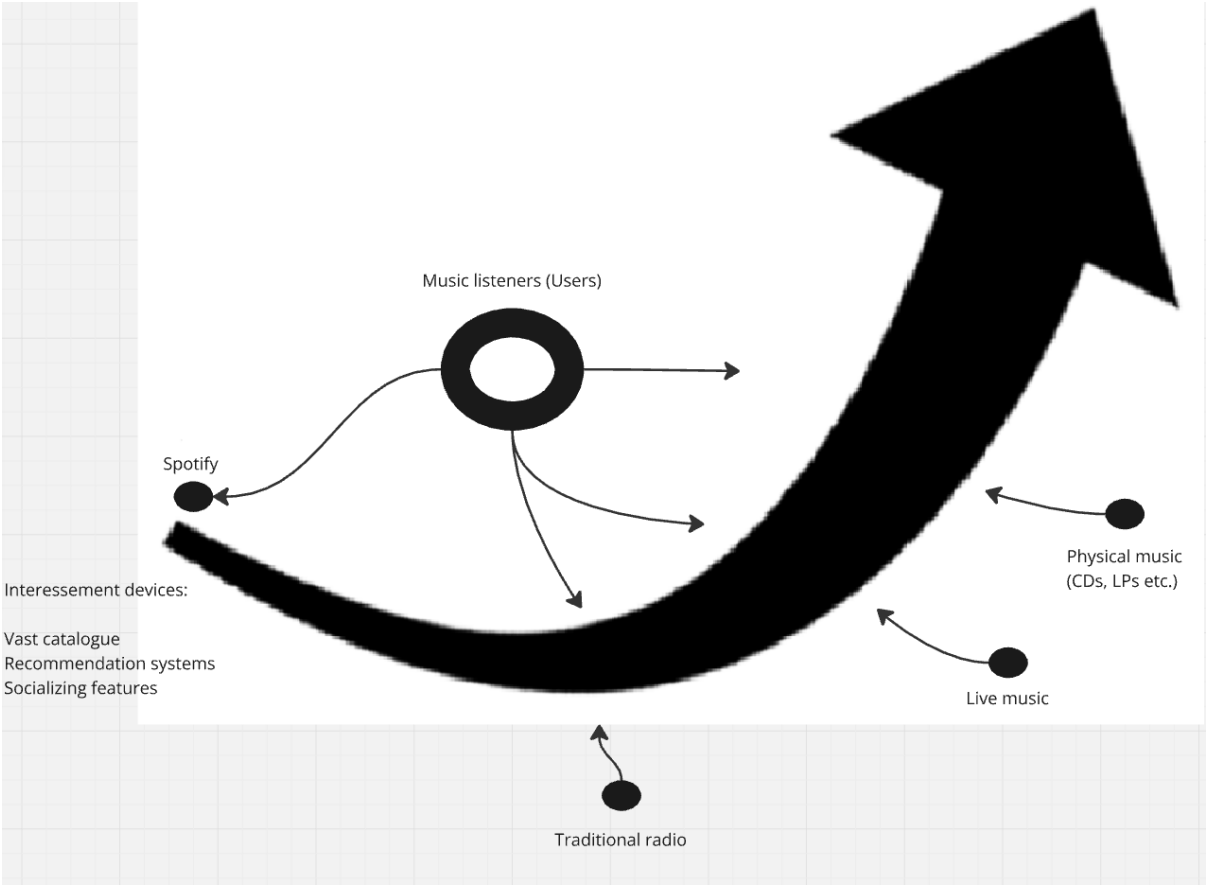
5.2.5 Interessement

To explain further upon Callon's notion of translation, we dive into the concept of *Interessement,* a continuation of translation after the problematization. Callon gives this notion a double meaning from the word *inter-esse* as it divides the meaning to be both of in between and to literally have an interest (Callon 1984). By taking this notion into account of how actors within the network recognize spotify as an obligatory point of passage as a way to cement spotify (MSS) as a key contributor to enabling its users to reach their (network)-goals.

> *"Interessement is the group of actions by which an entity attempts to impose and stabilize the identity of the other actors it defines through its problematization. Different devices are used to implement these actions."* (Callon 1984:8)

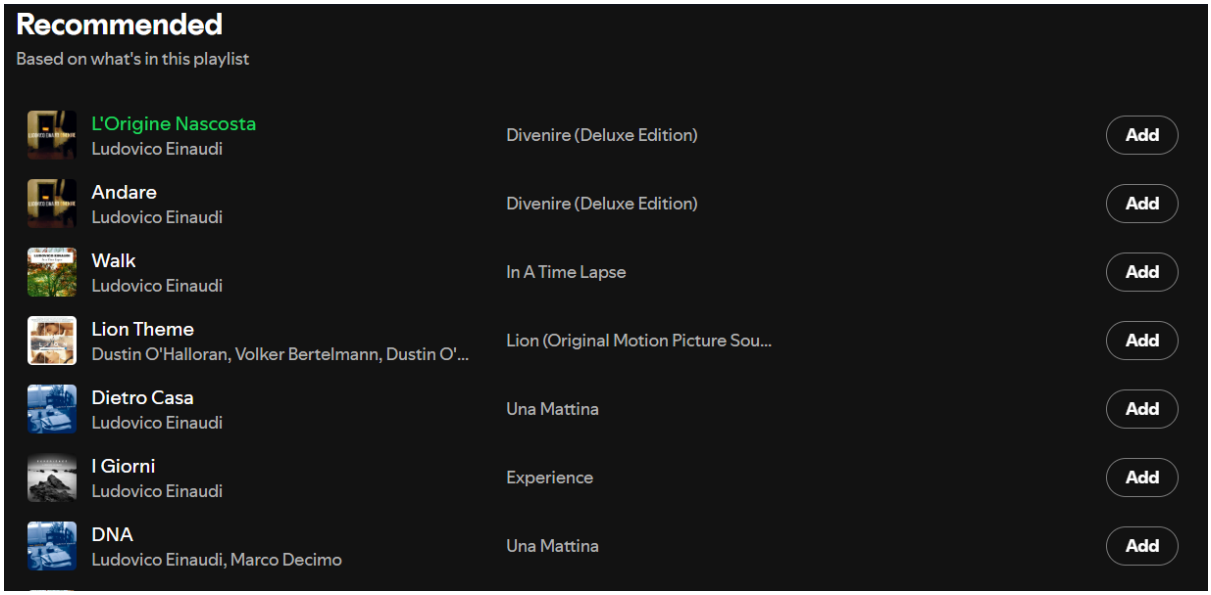
Spotify uses all sorts of different interessement devices, namely the features we highlight in Callon's device of interessement model, to impose themselves in order to create a stabilization. By leveraging these mechanisms, Spotify seeks to stabilize its network by disconnecting actors (such as users and other platforms) from their initial interests and aligning them with Spotify's own objectives.
To illustrate this dynamic, we use a model based on Callon's framework, showcasing how Spotify strategically positions itself to maintain influence and connectivity within its network. Callon explains the model below:

> *"A interests B by cutting or weakening all the links between B and the invisible (or at times quite visible) group of other entities C, D, E, etc. who may want to link themselves to B"* (Callon 1984).



Appendix 15, Figure 6: Our version of Callon's model

Spotify's recommendation systems thus serve as forms of interessement. Platforms like Spotify translate user behaviours into data points, which are then used to create personalized experiences through recommendation systems (van Dijck, Poell & de Waal 2018). These systems stabilize the users' roles by locking them into certain patterns of interaction, often shaping their preferences and behaviours in ways that align with the platform's objectives. This process limits the diversity of content users encounter, reinforcing certain user behaviours while excluding alternative possibilities (Aggarwal 2022).



Appendix 17, Screenshot 4: Playlist recommendations

A feature such as when Spotify recommends music based on a playlist showcases how Spotify locks in users to continue their listening after finishing a playlist. By adding new songs (the feature will continue after the seventh song) Spotify creates a habit for its users to stay put and not look into different ways of listening to music as it continues playing songs.

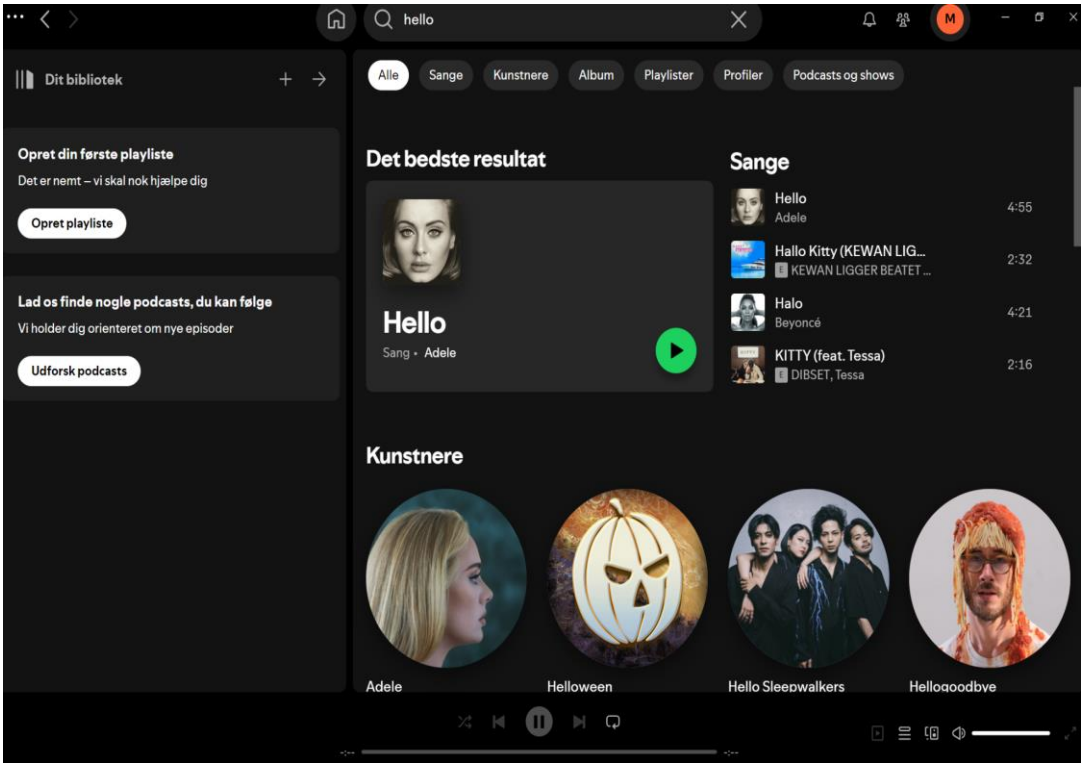
This is something our informants confirm throughout our interviews, as Tai explains:

> *"The last one I use a lot, the daily mixes and the various mixes they have; I've never really thought they were good (...) The thing where they continue a playlist, that's really great. I use it a lot because it seems to find something that fits in.*(Tai 2024 pers. comm.)

Our notion of recommender systems as interessement devices enables Spotify to hold its users to their platform, as it continues to play music after a playlist ends. This creates a cut-off for its users to not seek outside the platform to find and listen to new music somewhere else.

However this is not the only device Spotify uses, as mentioned earlier, one of the main objectives for its users is the access to a vast catalogue, fulfilling the sense that Spotify

contains all music in the world. To establish the sense of having a vast catalogue, Spotify uses the search function combined with the catalogue as an interessement that enables its users to find almost any music they would like to listen to.



Appendix 18, Screenshot 5: Spotify's search engine, showcasing the results of a search query of “Hello”

According to one of informants Emil, Spotify establishes themself with this interessement device to keep its users on the platform, as he describes his encounter with the interessement device:

> *“The search engine, I actually have good experiences with it. For example, I’ve tried searching for lyrics of a song I heard on the radio on Google, but I couldn’t find it at all, even though I typed in a lot of the lyrics. Then I tried typing it on Spotify and the song came up pretty easily"* (Emil 2024 pers.comm.).

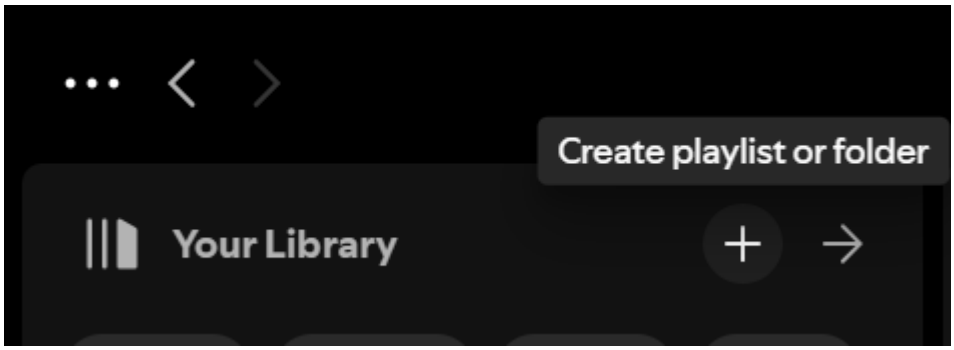
Emil does not have to leave Spotify in order to find new or old music, he can find it whenever he likes and as Spotify enables search queries to extend to more than just song names, bands

and albums. To increase the use of the catalogue and search function as an interessement device, Spotify have used language models allowing for more complicated searches, such as topics in their podcasts or lyrics from songs (Tamorrino 2022)

Increasing the access to the catalogue, as Emil explains, gives him no reason to find and listen to music elsewhere, as he believes he can access what he likes, defaulting him into cutting off radio and CDs to find the music he likes as they do not have the interessement device.

Additionally, Spotify utilizes its playlist creation feature as a means to engage users in curating its extensive music catalogue. This function serves as an interessement device, allowing users to do more than just play a song, they can actively discover, organize and customize music. By enabling users to arrange tracks according to their preferences, Spotify encourages a deeper interaction with its platform. As Alexander describes: *"You can use a playlist instead of a CD. It becomes your own CD"* (Alexander 2024 pers. comm.).

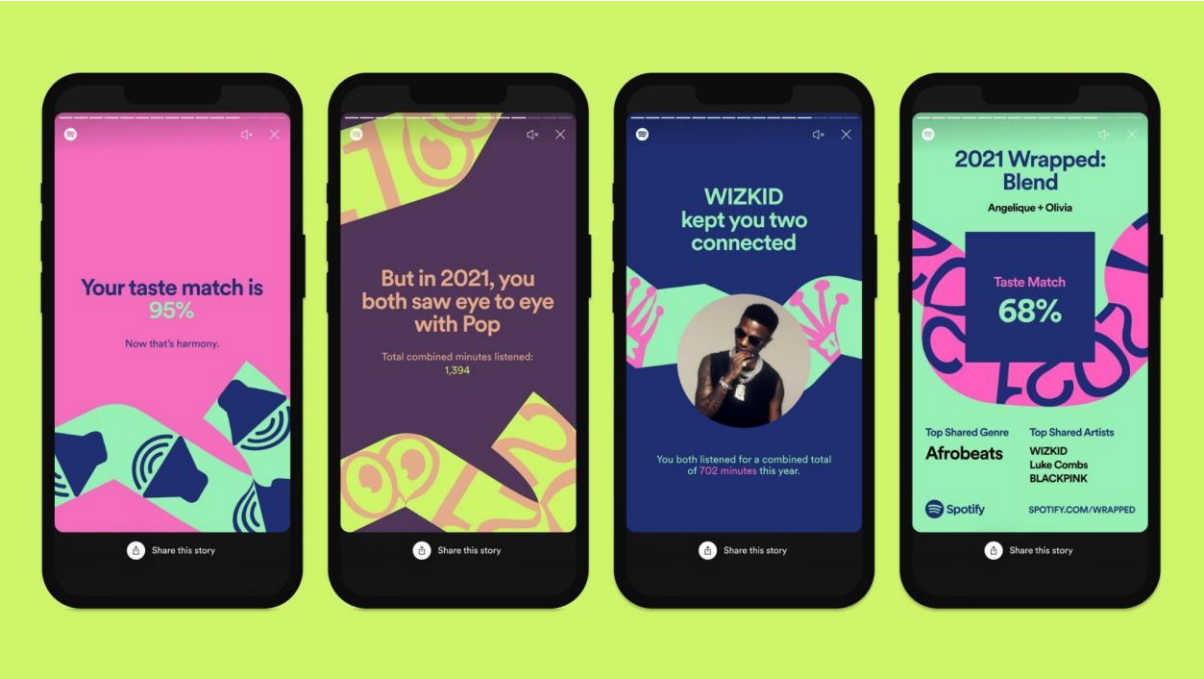
This personalization lets users modify playlists based on their mood, adding or removing songs to suit their needs, which neither traditional albums nor radio stations can offer. By empowering users to mix and match tracks, Spotify effectively uses interessement devices to draw users away from other formats, solidifying its place within the music streaming network.



Appendix 19, Screenshot 6: picture of create a playlist or folder, showcasing the function of curating a list or albums catered to your needs

Spotify integrates three key social features to enhance user engagement. First, the Blend feature allows two users to merge their music tastes into a shared playlist, offering a curated mix of their favorite songs while introducing them to new tracks. Additionally, Spotify

utilizes features like Wrapped and What's Your Music Generation, which analyze user listening data to provide personalized insights.



Appendix 20, Screenshot 7: picture of blend, one of the mentioned interessement devices. Blend showcases a comparison between to users music habits

These features not only expand users' awareness of their music habits but also encourage social interaction by enabling them to share their results in social settings.

> *"Spotify Wrapped is a cool thing; we share it among friends and talk about it every year. It helps remind us of what we listened to."* (Kristian 2024 pers.comm.)

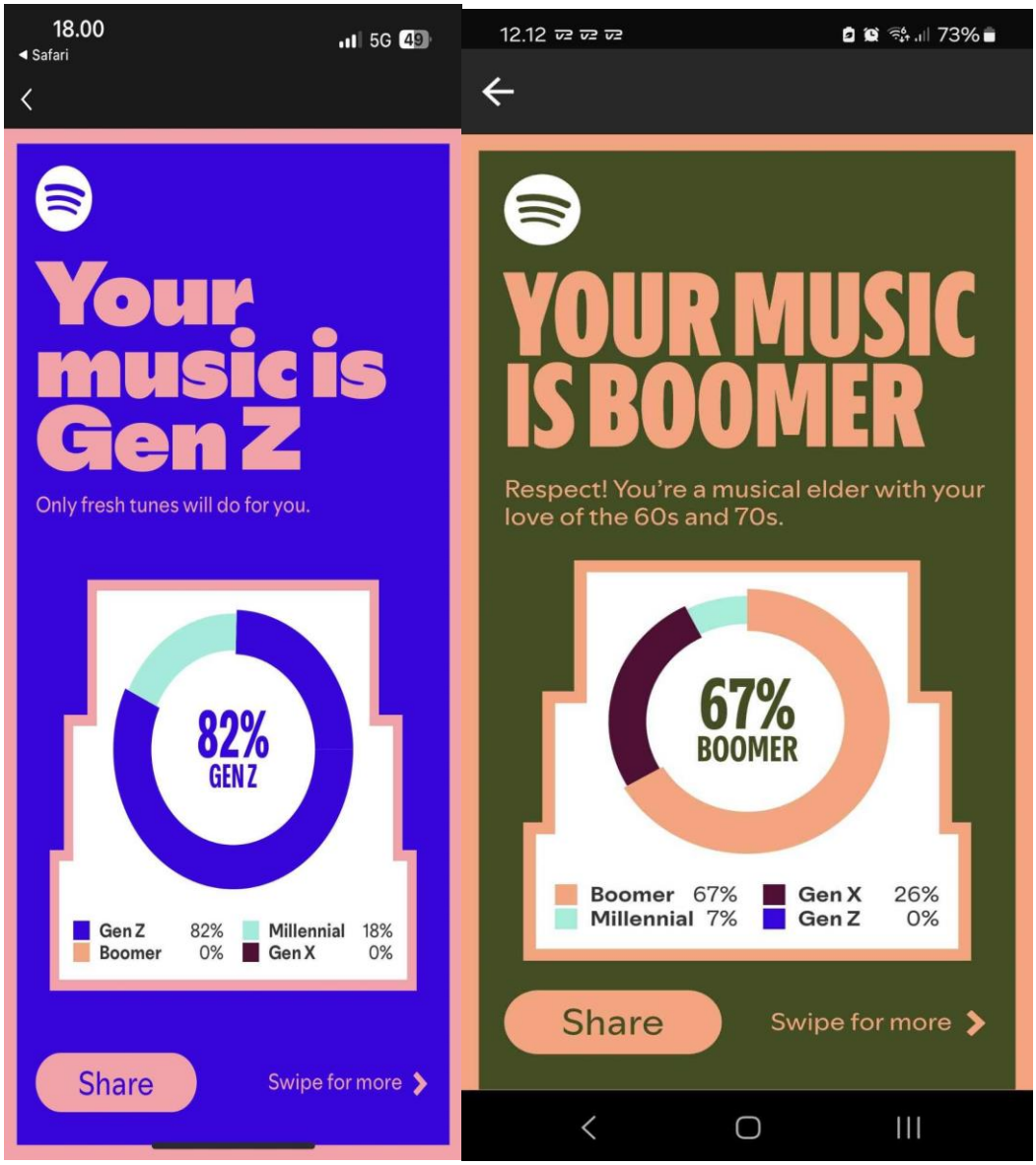
Sharing with friends is something Kristian notes as being fun and notable as they do it every year. As an interessement device it gives users a reason to stay connected with friends and the platform. As Kristian explains, he enjoys the social aspect of being teased for certain artists appearing in his yearly Wrapped. This kind of playful interaction wouldn't have occurred with CDs or radio, as tracking one's listening habits over an entire year would have required significant effort. The ability to effortlessly share and reflect on one's music consumption

highlights how digital platforms have transformed social engagement with music. However, this shift also creates a disconnect from earlier, more tangible forms of music socialization, as sharing no longer requires physical interactions but happens seamlessly online.
Astrid also comments on this socialising feature, as she notes:

> *"Even though I'm not proud to admit it, I do care a bit about what people see me listening to on Spotify. It's a social media platform where you can follow your friends and acquaintances. Sometimes, I finish by playing a song I know fits well into a certain category, even though I was actually listening to something completely different before."* (Astrid 2024 pers. comm.)

Astrid's comments highlight how Spotify has effectively positioned itself as both a music streaming service and a social platform. Her awareness of how her listening habits are perceived by others demonstrates how Spotify functions as an interessement device, influencing users to care about the image their music choices project. Unlike CDs or radio, which lack built-in sharing mechanisms, Spotify fosters a space where social validation and self-presentation play a role in music consumption. Both Kristian and Astrid emphasize that the ability to share and view listening histories not only enhances their engagement but also incentivizes them to remain on the platform, reinforcing the social connectivity that keeps users invested.

On that note, the *"What is Your Music Generation?"* feature further exemplifies how Spotify integrates personalization with social engagement. By placing users' music tastes within a historical context, it not only deepens their understanding of their listening habits but also creates another opportunity for social interaction.



Appendix 21, Screenshot 8: Generation

5.2.6 Enrolment

Spotify's wish to convince actors to join their network can be explored with Callons notion of enrolment, as Callon explains, enrolment involves describing a series of complex negotiations, trials and strategic manoeuvres that support the process of interessement and contribute to its success (Callon 1984).

Recommendation systems serve as spokespersons, representing both the users' personalised recommendations and the platform's commercial interests. For example, Spotify's recommendation system speaks on behalf of users by curating personalised playlists, but it also reflects the platform's broader business objectives (Spotify 2025). This dual role raises important ethical questions about the transparency of these digital spokespersons, as they shape user experiences and cultural consumption in ways that might prioritize profit over diversity and autonomy (Eriksson et al. 2019).

Though Spotify must convince or force the actors to use their interessement devices in order to ensure their enrolment is successful. However, as Emil below notes, it's not always simple to make it a successful enrolment:

> "*I often find it a problem to discover new music; I enjoy listening to music I already know.*" (Emil 2024 pers. comm.).

And as we have described, you could argue that since Emil tends to listen to music he's already enjoyed, the system will keep recommending songs he's familiar with rather than new discoveries, namely to keep him engaged with the platform.

This is also a point Tai brings up in the interview with him, as he critiques Spotify's recommendations to find new music as a feature he is less willing to participate with.

> "*Spotify's algorithm becomes too static in its suggestions* [lack of better recommendations]*, which ruins its functionality."* (Tai, pers. comm. 2024).

It could therefore be said that Spotify's interessement devices, in this case, do not contribute to a successful enrolment with all of its features, as neither Emil or Tai interacts intentionally with those specific features of Spotify.

Furthermore, users engage with Spotify's interessement devices; social features, such as visible profiles and interactions, encourage users to curate a musical identity that aligns with how they want to be perceived by others. As Astrid explains in the Design Workshop:

> *"In that way, you can manipulate your algorithm and personal profile. I know people check what others are listening to because a friend once told me he had seen that I was listening to a "cool" song. So, even though most people use Spotify to listen to their favorite songs or discover new genres, it also becomes a social media platform as soon as you interact with other profiles"* (Astrid 2024 pers. comm.).

Astrid argues how Spotify uses social interaction as an interessement device to enrol *and mobilize* users by allowing its users to engage with each other through making their listens viewable. This interplay makes Spotify both a personal tool and a platform for social and reflective engagement. Therefore, Spotify is successful with enrolment, as Astrid now actively chooses and curates music for other than her own enjoyment. Furthermore, also explains how she often ends her listening sessions with a song she believes is cool (Astrid 2024 pers. comm.). If that is the case, Spotify's social interaction interessement device ends up enrolling Astrid into the network.

Another social interessement device Spotify uses, as mentioned earlier, is Spotify Wrapped; this feature allows its users to send and share what music they have been listening to throughout the year. This can create a tension between its users and their habits, as it openly tells its users what they have been listening to whether they like it or not. Astrid elaborates:

> *"It confronts you with what you've listened to the most, which isn't always something you're proud of. For the past two years, my top artists have been Bremer/McCoy and Hvalfugl, because I use their music as background sound when I write, read or do practical tasks. But if people asked me what I listened to the most, I wouldn't answer with those same artists."* (Astrid 2024, pers.comm.).

It can be difficult for Spotify's users to be confronted with what music they listen to, as both Kristian and Astrid tell us how their top artists have been either something they have been teased a bit about. Kristian's top artist was Fie Laursen some years ago and Astrid had music that just functioned as background noise, not reflecting her music tastes satisfactorily. However, Spotify still manages to successfully enrol these users with their interessement devices as it is something they use and engage with yearly as it is something everyone does in their social circles, missing out on social engagement if they did not actively utilize the feature.

5.2.7 Mobilization

Spotify's recommendation systems become spokesperson for its users through its personalization, they speak on behalf of the users music preferences and suggest specific songs and playlists on that basis. Spotify's recommendation systems act as a spokesperson for its users' music preferences, it has through successful enrolment the ability to keep engagement high, even though it perhaps sometimes diminishes the exploration or discovery of new music.

The personalized playlists such as "Discover Weekly" and "Daily Mix," make this quite evident. The recommendation systems translate user behavior, listening habits, skips, likes and search activity into tailored recommendations. In this way, Spotify doesn't just reflect user preferences; it amplifies them, mobilizing its vast catalog of music to present an experience uniquely curated for each individual, continuing to keep users engaged, as expressed in the statement from Nanna:

> *"I don't think I'll ever stop having Spotify, because I often think, should I just save that money, especially since I don't even use it that much anymore. But I don't think that's ever going to happen. (...). Also because it's nice to just put on music, for example, if you're with other people or in a car or something, so there's nothing that would make me delete it."* (Nanna 2024 pers. comm.).

Through personalization, Spotify ensures that users remain enrolled in its ecosystem. Nanna's statement reflects how deeply this mobilization has taken hold: the platform's convenience and ability to create situationally relevant soundscapes (for driving, socializing or relaxing) make it irreplaceable. Thereby Spotify has not only stabilized its network but also continuously extends its reach, mobilizing its catalog of music in ways that users might not even consciously demand but nonetheless come to rely on.

> *"There are small nuances, but I don't know. It's maybe also a very narrow genre, which is easy to figure out, but maybe, I don't know, I mean... Yeah, I wish I knew more technically about how it does it, but I just think it hits the mark, at least 90% of the time."* (Martin 2024 pers. comm).

Martin's acknowledgment of Spotify's precision reveals another layer of mobilization: the emotional and practical reliance on the system, even in moments when users do not consciously think about its mechanics. This dynamic is crucial to the platform's durability.

Spotify’s ability to "hit the mark" with its recommendations 90% of the time creates a feedback loop of trust, where users come to expect and depend on the platform’s accuracy. Another of Spotify’s social features, such as the ability to see friends’ listening activity, amplifies mobilization by fostering social dynamics around music tastes. Astrid explains how this visibility shapes their behavior:

> *"Even though I’m not happy to admit it, I do care a bit about people being able to see what I’m listening to on Spotify. It’s a social media platform where you can follow your friends and acquaintances. Sometimes I’ve ended a session by listening to a song that I know is well-received, even though I was actually listening to something completely different before. I’ve done that because I know people can see the last song others have listened to.* (Astrid 2024 pers. comm.)*"*.

She implies how Spotify integrates social media dynamics into its platform, transforming listening into a somewhat performative act. By making listening activity visible, Spotify taps into users’ desire for social validation and identity curation. Users may actively shape their behavior to project a particular image, further embedding Spotify into their routines and social practices. This form of social performativity reinforces a Callon-esque mobilization, as the platform becomes not just a tool for personal music consumption but also a medium for social interaction and cultural exchange.

5.3 Partial conclusion on Actor-Network Theory

In conclusion to the analysis, we argue that earlier formats of music media offered more control or passive discovery, while platforms now mediate experiences through opaque recommendation systems. This shift has made music consumption more personalized, but less transparent and autonomous.

The current state reflects a tension between autonomy and the subtle influence of recommendation systems, which shape not only what users listen to but how they perceive their experiences. These "black boxes," as Latour describes, obscure platform mechanisms, limiting user control while reinforcing listening habits. Ultimately, Spotify mobilizes and stabilizes user engagement, turning music consumption into a socially performative act embedded in both individual routines and collective behaviors.

By analyzing Spotify through Actor-Network Theory , we see how the platform acts as an obligatory point of passage, influencing user behavior via opaque recommendation systems, social features and personalized content. These mechanisms bind users to the platform, reinforcing habitual listening patterns while limiting autonomy and transparency.

Through interessement and enrolment, Spotify stabilizes user engagement by integrating both technological and social elements, creating a seamless and habitual music consumption process. While the platform offers convenience and personalization, it also curates user experiences, reducing opportunities for discovery and independent decision-making.

Additionally, the social dynamics fostered by features like Wrapped and Blend tie music consumption to identity and social validation, ensuring Spotify’s influence over both musical preferences and user behavior.

Spotify demonstrates mobilization, the way it continuously refines user experiences and encourages ongoing engagement through personalized content and social interactions. These features act as stabilizing devices that not only maintain user participation but also expand Spotify's network influence. Ultimately, Spotify’s transformation of music consumption into a new form of socially performative act underscores the tension between personalisation and user agency, revealing how recommendation systems and platform features actively shape modern music practices.

5.4 User Perceptions through Social Contract Theory

The intersection of technology and user autonomy presents a compelling landscape for examining how individuals navigate their relationships with digital platforms. In this chapter, we delve into user perceptions of Spotify, a dominant player in the music streaming industry, through the lens of social contract theory. Spotify's authority as a curatorial force in the music landscape prompts an examination of how users perceive its role in shaping their music consumption. This theoretical, philosophical framework illuminates the delicate balance between individual autonomy and the deterministic forces exerted by platform design and recommendation systems.

At the heart of this inquiry lies the tension between freedom of choice and the curated nature of content consumption. As Immanuel Kant notes,

> *"Act in accordance with the maxim that can be at the same time make itself a universal law"* (Kant 1797, Gregor 1997:44).

So while our actions may be influenced by external determinants, we perceive ourselves as free agents when acting in alignment with moral imperatives. This dichotomy resonates within the Spotify experience, where users are both empowered by extensive access to music and constrained by recommendations that shape their listening habits.

Drawing from insights gathered in user interviews and workshops, we explore the nuanced sentiments surrounding Spotify's influence—how its personalized features might enhance the listening experience while simultaneously raising questions about the implications of relying on curated content.

We consider how users rationalize their engagement with Spotify, addressing the moral and ethical dimensions of their consumption choices. Are users relinquishing responsibility for their musical tastes to the platform's recommendation systems? Do the benefits of personalized recommendations come at the cost of broader cultural engagement, such as the diminished visibility of lesser-known artists? Through this, we try to provide a comprehensive understanding of the user experience on Spotify, highlighting the intricate dance between autonomy and determinism in the context of music consumption.

5.4.1 Hobbes: Authority and Control

In examining Spotify's role as a platform through the ANT, we draw parallels to Thomas Hobbes' concept of authority and control in the social contract. Hobbes argued that in the

"state of nature," individuals are driven by their own desires, leading to chaos. To escape this disorder of chaos, individuals enter a social contract, giving up certain freedoms to a sovereign authority that ensures order and security. As Hobbes famously noted, *"the life of man is solitary, poor, nasty, brutish and short"* (Hobbes 1651:78), underscoring the necessity of authority to avoid chaos.

Spotify users recognize the platform's authority in curating and organizing their music consumption, which offers them a refuge from the overwhelming task of navigating vast music catalogues. This curatorial power of Spotify is evident in how users interact with the platform.

While users willingly submit to Spotify's organizing force, whether through personalized recommendations or curated playlists, this submission comes at a cost. As Lukas shares his frustration with the platform's recommendation system:

> *"Recommendations take up so much space on Spotify that they don't meet my needs. You tend to avoid listening to entire albums; it becomes more focused on singles, so you might not explore as many new genres."* (Lukas 2024 pers. comm.)

This sentiment highlights a nuanced concern among users regarding the platform's recommendations. While they appreciate the convenience of tailored suggestions, some feel that the emphasis on popular singles may lead to a more superficial engagement with music, potentially limiting their exposure to the depth and diversity offered by full albums. Hobbes would likely argue that this perceived narrowing of choices is a necessary trade-off for stability and order within a chaotic world of musical options. In Lukas' case though, the trade-off feels restrictive and impedes his potentially deeper engagement with music discovery.

Similarly, Tai points out the necessity of being proactive in discovering new music,

> *"You have to be more proactive to find new music; you don't really notice who the artist is if you don't keep up. I like the feature where Spotify suggests music, but I think Spotify's playlists don't match my music taste and are too generic."* (Tai 2024 pers. comm.)

Tai's comment introduces another layer of complexity to the idea of control within the Spotify ecosystem. While the platform enables the discovery of new music through recommendations, it also places the onus on users to be proactive in seeking out music that

aligns with their preferences. For Tai, the balance between authority and autonomy becomes uncomfortable when the platform's recommendations no longer feel aligned with his evolving musical tastes. Spotify's authority somewhat mirrors Hobbes' theory of sovereignty: users give up their autonomy to benefit from the order the platform provides.

Despite these critiques of Spotify's features, many users still find Spotify to be a valuable tool for navigating the complex musical landscape. As Hobbes would argue, this structured environment allows users to escape the overwhelming chaos of traditional music consumption methods. For instance, the vast availability of music and the absence of interruptions (such as radio ads or physical media limitations) offers a more streamlined, user-friendly experience. This shift from chaos to order mirrors Hobbes' notion of a sovereign authority that provides stability. Spotify's ability to curate and recommend music in a way that feels intuitive to users can be seen as a practical realization of Hobbes' argument for authority's role in mitigating the chaos of individual choice.

Hobbes also stated, "*Covenants, without the sword, are but words"* (Hobbes 1651:103). We interpret this as the need for a reliable system of curation and recommendation that serves as a guiding authority. In this context, the recommendation systems serve as the "sword" as it translates its vast music catalogue into an understandable and manageable experience, effectively inscribing user preferences into personalized playlists and recommendations. This curation allows users to escape the chaos of traditional listening methods, offering order and accessibility in an expansive musical landscape. It creates a reliable framework for users to explore music without being overwhelmed by the endless choices. It does however, for Lukas and Tai, in some cases feel restrictive, limiting their exploration of music.

In many cases, the relationship between users and Spotify reflects a delicate balance: the trade-off between the freedom to explore music independently and the comfort of a streamlined organized experience. The platform enhances accessibility and enjoyment, but it also shapes user preferences and music consumption habits, leading to a redefined sense of autonomy within a carefully managed music ecosystem. Thus, users willingly surrender some degree of control over their listening experiences in exchange for the order and reliability that Spotify provides, as evident by our informants reluctance to switch out Spotify as their preferred platform, as previously mentioned throughout.

5.4.2 Kant: Moral and Rational Legitimacy

In considering how users rationalize their relationship with Spotify, we can apply Immanuel Kant's ethical framework, particularly his emphasis on autonomy and moral responsibility. Kant's social contract is not about actual consent, but about the rational and moral legitimacy of authority, namely in the sense that laws are only valid if they respect individual autonomy and can be universally justified (Kant 1797, Gregor 1997). Kant's view on authority therefore differs from Hobbes in that he emphasizes the moral legitimacy of laws and institutions, Hobbes' view is more so based on its ability to provide order and security rather than on moral principles as Kant would argue. With Spotify, users face the ethical challenge of: how to balance their sense of autonomy with the influence of a recommendation-driven platform that shapes their consumption choices.

Kant believed that autonomy is essential for moral agency. As he stated, *"Autonomy is the ground of the dignity of human nature and of every rational nature"* (Kant 1797, Gregor 1997:43). This principle highlights the importance of self-governance in making ethical decisions. However, Spotify users grapple with the tension between their perceived autonomy and the platform's recommendations, which are designed to shape their music consumption based on data-driven recommendations (Spotify 2025 b). While users feel empowered by the platform's personalised features, some question the extent to which they are truly in control of their choices. For instance, Nanna reflects on her use of Spotify, saying:

> *"We legitimize/justify the use of Spotify because it's personalized; it feels like we're being catered to"* (Nanna 2024 pers. comm.).

Nanna expresses the common perception that the platform provides a tailored experience that aligns with individual preferences, which users often equate with autonomy. However, Kantian ethics urges a deeper reflection on whether this perceived autonomy is genuine or if users are being subtly guided by the recommendation systems that may limit their freedom. Kant's categorical imperative, which states: *"Act only according to that maxim whereby you can, at the same time, will that it should become a universal law"* (Kant 1797:30) challenges users to think about the broader ethical implications of their consumption habits. Applying this principle to Spotify, users might reflect on whether their reliance on driven content promotes or restricts cultural diversity and individual agency. Nanna raises a concern about this determinism, noting:

> *"It feels like I'm being led by the platform rather than choosing freely. I wonder if I'm missing out on something great simply because the algorithms don't think it aligns with my taste"* (Nanna 2024 pers. comm.).

This sentiment shows a potential loss of autonomy, where Nanna feels constrained by the platform's curated content rather than freely exploring new musical genres. While Spotify offers the convenience of personalisation, it in this case creates a narrowing effect, limiting users to predefined paths that align with their existing preferences rather than encouraging genuine discovery.

Kant's perspective on moral duty further complicates the user-Spotify relationship. He argues that individuals are *"(...) he is subject only to laws given by himself but still universal and that he is bound only to act in conformity with his own will"* (Kant 1797:40). On that note, you could argue that users must consider whether their passive reliance on Spotify's recommendations aligns with their moral responsibility as consumers.

5.4.3 Rawls: Fairness and Justice

As we have described earlier in this paper, John Rawls' framework has fairness and justice as central elements to ensure that societal structures do not disproportionately favour the advantaged at the expense of others. When it comes to Spotify, users' perceptions of fairness in how music is made visible and accessible are crucial in understanding how the platform structures their music consumption. Spotify operates as a gatekeeper and functions somewhat as an OPP (5.2.4), influencing which artists, albums and genres reach the foreground of users' listening experiences.

But how fair is this distribution? And are the least advantaged, i.e. smaller or niche artists, given a fair chance in this ecosystem?

When asked about the fairness of Spotify's system, users express mixed feelings. Kristian mentions: *"It would be overwhelming if you had to know everything about Spotify; it's become so easy. You just need to know what you're doing."* (Kristian 2024 pers. comm.). While the platform's ease of use is appreciated, there's an acknowledgment that not everything is within the user's control. For instance, Lukas states: *"You can't change much on Spotify, I've tried,"* (Lukas 2024 pers. comm.) hinting at the platform's features and recommendations that might limit user agency.

Tai brings another perspective, noting that small actions, such as using a device at a social gathering without enabling private mode, can skew suggestions in ways that feel beyond his

control: *“The algorithm is too sensitive to one or two listens”* (Tai 2024 pers. comm.). Tai's experience shows that Spotify's recommendation systems can end up favouring certain artists based on unintentional user actions. This reflects the broader concern that even casual or unintended behaviours can shape what users see and hear on the platform, often distorting their long-term music discovery. These concerns highlight how users view Spotify as both a liberating tool for accessing a vast catalogue of music and a system that subtly guides their listening patterns through recommendation systems. In this system, the question of fairness becomes crucial: *Are all artists given a fair shot at visibility or do the mechanisms of the platform favour those with more resources or (pre-)existing popularity?*

Several of our informants feel that while Spotify introduces them to new music, its emphasis is skewed towards pop and mainstream content. As Kristian mentions, *"They don’t aim wide with these lists; it’s just more pop."* (Kristian 2024 pers. comm.). Again, this points to the issue of accessibility for lesser-known or experimental, niche artists.

Rawls’ Difference Principle states that inequalities are only justifiable if they benefit the least advantaged.

Spotify's dominance, as depicted in the ANT-analysis and throughout, in the music landscape means that it holds significant power in shaping what users hear and by extension, which artists succeed or fade into obscurity. Users like Nanna question whether Spotify’s playlists and recommendations are entirely organic, suspecting that financial interests play a role. Regarding these concerns, our workshops sought ways to perhaps influence their music consumption more consciously. The workshops allow users to better understand how recommendations work or at least make them more conscious of the personalisation elements, empowering them to take more control over their musical experience. For instance, Kristian says: *“We can’t live in a perfect world where Spotify handles everything, so it’s up to us to find our own ways to discover music,”* acknowledging the limitations of the platform while still seeking alternative solutions. This could inspire initiatives like user-generated playlists that highlight lesser-known artists or creating community-driven music discovery groups that prioritize fairness in representation.

Translating this into Spotify’s ecosystem, users are not privy to the full workings of the platform’s recommendation systems, playlist curation strategies or even financial ties with major record labels. Their consumption patterns are influenced by factors that are not fully transparent, which might favour the most popular or well-funded artists. As one user, Nanna, hypothesizes: *"I think it's based on what I previously searched for, but maybe some record*

labels are paying to get on those lists?" (Nanna 2024 pers. comm.) which is another example of if they fairly represent the broad musical landscape or if they disproportionately favour mainstream, popular, commercial content.

Rawls' Original Position and Veil of Ignorance from *A Theory of Justice* (1971), revised in 1999, asks us to imagine individuals designing the rules of society without knowledge of their own position, advantages or biases. As mentioned earlier in the paper, the purpose of this thought experiment is to generate principles that ensure fairness for everyone, especially the least advantaged, by eliminating personal interests that could skew decision-making.

5.4.3.1 Veil of Enlightenment

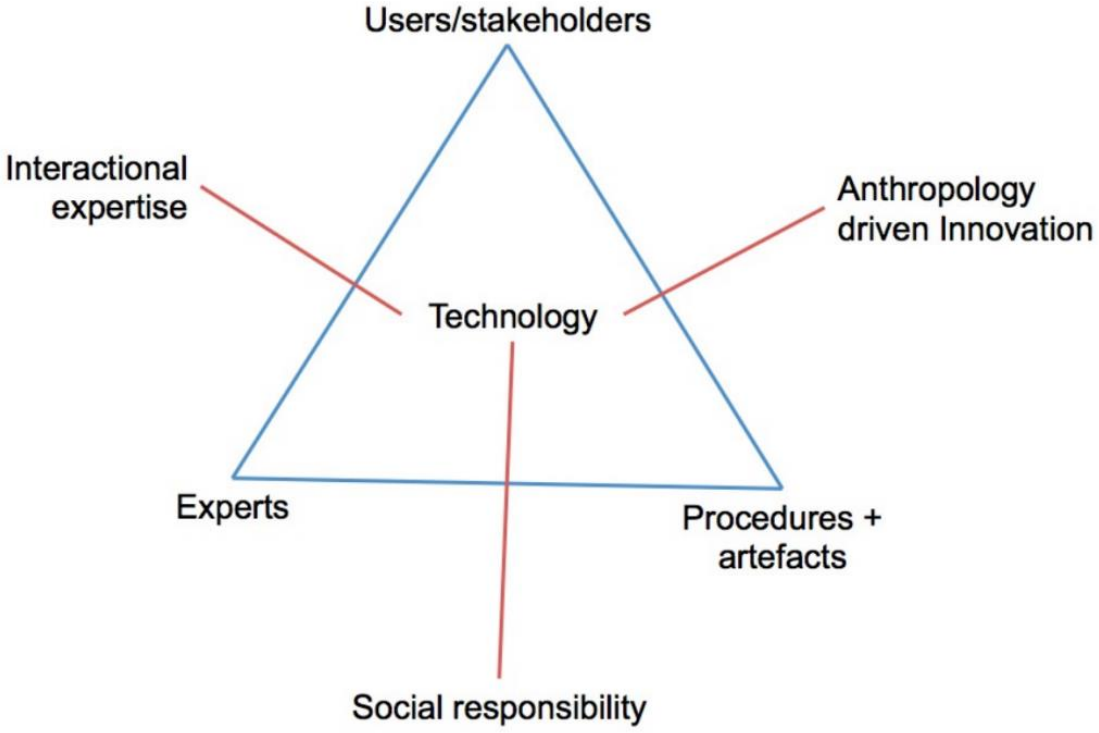
At the end of this philosophical deep dive, it is valuable to reflect on how a hypothetical *Veil of Enlightenment* might further reshape the way users and platforms interact. Building on Rawls' Veil of Ignorance, this concept assumes users are aware of the algorithms shaping their music consumption, as well as the cultural and financial dynamics influencing Spotify's music catalogue. Under this Veil of Enlightenment, users might make more conscious choices about their music consumption and actively participate in shaping a fairer system. They would advocate for transparency in how music is curated, ensuring that the distribution of visibility benefits not only the most popular artists but also those from marginalized genres or backgrounds. This would echo Rawls' principle of designing societal rules that protect the least advantaged, aiming for an inclusive and just musical ecosystem.

In applying the Veil of Enlightenment as a thought experiment, we can imagine a future where both Spotify and its users collaborate to create a more equitable music landscape, one that values diversity and ensures fairness in the distribution of artistic opportunity.

This philosophical inquiry invites us to question the systems that shape our listening habits and to envision new ways of engaging with the world of music.

5.5 Techno-Anthropological Reflections

In this final section, we further the discussion by tying it specifically to the field of Techno-Anthropology. For example, Spotify's role as a curatorial authority not only reshapes music consumption but also influences broader social and cultural behaviors (as we've depicted with how it functions as a social media platform for some, with real social effects (see Astrid's comments throughout the analysis).



Appendix 22, Figure 7: Børsen 2016:50

The Techno-Anthropological Triangle (Børsen 2016:50), which serves as the conceptual framework for this thesis, incorporates elements that reflect the core aspects of our study. The primary stakeholders in this framework include the users of Spotify, the artists who upload music to the platform and Spotify itself. As the authors, we aim to bridge these elements by combining insights from users with technical knowledge, thereby representing a form of interactional expertise.

Our approach to anthropology-driven innovation is demonstrated through our qualitative research methods, including interviews and workshops. The technology at the core of our study consists of music streaming platforms and recommendation systems, which are central to our analysis.

Social responsibility is emphasized through the philosophical exploration of social contracts, examining the ethical implications of these technologies. Finally, we incorporate expertise from various academic disciplines, drawing on contributions from multiple fields to enrich our understanding and analysis.

This approach is beneficial because it highlights the complex interplay between technology, users and social dynamics within the context of music streaming platforms like Spotify while

acknowledging the importance of understanding how each of these elements influences the others, accounting for the human and ethical dimensions of technological systems.

6 Conclusion

This thesis has explored the research problem of:

> *How do users of Spotify perceive Spotify's music recommendations and its influence on their music consumption and what implications does it have on their autonomy and agency when interacting with the platform?*

Our findings, based on user insights from interviews and workshops, highlight a common concern among users about the lack of transparency in the recommendation process. This aligns with the ethical challenges discussed throughout the thesis, particularly regarding the tension between convenience and user autonomy. We conclude that while Spotify's recommendation systems, playlists and social features have greatly enhanced accessibility and personalized experiences, they also mediate and influence users' musical choices in ways that are often opaque and potentially limiting to music discovery. However, while Spotify's recommendations systems play a significant role in shaping musical preferences, some users actively seek ways to exercise agency with something as simple as manually curating their own playlists or using the search function.

By analysing Spotify's recommendation systems and their socio-technical implications, we have gained insight into the evolving relationship between users and the platform in the context of contemporary and earlier music consumption. The use of Actor-Network Theory has allowed us to understand Spotify's role in the music ecosystem as an Obligatory Point of Passage, where diverse actors, i.e. users, recommendation systems and commercial interests, are aligned with Spotify's objectives. In this network, Spotify's dominance is reinforced through its success in enrolling users, offering a massive catalog and promoting social sharing features. This central role, however, raises important ethical concerns, particularly regarding the prioritization of popular content over lesser-known artists, which restricts the diversity of music discovery and reinforces algorithmic determinism.

Through this study, we conclude that Spotify's influence on user behavior reflects a delicate balance between personalization and agency. While users appreciate the tailored music experience the platform offers, this comes at the cost of reduced autonomy, with algorithms subtly shaping musical preferences and limiting users' ability to make independent choices. We further conclude that the black box-nature of recommendation systems makes it difficult for users to fully understand or control how their musical experiences are curated. We argue that this lack of transparency justifies broader concerns about fairness and autonomy in the

music ecosystem, where commercially successful and popular content often takes precedence over marginalised users and content creators.

In light of these findings, we argue that there is a need for greater transparency in Spotify's recommendation systems. By providing users with more insight into how their preferences are shaped, Spotify could empower users to make more informed, autonomous decisions about their music consumption. This would not only enhance user agency but also contribute to a more equitable music landscape that supports diversity in the digital music ecosystem.

Ultimately, this thesis contributes to the existing discourse on the ethical and social implications of recommendation systems. Namely by applying a Techno-Anthropological framework that illuminates the complex relationships between technology, users and society, offering a nuanced understanding of how digital platforms can shape modern cultural practices.

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