MASTERARBEIT / MASTER'S THESIS

Titel der Masterarbeit / Title of the Master's Thesis

Vinyl Is Not What It Used to Be:

Users, Expectations and Identities of Gentrified Technology

verfasst von / submitted by

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angestrebter akademischer Grad / in partial fulfilment of the requirements for the degree of

Master of Arts (MA)

Wien, 2019 / Vienna 2019

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Acknowledgements

There are several people without whom completing this thesis would not have been possible.

I would like to thank my supervisor, Erik Aarden, who has always been helpful, dedicated, patient, and honest. His insightful feedbacks and consistent sense of humour were always there to encourage me in the course of this project. It was a pleasure working with you!

Not only this thesis, but also my entire, magical time in Vienna would have never happened if it wasn't for my parents, Beata and Artur Ratasiewicz. Thank you for always supporting me, listening, talking, and being there.

Great thanks to my entire STS cohort, especially Shauna, Harrie, and Maggie – my wingwomen, the Underground Youth crew, and the reasons why all of this was so much fun.

Finally, I want to thank Przemek – for being you, I suppose, wherever you are.

"I wish that I was born a thousand years ago" (Reed, 1967)

1. Introduction

Digital Compact Disks: Replacement for LPs? asked, a little bit anxiously, *The New York Times* on March 31st, 1983 (Holland, 1983). Four years later the anxiety only grew, and previous uncertainty was replaced with an almost military state of alert: *The Invasion of the Compact Disks: A Battle Plan* (Crutchfield, 1987). By the early 1990s, the battle seems to be lost – as the *Recording Enters a New Era, And You Can't Find It on LP* (Pollack, 1990), one can do nothing but accept that the *Short Journey Into Obsolescence for LP's* (Miller, 1992) is over. The ubiquitous narratives of vinyl record's death, changing of the audio guards, old format staring into the abyss of oblivion, and many other dramatic metaphors were in full swing – but, yet again, not for too long. In the very same decade overtaken by the Compact Disks, some started claiming that the *Death of LPs May Be Greatly Exaggerated* (James, & Tribune, 1991), and *Music Lovers Are Voting for Vinyl* (Strauss, 1994). In the new century, *The New York Times* announces *Another Spin for Vinyl Records* (Williams, 2008) and *A Vinyl LP Frenzy* (Moran, 2015). After decades of dying, LP is back in the game, even framed as a potential rival to some of the newest forms of music distribution: *Watch Out, iTunes. Vinyl Still Lives* (Sisario, 2014).

Except for delineating the timeline of so-called vinyl 'death / revival' cycle, this parabolic media coverage is also a good depiction of the broader phenomenon which some authors refer to as "retromania" (Reynolds, 2011) or "technostalgia" (Pinch & Reinecke, 2009). Growing number of people not only uses, collects and discusses the seemingly obsolete technologies (such as the vinyl LPs, cassettes and analog cameras), but also incorporates them in their lifestyles, identities, and systems of value. Such cultural practices do not escape the attention of marketing specialists and salespeople, who see technostalgia (and its specific instances, e.g. vinyl 'revival') as a potential source of new, emotionally engaged consumers.

Interestingly, the past-oriented users have been recently addressed by those who are much more frequently associated with the futures of technologies – their designers. In 2016, an Austrian startup Rebeat Innovation, has patented the new method of pressing vinyl records. High Definition Vinyl (HDV) is claimed to achieve higher quality of sound, better audio fidelity, and longer playing time than the 'traditional' LPs. Currently in the development stage, the technology has been supported with a $4.8 million funding, and according to Pitchfork's article from April 2018, could possibly be introduced to the market by the end of 2019 (Hogan, 2018).

What initially drew my attention to this case is the temporally intriguing and somewhat symbolic character of this retro-innovation. Vinyl is a 'mature' technology with a long history of ups and downs and an established (even if, according to the media coverage, expanding), emotionally-engaged user base with a very specific understanding and appreciation of their format of choice. What would be these people's reaction to an attempt at improving something that they love so much – and, arguably, use due to certain degree of nostalgia? After a quick online research of several audiophile-dedicated forums, I realized not only that the emotional reactions are there, but also that they are much more complex than I initially expected. This is why I decided to take a closer, in-depth look at them, developing my initial interest into the following set of research questions:

RQ: How do the members of online audiophile communities of *r/vinyl* Reddit and *Steve Hoffman Music Forums* react to the announced introduction of High Definition Vinyl?

SQ1: How is the vinyl technology (re)-constructed in reaction to its potential new version?

What does the vinyl record mean for the forum members? How are these perceptions affected by the announced introduction of HDV – are 'vinyl' and 'HD Vinyl' treated as members of the same family, entirely different formats, logically replaced ancestor and its successor, or enemies? How does the established, seemingly obsolete technology change its meanings in the wake of being subject to an innovation?

SQ2: What role do the histories of vinyl play in the user narratives, how are they told and what are the functions of these stories?

What are the histories and socio-technical imaginaries embedded in the vinyl record and performed by the forum members? How does the introduction of HDV affect these stories – is it perceived as a new chapter, an opportunity, a threat, or a meaningless hype?

SQ3: What are the types of people and identities performed / brought into action?

How do the narratives surrounding vinyl record and HDV affect the user identities that forum members perform and display throughout the discussions? What types of identity are the regular and HD vinyl record imagined to entail?

SQ4: What are the assessments of vinyl's situation and expectations for its future that emerge from the forum discussions?

What futures do the forum members imagine for vinyl record in the face of HDV's introduction? Are they feared or anticipated? How, if at all, are these expectations affected by the possible new product? How are they related to vinyl's histories, old / new meanings and its embedded user identities? What do the different types of vinyl users hope for / fear of in relation to both HDV and vinyl in general?

In order to answer these questions I decided to conduct an online ethnography – netnography – of the two aforementioned forums, using the grounded theory approach to data analysis. What should also be stated here is that High Definition Vinyl, although undoubtedly the inspiration and the driving force behind both my research and the forum discussions that I treated as my dataset, is by no means the 'topic' of this thesis, at least in a sense of explaining its 'true' meaning, chances for success, or functional value. I think of it much more as a 'pretext' for looking at the 'community' which faces the controversy, and – as it so frequently happens in case of controversy – has to (re)-define itself, its key values, definitions, and objects of interest.

Examining the reactions and expectations surrounding HD Vinyl is also a valuable case study contributing to the prominent Science-Technology-Society (STS) subfield of user studies. As the performative agents, expectations and user negotiations are able to redefine the technological objects (as well as their users) by the means of inscribing and de-inscribing them with specific roles, meanings and values.

The structure of this thesis goes as follows:

Chapter 2: State of the Art, in which I present the focused review of key themes appearing in the literature on vinyl and its users, that is: (2.1.) Vinyl Death and Revival, (2.2.) Analog vs. Digital, (2.3.) Vinyl as a Cultural Artifact, (2.4.) Audiophilia, (2.5.) Record Collecting, (2.6.) Technostalgia, and (2.7.) Vinyl and Audiophilia in STS.

Chapter 3: Theoretical Framework, in which I situate my study in broader STS scholarship by delineating the theories and sensitizing concepts which helped my make sense of my data. These frameworks are: (3.1.) Technology Studies, (3.2.) User Studies, and (3.3.) Sociology of Expectations. Apart from that, I also conceptualize the online space from a more theoretical perspective.

Chapter 4: Methodology, in which I present my empirical material, methodological toolkit of netnography, the course of my fieldwork and grounded theory data analysis, as well as the matters of research ethics.

Chapter 5: Empirical Chapter, in which I present the findings of my study in the loose, intertwining clusters dedicated to technological artifacts, users and their identities, and the expectations concerning the potential future of vinyl.

Chapter 6: Conclusion, in which I summarize my findings, relate them to the discussed literature and theoretical frameworks, and reflect on the potential significance / generalizability of my study.

2. State of the Art

In this chapter I will present the focused literature review on two main topics of my thesis – vinyl record and its user, often conceptualized (in what will later on turn out to be quite an oversimplification) as an 'audiophile'. As the two topics are so broad, encompassing perspectives from such different fields as the history of technology and engineering, sociology, psychology, as well as cultural, music, and marketing studies, I decided to group the relevant literature in seven clusters, which represent the reoccurring themes that I found especially significant for my thesis. These seven clusters are: (1) Vinyl Death / Revival and the Tropes of Death, (2) Analog vs. Digital – Ongoing War or Imagined Boundary?, (3) Vinyl as a Socially-Constructed Cultural Artifact, (4) Audiophilia – Perfection, Identity, and Imaginary, (5) Record Collecting, (6) Vinyl and Technostalgia, and (7) Vinyl and Audiophilia in STS.

2.1. Vinyl Death / Revival and the Tropes of Death

I'm going to start my review not from what would seem to be a logical point of departure, that is the literature on vinyl itself – its status as a material object, cultural artifact, etc. – but from the publications concerning the so-called 'vinyl revival', which seems to be a widely agreed upon 'state' in which this technology finds itself these days. The reason why I decided to do so is that I found the majority of contemporary literature on vinyl to be somehow 'inspired' by the fact that the technology is making its comeback to the market and consumers' perception of audio landscape – similarly as the older sources seem to have been largely driven by the apparent vinyl's 'death'. The omnipresence of these narratives made me think that it's really hard to talk about vinyl, and the related literature, without positioning it in this non-linear life cycle. Before we get to vinyl itself, it is thus useful to see how inseparable its image is from the respective filters of 'life', 'death' or the moments of transition between those (being saved, preserved, unearthed, dusted by someone, etc.). This is also by no means the only narrative that dictates the contemporary perception of vinyl and its users – the others will be presented in the following sections.

The account of 'vinyl death' that is perhaps one of the closest in time to the actual events is that of George Plasketes (1992). In his article, *Romancing the Record: The Vinyl De-Evolution and Subcultural Evolution*, he recounts the early days of CD, the moods and reactions surrounding it, as well as the gradual adaptation of the new technology by the general, 'mainstream' public. Similarly to Kieran Downes almost twenty years later (2010), he recalls the marketing "hype" around CDs' technological superiority – audio clarity, storage capacity, durability and mobility – and how the slogans such as soon-to-be infamous "perfect sound forever" didn't convince many of audiophile-inclined high-end audio enthusiasts. To their despair, the market seemed to gradually accept the new format. The number of LPs and EPs (Long Play and Extended Play records) shipped by manufacturers

decreased by 80% between 1978 and 1988, when the CD sales surpassed those of vinyl for the first time – apart from that, throughout the 80s many major chain stores significantly diminished their inventories of vinyl, also due to the record companies' sales strategies that discouraged retailers from investing in the 'old' format (Plasketes, 1992). But as Plasketes points out, "the vinyl transition is more than business and technology; it marks the passing of a cultural icon" (p. 117). Such moments of cultural transition are very likely to cause the emergence of new subcultures, which establish their identities on "romancing" the obsolete technology. What was perhaps less obvious as of 1992 – but nevertheless hinted at by analyses such as that of Plasketes – is that this "passing of a cultural icon" to the underground is also what enabled this icon to be 'reborn' with new, or at least significantly deepened meanings.

Somewhere in the beginning of 21st century, when the 'second digital revolution' was in full swing, slowly leaving behind the once innovative CD for the sake of easily shareable MP3 files and online streaming services, the vinyl's fate began to turn around. Research performed by several marketing agencies established the so-called 'vinyl revival's' position as a matter of fact backed up by numbers – for example Nielsen 2014 report registered the 52% increase in vinyl sales, which, along with the CD's decline, made it a stable niche comprising of over 6% of physical album sales. This is also when vinyl and its users started getting more media and academic attention. In their quantitative study of media discourse, Breckenridge and Tsitsos (2017) examined the frequency with which the keywords 'vinyl', 'LP', 'CD', 'compact disc' and 'cassette' appeared in the titles of articles from *USA Today*, *New York Times*, and *Billboard*. Interestingly, vinyl never fully disappeared from the *Times'* 1990s and 2000s coverage – an indication that its 'death' might be a much more problematic notion than it seems – but its recent growth was nevertheless quite visible as it is "the most commonly headlined format since 2009" (p. 74).

The LP's comeback has also been tackled from a more STS perspective. In their 2016 article *'Vinyl never say die': The re-incarnation, adoption and diffusion of retro-technologies*, Sarpong, Dong, and Appiah apply the framework of Actor Network Theory (ANT) to the case of vinyl, in order to show how it challenges the traditional, deterministic perspectives on technological progress in audio. Basing their analysis on both Plasketes' (1992) account of vinyl's de-evolution coupled with the evolution of record collector's subcultures, as well as Latour's (1987) sociology of translation and assemblages, they suggest that what has in fact happened in the 1980s audio landscape was the case of one actor-network (CD) luring away the actors and forces that up until then stood behind the other one (vinyl). Similarly to Plasketes, they don't think that vinyl's network simply disappeared – it just started operating on a much smaller scale transforming into subculture. That remained the state of things until a new source of energy enabled vinyl to re-diffuse and enrol new allies (or re-enrol the old ones). According to Sarpong, Dong, and Appiah (2016):

"This new source of energy is the internet. Thanks to the internet, acting as a boundary object, now all the interests can be aligned. Consumers can enjoy music with better quality and authenticity because vinyl albums are also available for sale online. Some consumers may decide to purchase a vinyl record after they have heard the digital version of a song that they like. Especially, social media also drives consumers to the local record shops to thumb through vinyl records. (…) Die-hard vinyl fans also take advantage of the internet to maintain their subculture network, in the name of preserving and re-distributing their beloved vinyl." (p. 115)

This is also when the re-diffused technology has a chance to acquire new meanings, which differ between different groups of consumers – as a successful black box it remained invisible, and it is only after it broke down (destabilized by the CD actor-network) that its complexity and interpretative flexibility came to the fore, later on allowing old and new allies to redefine it. The stable source of energy allows for the emergence of technological bandwagon – which is arguably what happens today with vinyl's position in the record industry (Sarpong, Dong, & Appiah, 2016).

But what was it that made the LP so special, that it succeeded in not only re-assembling its network of power, but also re-diffusing via online outlets. One of the possible answers is quite ironic, as it highlights one of the characteristics of vinyl that sharply distances it from its new, online allies – tangibility. Many research has been performed on the engaged consumers' preference for the products that they can touch, and their tendency to attach more emotional value to such items, also in case of audio formats, where 'non-material' files are used for entirely different reasons (e.g. convenience) than their physical counterparts (Styvén, 2010). However, the issue of vinyl's tangibility and 'being real' turns out to be much more complex.

In 2019, Harper reviewed the literature on vinyl 'revival' in the context of technology's materiality, asking to what extent the growing interest in analog audio technologies might be associated with "anxieties over the inauthentic, even simulated nature of digital culture – 'virtual' as opposed to 'real', ephemeral as opposed to solid" (p. 52). He does acknowledge many arguments pointing out to the importance of touch in vinyl-listening: the association of vinyl's haptics (e.g. bouncing needle) with authenticity and fidelity ('the way music was supposed to sound'), the ownership of records as an indicator of the 'true love for music', as well as the nostalgic recollection of one's past selves via the cherished object. However, taking the perspective of "millennial narcissism" (p. 57), he also uses the example of his own non-material, yet significant, attachment to specific music files, highlighting the cliché and prescriptive nature of recent vinyl narratives ('kids these days don't understand the real music and how one should listen to it').

Similarly to Harper, also Paolo Magaudda (2011) problematizes the notion of materiality in audio technologies. Using the 'circuit of practice' model in order to show how the meanings, activities, and materiality interrelate, reshaping the young Italians' practices of music consumption, he opposes the

common assumption that these changes occur in a counter-reaction to the processes of digitalized dematerialization. According to him, digitalization doesn't necessarily come along with less materiality (consider multiple devices, such as the iPods, computers, headphones and the hard disk drives that the digital music files require) – apart from that, the majority of his research participants juggled with different (more and less 'tangible') formats, depending on their needs. Magaudda's suggestion is thus that what we deal with should be more accurately described as the re-materialization of practices – it is not that the issue of materiality and touch is irrelevant when discussing audio, it just should be used more carefully, avoiding such oversimplified dichotomies as 'tangible' vs. 'intangible'.

Despite the hesitant reactions of many scholars, materiality remains a central point in the stories concerning vinyl and its value as a format – no one would argue that it doesn't matter for many, not only vinyl, enthusiasts of audio technologies. One of the material features of the LP that seems to especially stand out is its fragility and proneness – both metaphorical and direct – to destruction. As Emily Chivers Yochim and Megan Biddinger (2008) argue:

"Throughout both their history and in the contemporary moment, vinyl records have been articulated with human characteristics, such as fallibility, warmth and mortality, which, for record enthusiasts, imbue vinyl with authenticity." (p. 183)

In their article tracing the "tropes of death" in narratives surrounding vinyl, they also point out that:

"(...) persistent alliance between records and anxieties about life and death has positioned records as a mass-produced good that can be imagined as valuable in ways often reserved for rare, unique or individually produced objects." (p. 184)

The way in which vinyl is constantly discussed as 'dead', 'revived', 'killed' or 'alive' is thus what makes this technology a carrier of such humane characteristics as creativity, individualism, independence, and resistance to technocratic order of compulsory productiveness (a.k.a. capitalism) – all this while remaining deeply vulnerable, requiring protection and respect. Vinyl 'alive' never seems to be more than a step away from vinyl 'dead' – even in the face of a new heyday, the threats are still there and have to be kept in mind. For example, the growing demand for LP coupled with the lack of pressing plants already causes production backlogs, as well as major problems with quality control (Palm, 2017) – vinyl seems to be an inherently endangered species. But it is also thanks to this state of constant risk, the effort that has to be put in care and preservation, this almost-humane mortality that makes people so eager to relate to the LPs physically and emotionally. They are fragile – but not as fragile as the pasts they encompass, making it easier to protect and reconnect with them (Chivers Yochim, & Biddinger, 2008).

2.2.   Analog vs. Digital – Ongoing War or Imagined Boundary?

Another theme frequently reappearing in the literature on vinyl is its status as an analog medium countering the surge of widely understood 'digital' technologies – CDs, low quality music files, and the 'digital revolution' in general. In his 2010 article, *„Perfect Sound Forever": Innovation, Aesthetics, and the Re-making of Compact Disc Playback*, Kieran Downes describes the problematic introduction of CD, but from less 'vinyl death' related perspective – his focus is much more on the slow process in which 'audiophiles' (to which he refers as "high-end audio enthusiasts") came to accept the new technology and incorporate it in their music-listening practices.

As for the beginnings, many found the CDs to sound "awful" – Downes quotes multiple audiophile-inclined journalists coming up with the most elaborate metaphors describing the horrors of listening to the new format – but the problem was related to much more than 'just' the sound quality. As Downes argues:

"(...) the compact disc also represented a challenge to audiophiles' customary modes of interaction with the technologies of their hobby. Responses to the disc in the high-end audio community were governed, I argue, by what the object signified for them both sonically and culturally. Upon its initial release, the appearance of CD technology as a literal and figurative black box, coupled with the perceived low quality of its sound, made the medium incompatible with the ethos of high-end audio, which emphasized both high-fidelity music reproduction and small-scale system-building practices undertaken to achieve such reproduction. In what follows, I show how the challenges posed by the compact disc inspired audiophiles to open this black box in an effort to incorporate the new medium into their aesthetic and cultural paradigm." (p. 306)

Inspired by Nelly Oudshoorn and Trevor Pinch's (2003) approach to technological innovation which frequently occurs in "culturally contested zones", blurring the boundaries between users and designers, Downes shows how audiophiles reclaimed their agency in this new context, translating the CD so that it would meet their expectations of improved sound quality (i.e. new high-end audio companies coming up with upgraded CD players), and greater interactivity (i.e. Do-It-Yourself tweaks enhancing sound quality, for example the 'green markers'). One could argue that Downes tells a similar story to that of Plasketes (1992) – they both describe a specific moment of transition in which the audiophile 'community' had to open the audio black box that turned out to be crucial to their identities. The difference is that Plasketes concentrated on the opening of an 'old' black box, caused by disturbance in the vinyl's actor-network (Sarpong, Dong, & Appiah, 2016), which resulted in formation of a vinyl enthusiast subculture, while Downes showed how the 'new' black box had to be creatively unpacked and gradually translated in order to meet the users' needs. One might talk about the 'schism' in the

community – those who stayed and those who moved on – but what seems to be much more realistic is that the boundaries between these two groups remain rather blurry.

Despite the understandable reluctance to use such sharp dichotomies (i.e. analog vs. digital audiophiles), one should remember that they nevertheless stand strong in popular and media discourses. In his study of sound-recording forums, Stuhl (2014) describes the tensions in sound engineering and recordist communities stemming from the so-called "analog fetishism" among their clients and collaborators. According to Stuhl, analog fetishism is an instance of technological determinism not only in a sense that it treats the pre-digital technologies as automatically adding value to the recorded music, but also because it deprives the digital-age recording engineers of their creative agency. As he explains:

"More than the technologically mediated transcription of a musical performance, sound recording is itself a performance, in which engineers work actively to translate a musical conception into a reproducible entity. Analog fetishism, to the frustration of engineers who encounter it, ascribes the vivacity achieved by great engineering to the tools of recording rather than to the engineer. Digital sound technologies, while acknowledged as a threat to the aesthetic qualities that have come to distinguish certain cultural values, maintain and in many cases bolster the performative status of recording. In resisting analog fetishism, recordists have emphasized a digital-age value system that ascribes deterministic power to the song rather than to the machine and that reconciles the technology of digital recording with the communication of artistic vision." (p. 43)

Interestingly, while Stuhl presents analog fetishism as a strictly negative trend that needs to be overcome, others take a step back refocusing their attention on users and how the instances of deliberate non-use of digital technologies (however difficult to define specifically) may be the source of agency and empowerment for postmodern consumers. Such is the argument presented by Thorén, Edenius, Lundström, and Kitzmann in their 2019 article, *The hipster's dilemma: What is analogue or digital in the post-digital society?* Conceptualizing the technology's non-use as an "assemblage" of elements, each of which generates both the territorializing (acceptance) and deterritorializing (resistance) powers, they show that every instance of use / non-use is actually placed on a spectrum, making it a field of constant active negotiation. According to them it is the dualistic distinction between the two ends of such spectrum (i.e. analog fetishism vs. digitalism) that is technologically deterministic, as it often implies such reasons for non-use as passivity, or some sort of material or mental deficit. Their further analysis is based on three cases which question the 'analog vs. digital' and 'use vs. non-use' divides in the context of post-digital era – (1) the "Light Phone" which offers its users the opportunity to disconnect from all of the options offered by their smartphones except from the phone calls, while maintaining the tech-savvy, 'hipster-friendly' design, (2) the VinylMePlease.com platform which connects vinyl enthusiasm (monthly subscription to exclusive

record box sets) with social-media-resembling and online streaming services, and (3) Arturia, the "True Analogue Emulation" software which allows its users to imitate the sound of vintage (and often inaccessible) analog synthesizers on their own computers (Thorén, Edenius, Lundström, & Kitzmann, 2019). Thorén's et al. conclusion is that the "hipster's dilemma" of 'analog vs. digital' is largely unsolvable due to the hybrid character of the post-digital era technologies – digital non-use is often temporary, enabled by the gadgets which are aesthetically similar to the icons of the digital world (i.e. Light Phone's design inspired by Apple products' techno-minimalism), and actively negotiated between different objects, needs, and identities.

Also in the case of 'analog vs. digital', the aforementioned "tropes of death" (Chivers Yochim, & Biddinger, 2008) play an important, although equally questioned role. For example Sterne (2006) criticizes the common accusation of digital recordings as being "less live or natural" and thus "closer to death" than the analog ones. Deconstructing both the digital and analog methods of recording, he shows that some of the former's features that arguably make it less natural (i.e. sampling as displacing the 'real' sound in time and space) are constructed as such based on the questionable "(...) premiss that a recording contains a quantity of life, and that as a recording traverses an ever larger number of technological steps, that quantity of life decreases, essentially moving it (and perhaps the listener) toward death" (p. 338). His critique continues as he brings into question fidelity as a measure of sonic experience – understood as a "metaphysical problem, based on the idea that a copy lacks some of the metaphysical 'stuff' that an original sound once had" (p. 340), it ignores many practical issues such as the contextuality of music-listening experience (i.e. why do we need perfect sound fidelity when listening to music on a train?). Sterne is not the only one to ask such philosophical questions about the essence of the 'truest sound possible' and thus the purpose of audiophilia, which is also what I will focus on in one of the following subsections of this chapter.

2.3. Vinyl as a Socially-Constructed Cultural Artifact

Before moving on to audiophilia and the issue of 'truest sound possible', let me summarize the phenomenon of vinyl record as a cultural artefact, socially-constructed by such powerful narratives as 'life vs. death', and 'analog vs. digital'.

In their analysis of the "analog medium in the age of digital reproduction", Bartmanski and Woodward (2015) underline such characteristics of vinyl record as performativity, iconicity, and authenticity in passing on the "music heritage". According to them, commodity objects are performative, in a sense that they generate:

"(...) social trajectories whereby their meanings for different groups of consumers change over time and space. Objects have an inherently mobile, mutable quality and are constructed both by their materiality and by stories, myths and their production and reception in particular contexts." (p. 17)

Vinyl's materiality is defined by its consumption purpose – it is a carrier, and provider of music, a "technology of the self" (Denora, 1999). This already places it in the category of 'emotional' and 'identity-related' goods, but apart from that it also has other material features which make it so easy to translate its meaning from that of a 'format of music storage' to the "cultural icon" (Bartmanski, & Woodward, 2018). One of them is the album cover and its artwork – five times bigger than that of a CD, it enables the LP to transcend its status from the 'mere object' into that of a 'piece of art' (Bartmanski, & Woodward, 2015). According to Bennett and Rogers (2016) such instances of capturing the musical experience in a material symbol, enhance the event's memory-preserving function by anchoring it in memorabilia, for example concert tickets and merchandise.

Another thing is the engagement that records require from their users. Putting the needle on the record, watching it spin, having to turn it around after each side – and in the larger perspective: collecting, display, assembling the turntable, maintenance work – vinyl comes along with a set of 'lifestyle-defining practices', which, coupled with its aestheticized image create an aura of coolness and counter-cultural authenticity. Such characteristics, and the way how they came to be conceptualized as entirely different from those of other formats (which lack the LP's warmth, intimacy and charisma), make it a somehow more legitimate medium for engaging with the musical heritage of past-present idols. Similarly to Chivers Yochim and Biddinger (2008), Bartmanski and Woodward (2015) emphasize vinyl's fragility as its main strength. The fact that it requires constant care, attention, and 'sacrifices', is what makes it more valuable comparing to other, convenient yet disposable formats. According to Nokelainen and Dedehayir (2015), the re-growing popularity of once dominating technologies may be a result of translating their meanings "from the functional-utilitarian to the aesthetic realm" (p. 65). Interestingly, as Bartmanski and Woodward (2018) suggest:

"(...) it is just as likely that vinyl's ascendancy to sacred thing may contain the seeds of its pollution and fall from grace. Vinyl has recently entered a rather dramatic and extensive contemporary phase of recommodification. It has a situation within popular culture where it is now something of a re-born celebrity commodity. The processes which allowed vinyl a renewed cultural mobility might begin to reinforce contradictory processes which push vinyl once again beyond the mainstream. This process will likely happen due to the relative cultural positions of vinyl's market agents – its consumers, communities, and intermediaries – in conjunction with processes of cultural valuing and symbolization." (p. 175)

Similarly to its "aura of iconicity", vinyl's position is best understood in the context of paradoxical, dualistic 'axes of concern' it brings into being. The technology, along with the narratives it engenders:

"(...) stabilises a series of currently important binary codings, specifically the reference of the real vis-à-vis the virtual, sentimental vs. strategic, ritual vs. convenient, exceptional vs. regular, etc." (Bartmanski and Woodward, 2015, p. 22),

as well as – one could add – 'analog vs. digital', 'material vs. immaterial', 'life vs. death', and many other, strongly mythologized 'conflicts'. Let me now move on to those who participate in and create the momentum behind these debates – the users.

2.4. Audiophilia – Perfection, Identity, and Imaginary

Audiophilia has been a reoccurring topic for many scholars, some of which I already mentioned in previous subsections (Downes 2010; Plasketes, 1992). According to Oxford Advanced Learner's Dictionary, an audiophile is "a person who is very interested in hi-fi equipment", where hi-fi equipment means "equipment for playing recorded music that produces high-quality stereo sound" (www.oxfordlearnersdictionaries.com). First issue starts when one tries to define what does exactly 'high-quality sound' stand for.

There are many expressions commonly used to characterize high-quality sound – fidelity, faithfulness, accuracy, etc. All of them assume that the recording reaches the status of 'high-quality' when its sound is as close to the 'original' as possible. In his 2003 book, *The audible past: Cultural origins of sound reproduction*, Jonathan Sterne presents the historical analysis of the concept of sound fidelity, and how it was socially-constructed with a large degree of technological determinism:

"Histories of sound fidelity usually begin at the end, with the achievement of perfect fidelity and flawless sound reproduction. Narratives of technological change and the transformation of technical specifications are folded back into an aesthetic and technological telos: the latest technological innovation equals the "best-sounding" or "perfect" sound reproduction. The progress narrative is ultimately untenable: the transformation of practices and technologies stands in for a narrative of vanishing mediation, where sources and copies move ever closer together until they are identical. The nature of what is heard and the very conditions of reproducibility are thereby presented as if they spring forth from the technology. This is a convenient narrative for advertisers with new hardware to sell, but it is not an especially compelling historiographic frame." (p. 222)

According to Sterne (2003), sound fidelity is much more a matter of faith in the functioning of the network of sound reproduction – people, machines, institutions, etc. – than it is about the accurate representation of the 'original source'. But that is by no means the only understanding of the issue. Multiple scholars researched the notion of sound fidelity from the exactly opposite perspective, concentrating on the idealized 'original sound' to which the hi-fi equipment is supposed to bring its users as close as possible – namely, what is to be understood as the 'original sound', and thus, 'the highest fidelity possible'?

One of the attempts at answering these questions is Steven Hales' 2017 article, *Audiophile Aesthetics*, in which he takes a much more reflexive approach to discussing the practices surrounding sound

reproduction. As he claims, "the very little philosophical work done on audiophilia uniformly agrees that the aesthetic aim of high fidelity is to achieve *transparency*." (p. 196) – that is the state in which the tools used for sound reproduction do not affect that sound at all. Transparency may apply either to playback or a recording and the degree to which they capture the sound of "original performance" – which is yet another problematic notion:

"The central conceit of transparency is that there is a possible auditory isomorphism between the original performance and its reproduction. Such isomorphism is possible only if there is something that the original performance sounded like. If there is (1) no such thing as an original performance, or (2) nothing that it sounded like, then transparency would be unattainable." (p. 197)

While in the case of the analog instruments there is a possibility of original performance (musician playing the instrument and causing the movement of air) – with the digital sound, the "source" is from the very beginning just a series of ones and zeroes (that is until they are converted into the analog movement of air at the moment of playback). However, as Hales points out, even the use of analog instruments doesn't mean that there is any performance for the recording to be transparent with. Recordings differ from life performances in that they are not synchronic (i.e. musicians play simultaneously), but diachronic – the bits and pieces of composition are performed and recorded separately. Apart from that, even if the performance in the most traditional sense did take place, is it really the goal of the recording to absolutely recreate the impression of "being there" – each and every element of that soundscape, including the noises of audience, coffee machine working in the background, etc.? According to Hales, it is not:

„(...) given a musical event, the aesthetic goal of audiophilia is the evocation of its Platonic ideal as understood by the listener. The desired experience is not necessarily transparency, but transcendence." (p. 204)

In a similar analysis of "the art of recording" Andy Hamilton (2003) draws his deliberations on the contrast between the aesthetics of perfectionist and imperfectionist approaches to sound reproduction and music in general. Starting from the discussion of the concept of aura and whether sound reproduction diminishes the auratic properties of music turning it into a common object, or quite the contrary – whether the recording acquires the aura of itself, sacralizing the musical experience as an enabler of ritualistic repetition – he shows how the phenomenon of recording redefined the dichotomy between the perfectionist vs. imperfectionist aesthetics in music:

"Perfectionism tends to support an auratic conception of art, while imperfectionism questions it. (…) A perfectionist aesthetic of recording aims to screen out allegedly contingent imperfections of live performance. For imperfectionists, in contrast, live performance is privileged, and recording has at best documentary status – when one aspires to the illusion of spontaneous creation, there is the risk of

failure and minor imperfection, and so, imperfectionists believe, improvisation and interpretation are not well-served by recording." (p. 347)

Imperfectionist approaches to recording would thus be "purist" in a sense that their main goal is to maintain the integrity of performance, a notion which Hamilton (2003) problematizes similarly to Hales (2017), pointing out to its illusionary character. Perfectionists on the other hand would embrace this illusion by using editing tools (mixing, compression, etc.) with an aim "(…) to create involvement in a recording, that quality of aliveness which makes the listener feel that they are present at the performance." (p. 348). Such notions as 'high-fidelity' would thus be inherently related to what Hamilton (2003) calls the "imperfectionist / purist" aesthetics of sound reproduction – a thought that seems to make sense theoretically, but becomes more than problematic when confronted with 'common-sense' understanding of audiophilia and the very strict practices it entails.

Marc Perlman took a closer look at these practices in his 2004 article *Golden Ears and Meter Readers: The Contest for Epistemic Authority in Audiophilia*. Conceptualizing audiophilia as a "point of contact between the layperson and the specialized artifacts and practices legitimated by scientific knowledge" (p. 785) – in this case audio engineering – he paints much less philosophical picture of the epistemic conflict over authority and power to define the meanings of certain technologies. Perlman (2004) distinguished two groups of "superusers": the golden-earists, who build their identities on the alleged ability to hear the slightest differences between audio devices (speakers, turntables, cables and even their various brands), often placing their judgment in opposition to 'professional' measurements – and meter-readists, who base their assessment solely on these measurements, dismissing the previous group as subjective and even delusional. Each backed by their 'own' media outlets, the groups employ experimental methods and strategies known from the laboratories and negotiations of techno-scientific facts, in order to prove their point – comparisons, double-blind trials, calibration, and, in case of the trial going 'wrong', invoking such explanations as experimenter's regress or the test conditions not reflecting the 'real life' ones. Perlman's analysis shows that, even if logically accurate, the philosophical deconstruction of the notion of sound fidelity and its arbitrariness, most likely won't affect what for many users is a 'reality' worth fighting for.

However strong, the attachment to their personal sound realities doesn't make audiophiles' lives less complicated. Rawson (2006) points out to one of the paradoxes of audiophilia which makes it such an ambiguous enterprise – putting the audio devices, tinkering and tweaking in the centre of attention, the audiophile tries to reach his / her ultimate goal of making them disappear (or, as Hales (2017) would say, transparent). Although he acknowledges the re-empowering potential that lies within the audiophile consumers' immersion in their highly mediated soundscapes, his approach is rather critical:

"For the most part, audiophilia does not acknowledge that the "absolute sound" is necessarily ambiguous. There is a nostalgic naïveté in the faith that as a precontingent passive observer the

audiophile can perfectly (re)experience an originary musical event. While the recording and duplication processes necessarily reduce a musical event and produce another very similar event, the process of sound playback can create a realm vaster than the recorded experience, offering through the imaginative involvement of the invested listener a kind of freedom, if only he is willing to claim it." (p. 210)

What the majority of scholars seems to agree upon is the historical, often technologically deterministic and ambiguous character of the phenomenon of 'sound fidelity' – it is a "socially constructed category: less a final destination than a moving target" (Devine, 2013). "Every age has its own perfect fidelity" (Sterne, 2003, p. 222), similarly to each individual listener: "the right question to ask is "given the source material and the listening environment, will this gear produce the aesthetic experience I consider ideal?"" (Hales, 2017, p. 205).

2.5. Record Collecting

Although often related to each other (and for some audiophile record collectors inseparable), record collecting and audiophilia are not exactly the same thing. Despite that, many publications about vinyl enthusiasts blur this distinction, for example by including references to such popular works of fiction as Nick Hornby's 1995 novel, *High Fidelity* and Stephen Frears' movie under the same title – a title, which arguably depicts the main purpose of an audiophile, rather than 'just' a record collector.

Apart from that, *High Fidelity* – whose main character is a passionate vinyl fan and a record store owner – seems to be an agreed upon source of an image of 'typical record collector'. For example, in his 2004 article, Roy Shuker makes it his point to reevaluate some of the stereotypes that the book and a following movie arguably planted in the public imagination. According to him, this "high fidelity stereotype" is that of "obsessive males, whose passion for collecting is often a substitute for 'real' social relationships, and who exhibit a 'train spotting' mentality toward popular music" (p. 311). In his interviews with "self-identified record collectors", he demonstrates the complexity of their characteristics – "love of music; obsessive-compulsive behaviour; accumulation and completism; selectivity and discrimination; self-education and scholarship" (p. 311) – pointing out that there is no such thing as a 'typical' representative of this group. From the perspective of social practices, collecting seems to be a key component of individual's identity as well as a core element of life cycle, marking its key events, moments of transition, and personal change (Shuker, 2004).

Just as it is a center of Hornby's novel, record store – preferably a local and independent one – remains a pivotal spot for record collectors, requiring similar support and protection as the format itself. In his 2016 article, *Reclaiming the music: The power of local and physical music distribution in the age of global online services*, Yngwar Kjus studies the period of second digital transition in the first decade of 21st century from the perspective of two Norwegian record stores, one of which

embraced the online streaming services business model, while the other invested in vinyl. In his analysis he shows how both venues serve as the places of direct fan-artist interaction (organising concerts, selling merchandise, etc.), promoting specific concepts of "right" and "truly valuable" engagement with music. Kjus also points out to a male-gendered character of the space of a vinyl record store:

"A male frame of reference is of course reflected in the shop's evocations of these experiences, including advertising taglines such as 'the hair on your back will stand up' or 'the wife has gone to bed'. By these means and others, then, vinyl's promises of tactile sensations, interpretive proximity and direct social interaction appeared to address some groups more than others." (p. 2127)

One of the ways in which the record stores are supported these days is the annual celebration of vinyl and its local independent retailers – Record Store Day (RSD). Established in 2008,

"This is a day for the people who make up the world of the record store—the staff, the customers, and the artists—to come together and celebrate the unique culture of a record store and the special role these independently owned stores play in their communities. Special vinyl and CD releases and various promotional products are made exclusively for the day. Festivities include performances, cook-outs, body painting, meet & greets with artists, parades, DJs spinning records, and on and on." (About Us, Record Store Day)

Eric Harvey (2017) problematizes the phenomenon of Record Store Day, pointing out to multiple issues that come along with branding the limited-edition, RSD-dedicated releases as a celebration of independent vinyl cultures. The hype surrounding annual holiday forces retailers to buy large amounts of expensive products, which – if not successfully sold during this one day – will most probably stay in their stock, as the number of potential clients (less likely to spend hundreds of dollars on one disc) will go back to normal. Also Michael Palm (2017) accuses RSD of adding up to the rising problem of production backlogs in record industry, as many pressing plants are forced to halt their services to smaller clients, as they're too busy preparing the huge batches ordered by larger players. In a move that Harvey (2017) refers to as "branding independence", the organisers of RSD seem to smartly disguise the capitalist colonisation of 'brick and mortar' businesses as an ideological endeavour:

"Record Store Day's branded network, in other words, does not just pit local, independent record stores as moral crusaders against corporate-owned chains and digital retailers, but also demarcates the behaviour of stores that are not deemed to be acting in the best interest of the event. Branding independence, for Record Store Day, means defining a code of retail ethics and attempting to ensure all participants follow it." (p. 592)

This goes in line with Palm's take on RSD, who claims that "for lovers as well as makers of independent music, the corporate reembrace of analog formats is just as threatening as their stranglehold on digital distribution" (p. 12).

Despite the engaged scholars' doubts, Record Store Day with its over 10 years-long history and many indie artists' endorsements is most probably here to stay, becoming a stable element of the record collecting landscape – at least enough to be affectionately mocked, in a somewhat typical subcultural instances of (auto)-irony. What I found to be a good summary of the ambiguous character of 'vinyl holiday' was a satirical RSD-dedicated *Vice* article, in which Dan Ozzi (2018) presents *Every Nerd You Meet on Record Store Day*, including "The Older Guy Who Thinks His Record Collection Is Worth Money but Isn't", "The Guy Who Goes to Record Store Day to Complain About Record Store Day" and "The Guy Who Is the Reason More Women Don't Come to Record Store Day".

2.6. Vinyl and Technostalgia

One of the common associations that come up to mind (as well as the media and literature) when discussing the contemporary vinyl use and the format's 'revival' is nostalgia, and especially its more specified, technology-related forms – "analog nostalgia" (Marks, 2002), "technostalgia" (Pinch, & Reinecke, 2009), and "retromania" (Reynolds, 2011).

Nostalgia, "a sentimental longing or wistful affection for the past" (The New Oxford Dictionary of English, 1998, p. 1266), has been studied by many scholars from various disciplines, including psychology, medicine, consumer research, advertising, marketing, media, and cultural studies. What turned out to be especially interesting for my own research were the two classifications of nostalgia, one presented by Fred Davis (1979), and the other by Svetlana Boym (2001). In case of Davis' typology, the differentiating factor is the degree of appreciation of the past, as well as reflexivity – his three categories of nostalgic experiences include: (1) simple nostalgia ("things were better in the past"), (2) reflexive nostalgia ("were the things really better in the past?") and (3) interpreted nostalgia ("why am I even nostalgic?"). On the other hand, Boym concentrates rather on the very act of being nostalgic, as well as its purpose. Deconstructing the notion of 'nostalgia', she identified its "restorative" strand (*nostos* – the return to home), which manifests itself in an urge to directly reconstruct the lost past, as well as the "reflective" one (*algia* – the longing itself), which is a self-contained action based on fluid fantasies, and even 'delaying' the impossible return to home. Another difference between the two is that the "restorative" nostalgics arguably do not consider themselves to be nostalgic – it is much more about seeking the 'truth' that was lost somewhere in the past and can still be 'restored'. "Reflective" nostalgics, on the other hand, linger on to the impressions and imaginaries of the days gone by, without considering them possible to recreate.

Especially Boym's classification has been frequently used in the studies of technostalgic reenactments of seemingly obsolete technologies. In his study of the contemporary use of Polaroid cameras, Super 8mm Kodachrome film, and other vintage "technologies of memory", Tim van der Heijden (2015) shows how the 'restorative' trend might have created a technological bandwagon, leading to the development of such 'reflectively nostalgic' tools as grainy Instagram filters, or even entire apps (Hipstamatic, iSupr8), which are supposed to imitate the 'vintage feel' of old analog photographs or 1970s home recordings. In case of such hybrid technologies, it is the "memory of technologies" that drives the nostalgic experience, not the need to recreate them (and their usage) with 100% accuracy.

Boym also inspired Göran Bolin's (2016) study of old-media-related nostalgia as a generational experience, in which he came up with his own classification of longing for the past media landscapes: (1) collective technostalgia associated directly with the analog technologies, which represent the shared media experience from the past, (2) technostalgia as a reaction to the "loss of childhood", and (3) technostalgia as a realization of the "(im)possibility of intergenerational experience", which often occurs when one sees his or her children growing up to become independent human beings, with different cultural and technological codes, meanings and emotions, unable to experience the same fascinations as their parents.

The term "analog nostalgia" has been used for the first time by Laura Marks in her 2002 book *Touch: sensuous theory and multisensory media*, where she defined it as the "retrospective fondness for the 'problems' of decay and generational loss that analog video posed" (p. 152) – a phenomenon she observed among the digital video-makers who tended to add the vintage effects of 'TV snow' or other typically analog imperfections to their recordings. Such practices are one of the main topics of the 2014 volume edited by Katharina Niemeyer, *Media and Nostalgia: Yearning for the Past, Present and Future*, in which the authors discuss similar instances of technostalgic behavior, for example the 'aging' of home movies or creating the digital retro photography (similarly to van der Heijden, 2015). Dominik Schrey (in Niemeyer, 2014) compares these kinds of practices to the 17th and 18th century trends of constructing artificial ruins, but this time the object of longing and fascination is not the Antique, but the 'pre-digital' era.

However, nostalgia is not restricted to visual technologies only. Bijsterveld and Van Dijck's *Sound Souvenirs: Audio Technologies, Memory and Cultural Practices* (2009), is yet another edited volume, dedicated specifically to the audio technologies of the past and their emotional impact on the contemporary users. It includes such contributions as Jansen's chapter on cassette mixtapes as carriers of the memories of past selves, as well Pinch and Reinecke's, story of the Minimoog synthesizer and the ways in which musicians incorporate its 'vinatge' sound in their compositions and identities, constantly intermingling the past and the present.

How does it relate to vinyl? Interestingly, the influence of nostalgia on record collecting and vinyl 'revival' seems to be obvious enough for many scholars to concentrate mostly on downplaying it as 'not a sole explanation'. Although in the aforementioned quantitative study of LP-dedicated online forum, Nokelainen and Dedehayir (2015) did identify "those who nostalgically romanticize the technology" as one of the six categories of vinyl enthusiasts, many others conceptualize nostalgia rather as a starting point, from which the analysis of 'real' reasons for revived vinyl use should take off. Putting nostalgia in opposition to more "robust" explanations, Bartmanski and Woodward (2015) consistently claim that:

"(…) the wide use in the media of such terms as resurgence and comeback suggests that the medium's re-articulated market presence is a multidimensional and relatively robust cultural situation rather than a fleeting craze, or a passing effect of fetishistic nostalgia briefly fuelled by the ultimate triumph of the digital." (p. 4)

In his 2006 analysis of youth consumers adopting the LP in their music-listening practices, Hayes does point out to certain nostalgia for the "good old days" of popular music (even if not experienced directly by the young people in question) as an important factor. However, the way he conceptualizes it suggests that the young vinyl fans' uncritical appreciation of past music as unspoiled by the consumptionist inauthenticity of modern times is not only reductionist, but also poses a significant threat to the further development of popular music both inside and outside of today's mainstream. Similarly, when commenting on Plasketes' (1992) thesis that anti-digital resistance might be related to the emotional meanings attached to the technologies of the past, Chivers Yochim and Biddinger (2008) suggest that "(...) nostalgia alone is not particularly useful for describing vinyl records' place in American culture, as it suggests a false consciousness (…)" (p. 184).

In general, 'vinyl as a nostalgic preoccupation' seems to be an established cliché, one that – if mentioned at all – requires instant problematization, or even questioning in a more general sense. Nostalgia is often conceptualized as a "fleeting craze" (Bartmanski, & Woodward, 2015), and something not worth too much of scholars' attention. Another problem – as with the majority of emotions – lies in establishing what constitutes a nostalgic motivation or experience. Is it possible, as Boym (2001) seems to suggest, that people can be nostalgic without considering themselves nostalgic in the first place?

2.7.   Vinyl and Audiophilia in STS

As it has become transparent in some of the publications I quoted above, the intersections between vinyl, audiophilia and Science-Technology-Society (STS) studies has been mostly that of the latter serving as a source of theoretical frameworks and sensitizing concepts. Actor-Network-Theory, user

studies, and other STS-related toolkits turn out to be quite useful in discussing the complexities of the engagements with audio technologies of past and present.

On a more general level, the need for establishing a more robust STS framework for studying sound and audio has been advocated by Trevor Pinch and Karin Bijsterveld in their 2004 editorial *Sound Studies: New Technologies and Music*:

"Sound Studies is an emerging interdisciplinary area that studies the material production and consumption of music, sound, noise, and silence, and how these have changed throughout history and within different societies, but does so from a much broader perspective than standard disciplines such as ethnomusicology, history of music, and sociology of music. (...) What S&TS can contribute is a focus on the materiality of sound, its embeddedness not only in history, society, and culture, but also in science and technology and its machines and ways of knowing and interacting." (p. 636)

Although vinyl is by no means an under-researched topic, it remains a field of dynamic change in meaning-making practices and identities it entails. Framing the 'analog vs. digital' as a "hipster dilemma" (Thorén, et al., 2019) points out to new groups of actors that start to be imagined as playing a role in the vinyl / audiophilia networks. I agree with Bartmanski and Woodward (2018) that the 'vinyl revival' as it has already been discussed for more than a decade might have entered a new stage of intensifying commodification. Innovations such as High Definition Vinyl seem to embody this change – a process worth paying attention to, considering the significance of symbols and materiality in the vinyl-related discourses.

3. Theoretical Framework

In this chapter, I will present the key theoretical frameworks, which have guided me throughout my research project: (1) the critical approaches to innovation studies, history of technology and technological change, as conceptualized by such scholars as David Edgerton, Trevor Pinch & Wiebe Bijker, and Susan Leigh Star & James Griesemer, (2) user studies, and especially their material-semiotic (Woolgar and Akrich) and cultural / media (Du Gay) branches, and (3) sociology of expectations, as derived from the works of Nik Brown & Mike Michael, Harro Van Lente, and others. Not only the sources of sensitizing concepts which shaped my way of thinking about, and interpreting the data, these perspectives enabled me to anchor my project in the broader Science-Technology-Society (STS) scholarship.

3.1. Technology Studies, (Retro)-Innovation & Boundary Objects

What do we really talk about when we talk about technology and its innovation? In his attempt at coming up with "a comprehensive definition of technology", Carroll (2017) engages in a detailed critique of two temporally distinct concepts of 'technology'. First one, coined in 1829 by Jacob Bigelow, is perhaps one of the earliest modern takes on defining these 'new' kinds of artifacts: "understood to consist of principles, processes, and nomenclature of the more conspicuous arts, particularly those which involve applications of science, and which may be considered useful, by promoting the benefit of society, together with the emolument of those who pursue them" (Bigelow, 1829, as quoted in Carroll, 2017). Second, more contemporary definition which he addresses is that of Volti (2009), according to whom technology is "a system created by humans that uses knowledge and organization to produce objects and techniques for the attainment of specific goals" (Volti, 2009, p. 6, as quoted in Carroll, 2017). Taking what he refers to as "ethological perspective", Carroll presents his own, elaborate definition:

"Technology is (a) something that is always inherently intelligent enough either to function, to be used to function, to be imbued with, or to be interpreted as having, a function that only intelligent beings (human or otherwise) have the ability to comprehend; (b) something devised, designed (i.e., primary intention), or discovered (i.e., secondary intention) that serves a particular purpose from a purely secular standpoint, without requiring that mankind be responsible for it, though he may be (i.e., the aspect of reflexivity through purpose in that salt doesn't inherently "elevate" or do anything deliberately, but it does "elevate" the boiling point of water, which it has been found to do and can be considered to serve a purpose); (c) a significant beneficiary of rationally-derived knowledge that is "used for" a purpose, without itself necessarily being translated into something physical or material that "does" (e.g., instructional methodologies in education, processes, ideas)" (p. 18)

Even after leaving behind some of the elements of this definition that automatically wave a red flag for an STS researcher ("inherently intelligent enough", "only intelligent beings", "discovered", "without requiring that mankind be responsible for it", "rationally-derived knowledge", etc.), one can see that coming up with an all-encompassing description of 'technology' is a tedious, and perhaps unfulfilling task – and even Carroll acknowledges that for some scholars it is also an unnecessary one.

These scholars include Bijker, Hughes, and Pinch (1987), whose account of *The Social Construction of Technological Systems*, is largely focused on dealing with the "seamless web of technology and society" (p. 4) from a social constructivist perspective. If they attempt to define or categorize anything, it is much more the field of 'technology studies', rather than the technology itself. Their classification of 'technology studies' literature includes: (1) innovation studies, largely carried out by economists with a tendency of 'black-boxing' scientific knowledge (2) history of technology, successful in tracing the development of technological artefacts, but often stained by technologically-deterministic emphasis on successful innovations and (3) sociology of technology, which is their key working ground, given their "intention of building a sociology of technology that treats technological knowledge in the same symmetric, impartial manner that scientific facts are treated within the sociology of scientific knowledge" (p. 18). One of such attempts, perhaps the most widely known as of this volume, was Pinch and Bijker's (1987) story of the development of the bicycle, strongly rooted in the Social Construction of Technology (SCOT) approaches:

"In SCOT the developmental process of a technological artifact is described as an alternation of variation and selection. This results in a "multidirectional" model, in contrast with the linear models used explicitly in many innovation studies and implicitly in much history of technology. Such a multidirectional view is essential to any social constructivist account of technology. Of course, with historical hindsight, it is possible to collapse the multidirectional model on to a simpler linear model; but this misses the thrust of our argument that the "successful" stages in the development are not the only possible ones." (p. 22)

Describing many possible versions of a bicycle, which at the time of their introduction in the second half of 19th century were all quite serious rivals to the title of what we now call 'the bicycle', Pinch and Bijker show the processes of quite socially-driven "selection" which led to some models' "death" and others' "survival". What turned out to be equally important in these trajectories were not only the matters of design, engineering, and functionality, but also such aspects of social life as gender roles, religion, identity, and fashion, as performed by the "relevant social groups", their perceptions of technology-related "problems", and meanings they attached to them. This perspective also rings close to that known from user studies, which I will discuss in more detail in the following section.

Bijker, Hughes, and Pinch's (1987) approach to the history of technology is quite similar to that of David Edgerton (1999, 2007). In his 1999 article *Ten eclectic theses on the historiography of*

technology, he delineates several problems that come along with too frequent association of the Anglo-Saxon histories of technology with innovations, rather than technologies themselves. According to Edgerton (1999):

"The study of the relations of technology and society must necessarily deal with technology which is in widespread use. However, most writing on the history of technology and on the relations of technology and society is concerned with innovation, with the emergence of new technologies. It fails to distinguish this from the study of technology in widespread use, which is necessarily old, and is often seen as out-of-date, obsolete, and merely persisting." (p. 112)

He postulates putting much more focus on adoption, diffusion, and use of technologies – especially the ones that have been geographically and chronologically displaced, maintained, repaired, remodelled, recycled, or – quite on the contrary – those that are, or already have disappeared. He also points out how "invention and innovation rarely lead to use, but use often leads to invention and innovation" (p. 123), suggesting that we should much more often ask how the existing technologies and their use affect the innovation:

"Other accounts of innovation stress the cumulation of small incremental changes in technologies-in-use. The path-dependence of innovation has been an important theme of recent writing: in this view innovation is strongly affected by what technologies are actually in use, and the particular problems that arise in use. The very fact of adoption, leads to development effort being concentrated on these technologies. "Bottlenecks" or "reverse salients" that arise in use, it is suggested, themselves focus innovative activity, both incremental and radical. In addition, use itself leads to increases in efficiency of use from "learning by doing" and "learning by using"" (p. 124)

Edgerton's critique of the "revolutionary, future-oriented rhetoric" (p. 128), which he finds to be quite specific to the 20th century Western culture, as performed by the white, middle-to-upper class male 'innovators', continues in his 2007 article, *The stuff of technofantasy*. Caught in the constant state of "technohype", we tend to be much less sceptical of the ever new, yet somehow old, socio-technical promises, than we "should" be. Edgerton points out to several reasons why this might happen: "we confuse technology per se with that small part of it that is claimed to be novel: because an individual item of technology is new, we grant the whole thing novelty (…) We also underestimate the importance of "older" technologies in the past – that is, those invented before a particular era but still in use in that era." (p. 46). The two main pieces of advice he has for those who want to escape this "technohype" is (1) to carefully reflect on the differences between 'old' and 'new' technologies, as the closer one looks, the more blurry these distinctions become, and (2) to stop confusing 'change' with 'innovation' – sometimes this 'innovation' is there to be found only in the advertising materials, whereas what might be a much more accurate description of what has been done to a technology are the various degrees of adaptation, redesign, and restoration.

Similar issue has been tackled by Bijsterveld and Peters (2010) in their study of musical instruments development, in which they take an STS perspective on some issues faced by organologists (scholars of musical instruments and their classification) conceptualizing the emergence and uptake of new instruments. What especially links their approach to that of Edgerton is the notion of "retro-innovation" – "the re-introduction of obsolete musical instruments, the re-invention of techniques for playing such instruments, and the reconstruction of early musical instruments in today's musical performance practices" (pp. 107-108) – and how the organologists, similarly to the historians of technology as conceptualized by Edgerton (1999) or Bijker, Hughes, and Pinch (1987), often overlook these practices of re-appropriation in their studies of innovation, putting their objects ('obsolete' instruments) in a category similar to that of extinct species (Bijsterveld, & Peters, 2010, p. 114). This does not mean that organologists do not care about these 'old' musical technologies – quite the opposite, their ongoing studies of these artifacts are crucial for the knowledge of past musical performance practices, as well as the trajectories of their further developments. They even engage in the studies of these instruments' revivals, although mostly those that happened in the past. However:

"Organologists speak of past revivals and rediscoveries of early instruments, as if later eras and cultures take in these instruments without transformation of either the instrument or the cultures involved. Yet STS scholars are pre-eminently interested in such transformations. This is the result of the trend in STS, one that started with Hughes' research into large technological systems, stressing that new technologies, rather than simply changing society or culture in a single blow, can only modify society gradually – after they have been appropriated, embedded, and transformed by that particular society." (p. 114)

This social appropriation, embeddedness, and transformation of technological objects brings us back to Bijker, Hughes, and Pinch (1987), and the notion of interpretative flexibility. One of the ways in which the artifacts are negotiated into specific social contexts is the multiplicity of meanings that can be ascribed to them by different relevant social groups. This is exactly what happened with the bicycle from Pinch and Bijker's story – in order for a technology and its specific model to become stabilised, different social groups had to formulate the different meanings they attached to this technology, and incorporate them in their lifestyles (for example when women's use of a bike to get to church on Sunday was deemed not 'sinful'). The bicycle was thus an object to interpretative flexibility – a notion which was initially coined by Pinch and Bijker (1984) in relation to scientific findings:

"In the *first stage* the interpretative flexibility of scientific findings is displayed – in other words, it is shown that scientific findings are open to more than one interpretation. This shifts the focus for the explanation of scientific developments from the Natural World to the Social World. However, although this interpretative flexibility can be recovered in certain circumstances, remains the case that such flexibility soon disappears in science – that is to say, a scientific consensus will usually emerge

as to what the 'truth' is in any particular instance. Social mechanisms which limit interpretative flexibility, and thus allow scientific controversies to be terminated, are described in the *second stage*. A *third stage*, which has not yet been carried through in any study of contemporary science, is to relate such 'closure mechanisms' to the wider social-cultural milieu." (p. 409)

In this quote, interpretative flexibility emerges as an active agent in the processes of establishing the consensus over both scientific findings and technological artifacts. However, such consensus is not always reached, and even if it is, the interpretative flexibility underlying the common understandings of a fact or an object can always be unearthed all over again. Star and Griesemer (1989) refer to the entities for which interpretative flexibility is a constant state rather than a passing stage as "boundary objects":

"Boundary objects are objects which are both plastic enough to adapt to local needs and the constraints of the several parties employing them, yet robust enough to maintain a common identity across sites. They are weakly structured in common use, and become strongly structured in individual-site use. These objects may be abstract or concrete. They have different meanings in different social worlds but their structure is common enough to more than one world to make them recognizable, a means of translation. The creation and management of boundary objects is a key process in developing and maintaining coherence across intersecting social worlds." (p. 393)

However, interpretative flexibility is not an only characteristic of boundary objects, which Star (2010) emphasizes in her much later critique of the ways in which the term has been commonly used, omitting some of its complexities:

"The two other aspects of boundary objects, much more rarely cited or used, are (1) the material/organizational structure of different types of boundary objects and (2) the question of scale/granularity. Boundary objects are a sort of arrangement that allow different groups to work together without consensus. However, the forms this may take are not arbitrary. They are essentially organic infrastructures that have arisen due to what Jim Griesemer and I called "information needs" in 1989. I would now add "information and work requirements," as perceived locally and by groups who wish to cooperate. "Work" is also a word that stretches, and should, to include cooperation around serious play endeavors such as skiing, surfing, and hiking (in other words, work-play is a continuum; what is important for boundary objects is how practices structure, and language emerge, for doing things together." (p. 602)

The key purpose of introducing the notion of boundary objects was thus to conceptualize the work (or play) in the environments where the consensus over the interpretative flexibility of objects involved is difficult or even impossible to reach. But how are such instable, yet lasting arrangements performed

by their human participants? Let us now concentrate on the user perspective on technology, innovation, and their incorporation in daily life practices.

3.2. User Studies

Oudshoorn and Pinch (2008) divide recent developments in STS literature on users into five main groups: (1) the innovation studies, which promote the notion of 'lead-users' as the drivers of technological innovation, (2) the sociology of technology, derived from the Social Construction of Technology (SCOT) approaches, (3) the feminist studies of technology, with the goal of drawing attention to once neglected and 'invisible' users, (4) the semiotic approaches, based on the notions of script and technology-as-text, guided by the principles of Actor-Network-Theory (ANT) and (5) media and cultural studies approaches, concentrated to an even larger degree on users and especially their personal, consumption-related practices of identity-building. Due to the focus of my study, and because I don't want to repeat myself and the concepts which I already delineated above, in this section I will concentrate mostly on to the latter two approaches.

3.2.1. Users, Technologies and Scripts

Semiotic approaches to user studies are largely based on Steve Woolgar's (1990) metaphor of machine as a text. By comparing the processes of technology's construction to writing and its use to reading, he shows that the relation between designers and users (i.e. writers and readers) is mediated by both the machine and its interpretation (what the machine is, what it can or is supposed to do, and finally how it is used and understood), which may lead to considerable levels of interpretative flexibility. However, Woolgar's take on this notion has a slightly different focus than that of Pinch and Bijker (1987). While they are mostly occupied with showing how different "relevant social groups" negotiate the meaning of technology-in-use (e.g. bicycles), Woolgar is much more concerned with how that technology is designed, encoding some modes of interpretation in its very material. Basing his research on the ethnography of computer design, he shows how the production of particular technology comes along with the processes of configuring its users – which go way beyond the 'use' itself, extending to the users' identities and frameworks for possible future actions. The act of user configuration is strongly defined by the boundary work between the insiders and outsiders of a given industry (for example the designers and users), what is or can be known about the user as imagined during the design stage of technology's development, but also the acts of silencing, making invisible and relegating some actors to the background.

Woolgar's metaphor has been criticized by some authors as an asymmetrical and one-sided perspective on user-technology relations, in which the emphasis placed solely on expert / designer-driven act of user configuration is just another incarnation of technological determinism. Madelaine Akrich (1992) tried to avoid such accusations by presenting the updated notion of a script. Strongly rooted in ANT,

scripts delineate the frames of action in human-nonhuman networks built upon a particular technological artifact:

"Designers thus define actors with specific tastes, competences, motives, aspirations, political prejudices, and the rest, and they assume that morality, technology, science, and economy will evolve in particular ways. A large part of the work of innovators is that of "inscribing" this vision of (or prediction about) the world in the technical content of the new object. I will call the end product of this work a "script" or a "scenario"" (Akrich, 1992, p. 208).

Apart from ascribing specific 'roles' to the imagined users, technical objects and the way they are designed, scripts shape the conditions of action and the space in which it is supposed to happen in a series of negotiations. These user-artifact negotiations are usually pursued via multiple intermediaries, such as designers, salespeople, policymakers, pioneering users, etc. (Pinch, & Trocco, 2002).

Although the scripts may seem similar to Woolgar's concept of 'technology as a text', Akrich's framework is supposed to be giving much more agency to the users themselves. The user-artifact negotiations can always fail, for example when people reject certain technologies as incompatible with their identities, cultures, needs, or the imaginaries concerning them. A good example of how such failure may occur was shown in an aforementioned Bijsterveld and Peters' (2010) article on organology and the STS perspectives on the development of new instruments:

"(…) organologists, as we have seen, have noted that professional players are not apt to accept change in musical instruments since they are reluctant to say goodbye to the musical instruments they focused on in their training or that will allow them to find a job." (p. 113)

Some of the STS-derived concepts that Bijsterveld and Peters suggest to be helpful in explaining such "conservatism" is the notion of tacit knowledge and the fear of losing it / not being able to reconstruct it with a new artefact, as well as the "notion of engaging technologies":

"Engaging technologies are artefacts, such as tools and musical instruments, users have an enduring relation with because they not only need to take great pains to control them, but also because the artefacts always keep responding in slightly unpredictable ways. It is exactly this combination of control and unpredictability that opens the door to a unique unity of performance, creativity, and flow – a unity in which even the process of wearing out the artefact enhances the personal engagement with that object (...)" (p. 113)

Sometimes it is not the user-technology negotiation that fails, but rather the one between the user and an imagined user – or even between the user who more or less accepted his / her imagined role as assigned by the script, and the social space in which this role is supposed to be performed. That is what happened in the well-known case of male contraceptive pill described by Nelly Oudshoorn

(2003), where the configuration of clinical trials and potential user behavior turned out to be especially problematic as the pill did not fit the widely spread visions of hegemonic masculinity and femininity traditionally understood as responsible for contraception. Interestingly, it was not the male trial subjects who rejected the new role of 'caring man' – despite them and their partners embracing this new figure (and even praising it as a 'brave pioneer', which actually embedded this script in more traditional masculine narratives), the clinical trials arguably remained to be a cultural niche of 'identity testing', too detached from the outside conditions of normative gender identities.

Of course, it is not the case that technologies, scripts, and the roles assigned by them can only be either fully accepted or rejected. Apart from the instances of de-inscription, scripts can also be actively modified by the users and the alternative readings they may come up with, resulting in the new, unpredictable arrangements in the heterogeneous socio-technical network of use and non-use. In order to fully grasp this indeterminacy, interpretative flexibility of technological objects, and an ongoing state of negotiation, Akrich (1992) postulates the analytic approaches based on constant 'movement' of attention between the designer and the user, or, speaking more precisely, in-between the figures of user as imagined by all of the actors involved – the designers, the users themselves, as well as any other relevant social groups.

3.2.2. I Consume (Culture) Therefore I Am

The approaches to users derived from cultural and media studies put a specific focus on consumption as an inherent part of technology's production. To consume does not only mean to buy, use and hopefully (at least for the designers) re-buy, but also to incorporate the artifact in one's personal spaces of living, daily practices, and identities – both those self-perceived, and the ones we show to the outside world. Such acts of cultural appropriation are frequently referred to as achieved by the means of domesticating the everyday technologies.

In their 1997 book, *Doing Cultural Studies. The Story of the Sony Walkman*, Du Gay et al. identified five cultural processes, by which an artifact gains its place in the consumers' daily lives. Representation, Identity, Production, Consumption and Regulation, due to their intertwined and overlapping character, form a so-called Circuit of Culture. Underlining the role of language, Du Gay et al. show how the meaning of technology does not arise from the object itself, but from its oral and visual representations. Similarly to Akrich (1992) and Woolgar (1990), they define production not only as a strictly technological process, but also an inherently cultural one, as it depends on the acts of 'encoding' an artifact with particular meanings and user / consumer identities.

The blurred boundary between production and consumption has also been emphasized by Alvin Toffler (1980), who introduced the notion of "prosumer", which highlights the active role of consumers in the processes of "production for use". One of the key sites of this user-artifact interaction

are the domestic spaces, where the technologies can be 'tamed' – adapted and incorporated in day-to-day practices and consumers' visions of themselves and their lifestyles – a process often referred to as "domestication" (Silverstone, & Hirsch, 1992).

According to Oudshoorn and Pinch (2008), this focus on household has been largely inspired by feminist scholars and their attempts to draw attention to the ways in which women have for a long time participated in and shaped the mass consumption of daily life commodities (De Grazia, 1996). Initially portrayed mostly as negative, the role of consumption finally started to be conceptualized also as a source of empowerment, and a sphere in which women were able to actively express their personal identities. Although still frequently equated with capitalist and market-driven manipulation, these practices also have some supporters, especially among cultural and media scholars, who ascribe much more agency to users and their culture-making abilities. According to this framework consumers are thus "cultural experts" who playfully use the mass consumption goods in a creative and self-aware way (Oudshoorn, & Pinch, 2008).

3.3. Sociology of Expectations

Futures are always the sites of contestation (Brown, Rappert, & Webster, 2000). Anticipated, feared, promised, advertised, planned, desired, or argued about, they are inherently embedded in the majority of individual and collective actions, especially those related to techno-sciences and innovation. Expectations are some of the key narrative devices which help us to incorporate this abstract goal of our behavior into the languages of the present.

According to the sociology of expectations, these narrative devices are as performative and generative as the actions that eventually push us towards the futures that we imagine. They 'do something' by obliging others to 'do something' or to prepare for 'something to be done'. Van Lente (2012) shows how this "promise-requirement cycle" (the transformation of promises into requirements) is a central mechanism in the dynamics of expectation and performing certain futures – including the socio-technical ones. In his contribution to the 2006 edited volume *User behaviour and technology development: Shaping sustainable relations between consumers and technologies*, Van Lente explains how crucial these expectations are for setting the framework for technological change and its future use:

"Anticipation of use guides the development and design of technologies. The key phenomenon here is that technical expectations distribute roles to developers, competitors, governments and users." (p. 218)

Similarly to Akrich's (1992) scripts, expectations thus ascribe particular roles to the actors involved, for example leading to the construction of such figures as the "ideal future user" (Borup, Brown,

Konrad, Van Lente, 2006), which then play a crucial role in decision-making concerning the policy strategies, design and innovation trajectories, as they enable certain stories to be told, while silencing the others (Ivory, 2013). This influence is especially powerful as the expectations easily acquire collective, and even moralized character, for example in the narratives concerning the necessity of technological 'progress'. However, once again like in the scenarios known from the user studies, the actors involved are not absolutely powerless in the face of those narratives. Users perform and participate in their own expectations, and they can always reject or modify the roles ascribed to them by the future imaginaries of designers or policymakers. The relationship between personal and collective expectations, technology's design and potential futures that might follow is a subject of constant negotiation and interpretative flexibility (Konrad, 2006).

What is perhaps especially important from the perspective of a scholar, is that the expectations help us to transform the future itself into an 'analytical object', not just some ill-defined space in time yet to come (Brown, & Michael, 2003). In their 2003 article *A Sociology of Expectations: Retrospecting Prospects and Prospecting Retrospects*, Brown and Michael postulate the analytical shift from looking 'into' the future to looking 'at' the future 'in the making' – and how this future is and has been mobilized in the narratives of both the present and the past. They suggest that many valuable insights can be achieved when comparing the currently performed expectations with those that have been employed in the past, and thus propose two interpretative frameworks: (1) *retrospecting prospects*, that is the recollection of past imagined futures and the ways they have been represented in the past narratives, and (2) *prospecting retrospects*, that is analyzing the ways in which the past futures are deployed in the present, and what kinds of new imagined futures they potentially build. Thanks to this perspective, it is possible to look at the expectations not only as the performative narrative devices, but also the bridges between the past and present narratives in which they participate.

3.4. Online Forum as a Space of User Negotiation

Each of the theoretical frameworks I delineated above puts a great emphasis on various processes of negotiation – users vs. technologies, designers vs. users, users vs. expectations, users vs. users, and many other possible configurations. How are such negotiations affected by the space in which they unfold? What if this space is highly dematerialized, spatially and temporally fluid, anonymous yet encouraging intense practices of identity work – namely, what difference does it make (if any at all) if the site of user-designer negotiation is a virtual one? In this section I will shortly address the ways in which the internet is conceptualized as the site of personal interactions.

Understanding digital culture "as an emerging set of values, practices, and expectations regarding the way people (should) act and interact within the contemporary network society" (p. 63), Deuze (2006) addresses three features of such culture: (1) remediation, that is the continuous remixing of the old and new media, (2) bricolage, "the highly personalized, continuous, and more or less autonomous

assembly, disassembly, and reassembly of mediated reality" (p. 66), and (3) participation, which helps the users of online spaces to maintain their personal agency.

"Something is going on in the daily lives of media users worldwide that makes them (us) accept the fact that reality is constructed, assembled, and manipulated by media, and that the only way to make sense of that mediated world is to intervene and thus adjust our worldview accordingly—which in turn shapes and renews the properties of media, more closely reflecting the identity of the remediating bricoleur instead of the proverbial couch potato. In short: In the proliferation and saturation of screen-based, networked, and digital media that saturate our lives, our reconstitution is expressed as: (1) Active agents in the process of meaning-making (we become participants), (2) We adopt but at the same time modify, manipulate, and thus reform consensual ways of understanding reality (we engage in remediation), (3) We reflexively assemble our own particular versions of such reality (we are bricoleurs)." (p. 66)

On the other hand, Lee (2005) focuses on the implosive character of the internet, meaning its ability to blur the geographical boundaries, as well as those between the private and public, the virtual and 'real', and the written and spoken modes of communication. One of the key outcomes of such boundary dissolving would be the facilitating of interaction between the people of many different cultural backgrounds and worldviews who could have never met otherwise – which according to Lee also explains the prevalence of online hostility and tensions. Interestingly, many authors, especially those concerned with online dating, point out to a somehow opposite characteristic of a virtual space, namely how it helps people to connect on deeper levels (than, for example, physical attraction) such as shared beliefs, values and interests (Bargh, & McKenna, 2004). While both options – facilitated encounter of 'the other' and non-distracted search for 'the similar' – seem to be equally probable, the focus is much more frequently placed on the internet's algorithmic capacity of enclosing its users in the numbing "filter bubbles" (Pariser, 2011).

From a more market-driven perspective, internet is also conceptualized as a valuable source of information on users, as well as a site of customer-company collaboration:

"Social media tools offer a creative way for customers to develop value by collaborating or interacting with companies and other customers. Combining customer co-creation with social media tools is not only a natural extension of the co-creation process but also an effective platform to engage customers for innovation." (He, & Yan, 2015, p. 1917)

Interestingly, this framing of online space as a dream-come-true for vendors, salespeople and marketing experts is often coupled with many 'off the record' tips on the characteristics of social media users and how to best 'approach them'. Kaplan and Haenlein (2010) list the following "five points for being social" online: "be active, be interesting, be humble, be unprofessional, be honest".

Such bucket lists position the online space as a somehow paradoxical site of 'calculated honesty' – one can prepare to face, and even benefit from it by adjusting one's behaviour to the low-key, 'natural' circumstances, where everyone is equal, interconnected, and has a right to be wrong and quirky, yet the notion of an outsider still applies and is an important gate-keeping device. It seems that online spaces are inherently ambiguous – crossing the boundaries while establishing new ones, grassroots yet subject to intense commoditization, encouraging honesty and weirdness while sticking to very specific norms of behaviour. One can suspect that the user negotiations hosted by such sites will be not less heterogeneous and paradoxical.

3.5.   Summing It Up – Sensitizing Concepts

In order to sum up the information provided in this chapter, I list three sensitizing concepts derived from the frameworks of technology studies, user studies, and sociology of expectations, which were especially important in shaping the way I made sense of my empirical findings.

Boundary Objects

Introduced by Susan Leigh Star and Jim Griesemer (1989), boundary objects are flexible entities which acquire different meanings in different social worlds, yet their identity is robust enough to enable the meaningful cooperation between these different worlds – even without reaching the consensus. Boundary objects are (1) subject to interpretative flexibility achieved by the means of translation, (2) strongly related to organizational and information needs of infrastructures in which they participate, and (3) easily scaled up to form larger boundary infrastructures (Star, 2010).

Script

Madelaine Akrich's (1992) take on Steve Woolgar's (1990) metaphor of machine as a text, scripts are the sets of arrangements – personal, spatial, temporal – which get to be embedded in a design of particular technology. They carry specific imaginaries of a user and modes of use, thus enabling some actions and identities, while silencing the others. Scripts are objects to constant negotiation, especially as the designer's imagined user may not be in line with the roles as imagined by the actual users. Apart from the instances of complete de-inscription (rejection of a script), scripts can also be adapted, re-interpreted, and translated to meet the users' needs and expectations, resulting in new and unexpected networks of arrangements.

Retrospecting Prospects & Prospecting Retrospects

Although not really a single concept, I find Brown and Michael's (2003) two analytical frameworks for looking "at the future in the making" – retrospecting prospects and prospecting retrospects – very well-suited for the analysis of contemporary technologies 'with a past'. While retrospecting prospects

is concerned with the past futures and how they used to be imagined and employed in the narratives of those pasts, prospecting retrospects is all about the present, how the past future narratives are currently used, and what possible futures (and their imaginaries) may result from them. The two modes of thinking are derived from the sociology of expectations, and thus highlight the performative character of the ways we think about future, turning it into an analytical object. Similarly to scripts, expectations set the frameworks for future actions, ascribe specific roles to actors involved (e.g. 'ideal future user'), and are constantly negotiated by these actors.

4. Methodology

In this chapter I will present the material and methods I used for conducting the empirical part of my research. The chapter will be divided into five sections – (1) Empirical Material, (2) Methodology: Netnography of the Internet, (3) Fieldwork, (4) Data Analysis, and (5) Research Ethics – in which I will present the goals and technical details of my netnographic fieldwork, data collection and grounded theory data analysis.

On a most general level, my research methodology is situated in the qualitative realm, due to the character of both my research questions, as well as the dataset. According to Jensen and Laurie (2016), qualitative approaches are best suited for handling the data that are not numerical, and answering the 'how' questions that focus on the processes behind human interactions. They also encourage the researcher to take the inductive line of reasoning, where data collection is the first step in the theory-generating process (p. 11). Such 'journey' is filled with moments of uncertainty, where the further trajectories of research project depend solely on the researcher's decisions – which are not necessarily 'right' or 'wrong', as much as highlighting different perspectives of the dataset and the potential theories it may generate. That is why I will pay a particular attention to these moments of decision-making, hoping to make it clear to the reader why some things have been done in a certain way, and how my line of reasoning might have been affected by such handling of the data and the methodological approaches. Applying John Law's (2017) perspective on techno-scientific methods to my own research, I tried to keep in mind:

"(...) that methods are shaped *by* the social; that they *also* shape, stage, and structure the social; that they are performative and heterogeneously enact objects, worlds, and realities; that they are situated, productive, essentially political, and normative; and that they might be otherwise." (p. 48)

4.1. Empirical Material

In order to address my initial research interest, that is the reactions of online audiophile / vinyl enthusiast communities to the announced introduction of High Definition Vinyl (HDV), I had to start with the exploration of such online communities, and whether their members engage in discussing the HDV in the first place. The topic turned out to be significantly popular, with several audio- and technology-dedicated forums hosting a number of discussions concerning the new version of vinyl record. The numbers were large enough to make it impossible to include all of the material in my analysis – hence, one of the first decision points, where I had to pick which discussions / forums I will address in my analysis. Following the advice of my supervisor, I decided to stick to the more vinyl-dedicated outlets (for example in contrast to the 'digital' ones) – a decision which could have affected the profile of an 'average member' of the forum, although such figure turned out to be nevertheless quite difficult to grasp / speculate on.

As my interest was not in the immersive experience of one specific community, much more an in-depth analysis of such communities' reactions to the technological innovation that HDV would be, I wanted to include the data from more than one forum – not in order to come up with a comparative study in a full sense, but to have a wider perspective from at least two different sources. Initially, I was open both to the possibility of such comparative study, as well as the inclusion of more forums, but due to the timeframe of my project, as well as the increasingly deepened character of grounded theory approach which I chose during the data analysis stage, the included forums count stopped at two. Even though this number can't help but suggest some form of comparative analysis, I want to make it clear, that this is not really the case. The reason for that was twofold – first, the differences between the forums did not seem to stand out sufficiently (even if there certainly are some), and secondly, the other aspects of the dataset turned out to be much more interesting than searching for these potential differences.

Finally, I decided to concentrate on the material from *Steve Hoffman Music Forums* (*SHMF*) and Reddit's subreddit *r/vinyl*. The reasons why I picked these two outlets were yet again twofold: (1) the placing on the list of Google search results (in case of *SHMF*) and (2) the 'common sense' / my own knowledge of the internet landscape (in case of *r/vinyl* subreddit).

The forum that always landed on the first spot of Google search results after inserting the keywords 'hd vinyl forum' into the search engine, was *Steve Hoffman Music Forums*. Built around the website of Steve Hoffman, an American mastering engineer, *SHMF* is a large discussion hub dedicated to music in general, as well as audio technologies, equipment, and audio engineering:

"With over 711,000 discussions, 21,200,000 posts and 85,000 members we invite you to join us today! Keep up to date with the latest on the Grateful Dead (The Grateful Thread), the Beach Boys, the Beatles, Rolling Stones, Classical Music threads, The Jazz Beat thread and releases, the newest music reissues and much more; audio hardware discussions including **Audio Note UK** and the latest in Visual Arts!" (Welcome!, www.stevehoffman.tv)

SHMF is thus a large community, whose character could arguably be described as rather 'traditional'. Using the authoritative figure of a respected mastering engineer, frequent references to 'classic rock' music and artists, as well as the importance of technological details make up the general impression of a 'grown up' community based on expertise and knowledge of the subject. The discussions are grouped according to topics (*Music Corner*, *Audio Hardware*, *Visual Arts*, *Off Topic (General Discussions)*, etc.) – they are available for the unregistered visitors to see, but full participation is possible only after logging in.

The choice of Reddit was based on my personal knowledge of this platform as a place to go to when searching for fan communities of pretty much any topic possible – and vinyl was not an exception.

Reddit's structure is based on smaller communities – subreddits – dedicated to specific topics. The largest vinyl-dedicated subreddit, *r/vinyl*, is also the one where the majority of Reddit-based discussions on HDV took place. Similarly as in case of *SHMF*, I concentrated only on those *r/vinyl* discussions which concerned the newly announced technology.

I decided to analyze my empirical material using the methodological toolkit of netnography. In the following section I will deliberate on this approach in more detail, as well as – similarly as I did in the previous chapter – discuss the characteristics of internet as a research field site, this time from a more practical perspective.

4.2. Methodology: Netnography of the Internet

Although it has already been over twenty years since its development by Robert Kozinets (1998) as an adaptation of traditional ethnographic methods to the new, extremely broad and dynamic research field of the internet, netnography (and online research in general) is still a very contested method of qualitative research. Similarly to the internet itself, it does carry a load of something new, still non-established, and requiring some sort of top-down ordering and more coherent definition. In what follows I will delineate the key methodological literature on conducting the qualitative inquiry online, including the specificities of the internet as a research field, as well as the general rules of, and controversies surrounding netnographic studies.

The internet, and especially so-called Web 2.0 (O'Reilly, 2005) with its social media platforms, has undoubtedly created new modes of communication and social interconnectedness. What many scholars point out to, trying to characterize this cyber space, is its dualistic nature. Sade-Beck (2004) emphasizes the way in which the internet frequently integrates both the personal and mass media content, transforming its users from passive (and private) data consumers, to the hands-on participants who actively produce the stream of online information. Another dual characteristic of the internet Sade-Beck (2004) points out to is the medium's tendency to encourage the emotional reactions, as well as the acts of seemingly random bonding between the members of online communities, intertwined with the 'impersonality' and 'alienation', which have already become one of the most clichéd attributes of the digital technologies in general – and especially the digitally-mediated interactions. Coupled with a frequent framing of the internet as a culprit in such burning controversies as the wave of fake news, privacy breaches, and its disputable effect on political controversies, these characteristics of online space make the internet both fascinating, as well as risky field for a researcher.

Despite this ambiguity, the internet is also presented as a rewarding space of sociological inquiry, especially for those investigating the online communities and their members. In her study of teenage social media users, boyd (2007) presented the online-created digital body as the extension of the 'real'

one, similarly serving as a tool for impression management and identity work. Of course, there always is a question of representativeness, i.e. to what extent can we trust the pictures of social worlds that our research subjects paint online. My decision is to reply to this (legitimate) doubt: we cannot. According to boyd, the audiences of these self-defining virtual creations are always to some extent imagined, as it is never certain who will become the witness of the identity work performed online. My approach is based on paraphrasing hers – the online identities are no less imagined than the audiences they target – but it is the very fact that they had been imagined and performed that makes them so interesting.

Another issue frequently mentioned in relation to online qualitative research is the scope and dynamic character of the internet content. Drawing the boundaries of the field has always been crucial in conducting a reliable ethnographic study, but when the field is as vast as the World Wide Web, the task becomes even more challenging. Tunçalp and Lê (2014) present many different strategies adopted by online ethnographers to delineate their fields, such as establishing spatial, "one web site equals one field" (p. 73) or temporal (archival vs. real-time data) boundaries, but they also suggest that some degree of flexibility may turn out to be "more adapted to the fluid and increasingly pervasive nature of online space" (p. 73).

Flexibility is in general one of the most frequently emphasized qualities of a successful researcher of the World Wide Web. According to Hine (2015), the key components to approaching the internet that is "embedded, embodied, everyday, and above all emergent" (p. 87), are (1) holistic approach of openness to what was unanticipated, (2) considering the field as fluid and emergent, rarely contained in purely "online" or "offline" sphere, (3) multiple embeddedness of the internet in diverse frames of activity and meaning-making, (4) the internet as an embodied and (5) everyday, mundane experience, (6) understanding that there is not just one internet, nor the one experience of online phenomena, (7) expecting the uncertainty and (8) taking responsibility for one's own agency.

Keeping these suggestions in mind, I also needed more specific guidance. Due to the specificities of my dataset, as well as the character of research questions I wanted to answer, I decided that my approach should be placed somewhere in between the netnography and archival content analysis. This decision was based mostly on the degree of interaction with the research subjects (forum members) which I found to be (1) possible for me to immerse in, considering the timeframe of my project, and (2) necessary in order to answer the research questions.

Netnography, as defined by Robert Kozinets is a "written account resulting from fieldwork studying the cultures and communities that emerge from on-line, computer mediated, or Internet-based communications" (Kozinets, 1998, p. 366). Also referred to as 'virtual ethnography', 'cyber-ethnography', 'computer-assisted webnography' and 'netnographic grounded theory', this method of

online inquiry seems to be still far from settled if it comes to such issues as research ethics, field boundaries and the extent of researcher's participation in the community.

In their literature review on online ethnographic methods, Tunçalp and Lê (2014) defined the following bullet points of decision-making that a netnographer has to face when defining the field of her inquiry:

(1) Space – to what extent (if at all) should the offline data be included? What kind of field localization (e.g. single, multiple, "flowing and connected", etc.) should be incorporated?

(2) Time – how long should the fieldwork last? What should be the character of gathered data (real-time or archival; synchronous, asynchronous, or somewhere in-between)?

(3) Engagement – to what extent should one participate in the field (passive or active engagement, "owning" the field, etc.)? What should be the degree of researcher's concealment (covert vs. revealed)? What complementary methods should be used, if any?

I decided to conduct my netnography (1) purely online, using a "flow and connection" approach to the field site boundaries (picking the specific discussions from two different forums, basing on their adherence to the driving force behind the research, that is the HDV), (2) with the asynchronous collection of archival data (discussions from the past, often already archived, generated not synchronically to my research), and (3) passively (except for the participation in the discussions under my own introductory posts), revealing my identity as a researcher.

However, methodological literature paints a much more complicated picture of the rules of netnographic research, than this three-bullet-point guideline. Many of the sources turn out to be full of not only prescriptive but also contradictory statements regarding what the 'proper' netnography is supposed to be like, how it should relate to the ethos of 'classic' offline ethnography, as well as what the desired direction of the method's developments should be. One of the key points of disagreement is the degree of participation. Costello, McDermott and Wallace (2017) strongly criticize the non-participative approaches to online ethnographies, advocating for a participative turn in online research, which would include the real-time interaction and co-creation of meanings with the researched communities. This should be achieved by such interactive methods as direct participation in forum discussions, online interviews, as well as member checks, in which the researcher's written account is consulted with the members of online community under consideration (Kozinets, 2010). In case of non-participatory online inquiries such as mine, Costello et al. suggest using different terms than netnography when naming the methodological approach one takes, for example the "qualitative archival data research of online communities" (p. 9) – which, perhaps except for the adjective 'archival', seems to be an exact description of the most common sense understanding of a netnography.

On the other hand, some researchers are much less strict if it comes to the netnographer's participation as well as the degree to which the inquiries should be modeled after 'classic' ethnographies. Some position netnography "in between discourse analysis, content analysis and ethnography" (Langer, & Beckman, 2005, p. 189) or even consider it, especially if the dataset in question is archival, a non-human-subject research (Salzmann-Erikson & Eriksson, 2012), thus not requiring the researcher to worry about such issues as identity disclosure or informed consent.

Looking at the multiplicity of definitions of a 'good' netnography (or any netnography at all), one starts to understand the importance of the aforementioned flexibility in designing the online research (or any research at all). I don't fully agree with neither Costello's et al. (2017) ontological rejection of any online study that wasn't conducted with a researcher's absolute personal immersion and an ongoing feedback loop with the online community – nor Salzmann-Erikson and Eriksson's (2012) denial of human subject's participation in the netnographic study. None of them seems to be necessary nor fitted to my research design, as well as the way I understand the online space, and what an ethnography of such space should look like. Internet is a space of in-betweens – and such I attempted for my netnography to be. The classic rules of openness and "ethnographic sensibility" (Pader, 2006) still apply, but the attempts at recreating the 'old-school' ethnographic engagement in this entirely new context with a one-to-one accuracy seem to be doomed to fail. What follows is the description of my take on conducting the netnographic study.

4.3.   Fieldwork

As I have shown in the previous sections, my field has been delineated both spatially (*SHMF* and Reddit *r/vinyl*) and thematically (threads dedicated to High Definition Vinyl's introduction). The majority of discussions I picked has already been archived, which made it impossible for forum members to add new comments – and the rest that remained open for further discussion was rather easy to keep track of, via the 'watch thread' function. This made the temporal boundaries of my online field quite open to potential changes – at least until my data analysis got to the more advanced stage (at the beginning of June 2019), when I decided to close my dataset for any potential new comments.

My starting point was getting the access to the field. I created an account on both websites using a pseudonym – in case of *SHMF* that was enough to become a member of the community, while on Reddit I also had to 'join' the *r/vinyl* subreddit. I decided that disclosing my real name was not necessary, as almost none of the users did it anyway. Following that, I contacted the administrators of both communities, in order to explain the aims of my study and ask them, as the field site gatekeepers, for a permission to conduct it. As my request was accepted in both cases, I found myself in another moment of decision-making, in which I had to choose whether to disclose my identity as a researcher to the general publics of the forums or not. Due to the reasons which I will discuss further in the

'Research Ethics' subsection, I decided to present myself and my research project in the introductory post I uploaded to both communities. This is also when – for a couple of days – my fieldwork took a more active turn, as I participated in the discussions that unfolded below the two posts.

The large part of the empirical stage of my research was thus handling the data I collected from the two outlets. By inserting the keywords 'hd vinyl' and 'high definition vinyl' to the forums' search engines I identified the discussions, which were related to HDV's announced introduction. Following that, I copied each discussion to the Word document, where I 'cleaned them up' from unnecessary debris, forum-related graphics, etc. The dataset I assembled this way consisted of 22 threads – 11 from *SHMF* and 11 from *r/vinyl* (227 pages in sum) – the titles of discussions, their lengths and time periods which I have analyzed (most often consistent with the time periods in which they have taken place) have been listed below:

Steve Hoffman Music Forums		
Title	**Length**	**Time Period Analyzed**
HD Vinyl is coming	53 pages	2016, March 15 – April 10
HD Vinyl? Yes! High Definition vinyl. What the ? !!!!!	10 pages	2016, March 16 – 2018, April 14
HD vinyl?	1 page	2016, March 17
HD "HI-FI Vinyl Will Soon `Be A Reality 3D Printing Technology	80 pages	2017, February 21 – 2018, June 1
Is HD Vinyl In Your Record Playing Future?	2 pages	2017, May 26
HD Vinyl in 2019?	12 pages	2018, January 26 – May 28
High Definition Vinyl?	6 pages	2018, April 12 – 14
Digital Vinyl Records?	2 pages	2018, April 13
High Definition vinyl	1 page	2018, April 13 – 14
High Definition Vinyl is Coming	1 page	2018, April 13 – 14
Master thesis research on HD Vinyl's uptake **(Introductory post for *SHMF*)**	12 pages	2018, December 16 – 18

Table 1 Steve Hoffman Music Forums Threads

Reddit *r/vinyl*		
Title	**Length**	**Time Period Analyzed**
HD Vinyl - Austrian company claims to improve vinyl records with new manufacturing process	5 pages	2016, March 15 – 17
Patents Filed for 'High Definition Vinyl' Technology	2 pages	2016, March 16
Vinyl may be going high definition within three years	1 page	2016, March 17 – 18
Potential Future of "High Definition Vinyl" to Increase Capacity, Volume, and Audio Fidelity	4 pages	2016, August 23 – 24
"High Definition Vinyl" Is Happening, Possibly as Early as Next Year	7 pages	2018, April 11 – 12
Austrian startup working on "HD vinyl"	6 pages	2018, April 12
Apparently high-definition vinyl is coming next year	4 pages	2018, April 13 – 14
What Is HD Vinyl and Is It Legit	1 page	2018, April 20
HD vinyl is a promise, not a product	1 page	2018, April 26
Are you ready for HD vinyl?	6 pages	2018, December 1
Master thesis research on HD Vinyl's uptake (**Introductory post for *r/vinyl***)	10 pages	2018, December 14 – 15

Table 2 Reddit r/vinyl Threads

4.4. Data Analysis

I conducted my data analysis using the grounded theory approach (Glaser, & Strauss, 1968), which was a perfect fit to the dynamic research field, as well as the research questions focused on processes of personal meaning-making. According to Kathy Charmaz (2006), one of the main advocates of constructivist grounded theory, neither data nor theories that stem from them are discovered by the qualitative researcher. They are both constructed accordingly to the researcher's previous experiences, assumptions and backgrounds. Theories should be derived directly from data, with constant awareness that these data are never the 'objective' facts – and thus the theories grounded in them are only one possible form of representing the world. The basis for constructing a full grounded theory interpretation is an ongoing process of analyzing the occurring data, starting from the very beginning. Grounded theorists concentrate on actions, processes and meanings, which research participants ascribe to them – it is much more about finding out how people in the field perceive themselves, their worlds and the roles they play in them, rather than searching for the 'truth'.

Following Charmaz (2006), I started my grounded theory analysis with a quick stage of line-by-line initial process coding. The goal of process coding, in which the codes are based on gerunds, is to drive

the researcher's attention to actions occurring in the data (Saldaña, 2011). Following that stage I was left with an enormous number of very long, mostly in-vivo codes, which captured what was happening in the dataset quite precisely, but seemed to be almost impossible to generalize on. This is when I came up with what I would refer to as the 'generalized' initial coding.

Due to the extreme multiplicity and specificity of personal stories, disputes, misunderstandings, off-topics, and many other types of interaction I encountered throughout the forums, I felt the need of repeating the first process of initial process coding before I would move on to focused coding – that is grouping the codes into themes and categories. This time, the object of my 'second' initial coding were the super-specific and long initial codes I came up with during the 'first' initial coding stage. Thanks to this repetitive action, which could be compared to Latour's (1987) erasure of modalities during the construction of scientific facts, I was able to get to the point where the codes – although based on the often contradictory statements of hundreds of people – were comparable enough for me to move on to the next stage of focused coding.

This is when I started coming up with some of the themes and categories that would later on form the basis of my grounded theory. While some of them, for example *Historical / Tribal Storytelling*, or *Conflicting Definitions*, were just that – general categories describing the actions and meanings performed by forum users – others, such as *Identity Work* or *(Re)-constructing Vinyl*, started to crystallize themselves as something even more basic, the tenets (or branches) of my evolving theory.

Especially *Identity Work* required much more of my attention, considering the fact that it wasn't just a singular 'work' of one person – more like heterogeneous, contradictory, situated, both grouped and personal 'works' of multiple different community members. Quite early on I started identifying some specific 'identity types' – performed, imagined, talked about, etc. I knew they would be crucial for constructing the written account of my netnography – both as the characteristics of the field participants, as well as the actors in narratives that my emerging theory consisted of – but what I had to do first was to order them in a comprehensible and structured way. Keep in mind that I didn't know many of the things that are much more obvious when one analyses the interview data. Who says what (and to what extent is it consistent with their previous statements), how many people say that (one active or ten less active?), who agrees and disagrees with what (and how does it relate to their other statements), and many other issues that are so easy to lose track of in the sea of comments, nicknames, different threads and two different forums.

In order to grasp the scope and character of different types of identity works performed on Reddit's *r/vinyl* and *SHMF*, I had to conduct a second round of focused analysis, similarly as I did with initial coding. I re-read my entire dataset, marking every instance of identity work, as well as its author, with one of the six colors, each dedicated to one identity type I identified earlier on. Following that, I

categorized these 'instances of identity work' in a two-fold manner: (1) according to the identity type (i.e. color), in order to come up with a generalized description of that type, as it was represented in the comments that I associated with it, and (2) according to the author, in order to discover the more personal levels of identity works as performed by the forum users – their ambiguities, contradictions, and practical enactments. Only after doing so I felt confident enough with my knowledge of the dataset and different identity types it entailed, to move on to the process of writing up my research findings and constructing the theory grounded in them.

In order to make my 'identity work related' focused analysis more clear to the reader, I decided to enclose one example of such coding process. Here is a quote by Pac-Man:

"They are really missing a trick by converting to digital and back again. Don't they read the internets? No matter how good the product this will lose the interest of pretty much all the purist enthusiasts." (Pac-Man)

Keep in mind that for the purpose of this thesis, my definition of *Identity Work* is slightly broader than 'just' talking about one's own identity – it also encompasses talking about other's identities, for example how one imagines or relates to them. Basing on this quote, it is difficult to assess Pac-Man's personal stance towards "converting to digital and back again". We know that he thinks "they are really missing a trick" by doing that – but it's not sure whether this belief stems from his personal preference, or the preferences of others, as he imagines them. What we do know however, is how he expects these 'others' – namely, the "purist enthusiasts" – to react to the act of converting to digital and back: "pretty much all" of them won't be interested, "no matter how good the product is". As it is a performance of 'other' identity type (*talking about others*), I thus identified this quote as an instance of *Identity Work*. This is why, except for the 'normal' cycle of initial, 'generalized' initial, and focused coding, I also subjected it to the other round of identity-related focused coding. The excerpt was highlighted with a light-blue color, which represents the 'Vinyl Enthusiast / Analog Purist' identity type (which I will elaborate on, along with the other identity types in the empirical chapter), once again initially coded as '(they) missing the trick by converting to digital and back – no matter how good, losing the interest of pretty much all purist enthusiasts', and then coded in a focused way as 'talking about purist enthusiasts from the outside (inside?)". Then, this pair of initial and focused codes (the focused one inserted as a comment to the initial one) was incorporated in two Word documents. One was the set of all the 'identity notes' categorized according to their color – in which, the pair in question landed in the 'light-blue' category, in order to be later on used, along with other 'light-blue' identity notes, as a basis for 'Vinyl Enthusiast / Analog Purist' identity type memo. The other document was dedicated specifically to Pac-Man, meaning that all of the identity notes that he authored were inserted there – this helped me to compare them, and decide what type of identity (if any) he represents.

I also made sure that the codes were accompanied with specific descriptions of their 'origins' regarding placing in the dataset and authorship, had I wanted to quote them directly in the empirical chapter. The origin note would normally look like this:

p. [page number], lines [line numbers], (forum type [*SHMF* / reddit] + number of the discussion)

4.5. Research Ethics

It should come as no surprise, that such a disputed methodology as netnography is also quite controversial if it comes to the ways of handling the ethical issues. The question which usually comes first is the one considering the status of the internet – is it a public or private space? Is it even a space in a place-like sense, or a text or even something else? In general, the (often questioned) consensus is that the online spaces which are easily available without password can be considered as public ones.

But, yet again, what does public mean? Does considering the internet more or less public make it a handy source of free data, the use of which does not require asking for the informed consent of their authors? According to Robert Kozinets, the key figure in netnographic research, not exactly. In his 2010 book, *Netnography: ethnographic research in the age of the internet*, he identified four main areas of ethical consideration when conducting an online ethnography: "(1) identifying yourself and informing relevant constituents about your research, (2) asking for appropriate permissions, (3) gaining consent where needed, and (4) properly citing and crediting culture members" (p. 140). Following these points, I came up with my own ethical strategy:

(1) As I already mentioned in the previous section, I informed both the forum administrators (in a direct message), as well as the forum members (in two introductory posts) about my research, disclosing my identity as a researcher, although without giving away my real name due to the safety reasons.

(2) I directly asked for, and obtained the permission of both groups of forum administrators. If it comes to the 'general public' of the forum members, both introductory posts included the information about the possibility of opting out from the study by contacting me directly – as well as the reassurance that, in case I would want to quote them directly in my work, I will contact them before doing so. This placed the burden of 'giving permission to participate' on my research subjects (instead of putting the one of 'getting permission to include' on me), but I didn't find it possible (nor necessary) to ask each and every one of the forum members directly for their permission to conduct my study. Nobody contacted me with the request of opting them out.

(3) In case of the general content of the online forums, I assumed that the consent of its authors is implied, unless they stated otherwise (by contacting me directly in order to opt out from the study). However, I did contact directly the authors of these comments, which I decided to quote directly in my

master thesis. After writing the draft version of my empirical chapter, I prepared the list of all quotes I used there, along with the nicknames of their authors and reached out to them via private messages. Out of the 41 persons I quoted, 23 consented, 18 did not reply, and 2 were unreachable via the private message. None of the persons I contacted refused to be quoted.

(4) Keeping in mind Kozinet's (2010) remarks about the importance of treating the online nicknames with the same sensibility as the real names, I made sure to anonymise all of the people whom I quoted or referred to in my thesis, unless they stated that they want me to do otherwise.

One of the issues I faced when writing about and citing the forum members was their gender identity, especially since I didn't want to ask about it directly, treating it as a private information. Fortunately – as it was quite tedious to use the gender neutral pronouns like '(s)he', 'his / her', etc. all the time – it quickly turned out that, at least *SHMF*, provides its users with a functionality of marking the gender with which they identify on their profile pages – and indeed, many of the members (although not all of them) did so (establishing gender on *r/vinyl* was much more often impossible). In the end, I was able to establish gender identity of 26 out of 41 people whom I identified as the most active providers of 'identity type' notes – all of these 26 people identified themselves as male, which goes in line with the frequently mentioned in the literature 'gendered' character of audiophilia and record collecting. I do not address this issue too specifically in my empirical chapter, as it is not related to my research interest, but I am nevertheless fully aware of it. The people who did not specify their gender, are addressed with gender-neutral pronouns, if they appear in the empirical chapter.

This ethical methodology was based on several assumptions. First of all, I consider both *SHMF* and Reddit's *r/vinyl* to be the public spaces, meaning that their threads and discussions which they consist of are easily available without any password nor the necessity to register or create an account (as long as one does not want to participate in these discussions). Secondly, contacting each discussion participant with a private message in order to get their personal consent to be included in the analysis, would make my study unfeasible, especially considering the time which it would take to receive all the replies. Contacting only those whom I quoted directly was a step in between, which also reflects my stance on the 'public vs. private' debate in the literature on netnography. Finally, I consider my topic to be highly non-sensitive, as the discussions that I studied are of a purely hobbyist nature. Returning to the key question that should stand behind any decision concerning research ethics: 'what harm can I cause to my study subjects?', I assume that almost none, especially after taking the precautionary steps I delineated above.

5. Empirical Chapter

In this chapter I will present the results of data analysis I performed on the material gathered from two online communities: *Steve Hoffman Music Forums* (*SHMF*) and Reddit's subreddit *r/vinyl*. The material consists of 22 discussion threads dedicated to the announced introduction of High Definition Vinyl (HDV) – new method of manufacturing vinyl records.

It is important to note that HDV – although the main topic of discussions I analyzed – was not an object of my analysis in itself, nor were its chances to succeed as an audio format or a product on the market. My focus was much more on the reactions, expectations, and storytelling which HDV has triggered among the forum users. Throughout their discussions, I identified multiple instances of identity work – disputed, contextual, heterogeneous, often contradictory – performed (or unearthed) in reply to this newly announced vinyl pressing method. In this empirical chapter, I will specify what is it about HDV that triggers such reactions – what is the technology about, what are the expectations (both hopes and fears) associated with it, and how its status as a boundary object reignites and problematizes many key disputes ('analog vs. digital', 'quality vs. format', etc.) which drive the audiophile 'community', helping its members to position themselves in the group.

Apart from that, I will explain how the vinyl technology itself is (re)-constructed in the context of HDV's introduction, for example by the means of *historical / tribal storytelling*. As both the technology's meaning and its histories differ depending on the specific person's position on the axes of aforementioned discussions, and the identities which stem from those positions, I will also explain the types of identity that come to play a role in defining the audiophile landscape – this problematic and largely fragmented 'community'. Apart from describing the six 'ideal types' of identity, I will also back them up with some individual examples, in an attempt to show how the identities performed in practice are far from unambiguous, often employing the elements of many different, seemingly mutually excluding, positions.

5.1. What is High Definition Vinyl?

High Definition Vinyl (HDV) is a new method of manufacturing the record stampers developed by Rebeat Innovation, an Austrian-based audio-tech company (HD Vinyl, n.d.). In a current method (often referred to as 'traditional' by both Rebeat and the forum users), the stamper is one of the last intermediary steps in the process of vinyl record production. First, the tape recorded in a studio is cut to lacquer in the form of grooves, which 'capture' the sound. Then the lacquer is plated and separated to make the matrix (surface with hills, an anti-representation of previous grooves), which in turn is plated and separated to make the mother (new, repeated grooves). After plating and separating the mother, a stamper (yet again with hills) is created – the step which is repeated multiple times depending on the number of stampers the manufacturer needs. Finally, the stamper is used to press the

grooves onto vinyl, resulting in a playable record (in case of larger releases, stampers can also be used to obtain copy mothers).

There seems to be an agreement that each step of vinyl production results in quality degradation, as an opportunity for "things to go wrong". Rebeat addresses this issue by etching the hills directly onto the stamper, skipping several earlier steps. Using their own software, they create the "3D topographic maps" of groove structure – the maps can be optimized in a program, making the usage of groove space more efficient, which allegedly allows to obtain a record with more playing time or larger amplitude. The map is then directly laser-etched onto the stamper made out of ceramic, a material more resistant to wearing off than the currently used metals. According to Rebeat, the results are exceptional – high precision laser-etching and groove-optimization software make records longer or louder (depending on manufacturer's decision), less conversion steps allows for less loss of audio information during the production process, and stampers made out of harder materials are more durable, meaning that the problem of quality degradation (and thus the price difference) between the first and last copy of a record pressed from the same stamper is no longer relevant.

Whether the Rebeat's claims are true is still not known, as the HD records have not made it to the market yet – for now, the production of first HDV stampers is scheduled to be completed by the end of 2019 (https://www.facebook.com/HDVinylRebeat/, 2019). This lack of empirical evaluation – although often mentioned as an obstacle to any assessments – did not stop the *SHMF* and *r/vinyl* members from producing hundreds of pages of discussions in which they shared their initial reactions, expectations and doubts concerning the upcoming technology. This is where my analysis has started.

5.1.1. Reacting to High Definition Vinyl

Coming from the perspective of user studies and sociology of expectations, my initial interest was in observing how the forum users react to, and what they expect from the upcoming introduction of High Definition Vinyl. Treating these expectations as performative, in a sense that they shape not only the perception of the future technology, but also the technology itself (including its current, 'traditional' version), I quickly realised that these HDV-related expectations are also generative. They bring into being the identities, other technologies ('real', potential and imagined) from the past and the future, the everlasting ontological and moral discussions, as well as the histories, which conjoin and give meaning to all these elements.

Quoting one of the forum users:

"(...) Few would argue with a 'wait and see' attitude. Those who don't immediately buy in and try it, get to read about it here at the SHF. It's catnip to this bunch which is why several pages of discussion over it's mere potential draws more and more participants. Had someone wanted to simply fabricate

the idea to observe an 'audiophile' hubbub, they couldn't have picked a better idea. HD Vinyl. (...)" (The Wrestler)

"Observing an audiophile hubbub" is exactly what I intended to do – and indeed, the choice of the case of HDV quickly turned out to be a great pretext to investigate the disputes, positions, and stories which shaped, excited and divided the audiophile 'community' for years – and apparently still do. The HDV-related expectations are performative and generative (or rather re-generative, as they invoke mostly the pasts and figures known from these pasts), but also co-produced with the narrative elements they generate and perform. Identities determine certain kinds of reactions and expectations, and these expectations reinforce and bring up new identities, discussed technologies and alternative histories – the cycle is repeated and the object that started it, becomes more and more blurry and ambiguous, standing at the intersection of multiple definitions, boundaries and meanings attached to it.

In what follows I will describe three kinds of reactions and the way they position the new technology: (1) as a promise, (2) as a controversy, and (3) as a boundary object.

5.1.1.1. High Definition Vinyl as a Promise

The idea of HD Vinyl is based on several promises: better sound, longer playing time, records stamped with consistent quality, speeding up the production process to alleviate bottlenecks common in the industry. These promises attract people's attention and curiosity, but, as many technological innovations, are dependent on various 'ifs' – if it is possible to improve the sound of vinyl at all, if the grooves can be 'squeezed' together more tightly in order to achieve more space, if the outcomes would still function properly and sound good.

Rebeat's promises have been reacted to with curiosity, but also general distrust. Although there appeared some displays of excitement – the possibility of HDV being a "cool idea", bringing some advantages or solving some issues currently faced by the industry – many of the commenters' reactions were filled with doubt. Some people framed the new technology as "implausible", for example in terms of whether the difference of sound would really be noticeable with 'normal' turntables, or even whether the new technology would be compatible with them at all. The issue of compatibility was invoked multiple times, especially since in several press releases, Rebeat hints at some sort of "HD turntables" being in the development stage as well (Henshall, 2018). Despite the fact that the company presents their product as "100% backwards compatible", the new type of turntable which would "bring the most out of HD records" makes people rather suspicious:

"It would be nothing more than some brand essentially called *HD*, which is some class A marketing – yet opportunistic bullshit, hah." (Fahrenheit)

The very fact that laser cutting is involved in the production process is also problematic – apart from the instant CD / digital connotations, the questions about playback compatibility are raised to an even further degree (i.e. how can it be played without a laser turntable?).

Another object of doubts are the groove optimization claims, especially considering the "physical limitations" of what can be done to a record groove:

"(…) When you're inscribing grooves into plastic, there are literally physical limitations as to what you can get away with and still preserve the integrity of the signal. Applying lasers and digital computer technology doesn't change them. Groove walls that are too close together to maintain their integrity are too close together to maintain their integrity, regardless of how they're cut. And you can't get louder without getting bigger. Period. Record Groove 101." (Nico)

The suggestion that record grooves can be squashed close enough to obtain up to 30% more playing time or 30% more loudness while remaining compatible with all currently available styli (turntable needles) is widely discussed among forum members. Some do believe that a Computer-Aided-Design (CAD) software can enable such optimization, some claim that it has been done for decades already, and some find it to be a nonsense or gimmick, which would lead to such issues associated with wrongly formed grooves as non-fill, skipping, or turntable's needle flying off its route. The way Rebeat places the "longer playing time" and "louder sound" promises next to each other – even if separated by the connective "or", suggesting that it is the choice between one or another, not both improvements that get to be offered – also doesn't help. Many point out, that one goal cannot be achieved without giving up the other. This is the matter of sacrifices which define what vinyl is and can be:

"(...) Want more playing time, volume and bass levels get sacrificed. Surface noise issues get very exacerbated. Laws of physics of vinyl mastering. (...)" (Macclesfield)

Due to these multiple doubts, but also curiosity and the will to discuss, follow and try out the technology once its available, many forum members declare taking the *wait-see-hear approach* on this one. As one of the commenters states:

"(…) even though I might not have the answer to how right now, Im not really worried. Its not like I have anything to lose. If it sounds good is the important question for me, and we will find out soon enough." (Renard)

But not everyone is so relaxed about the HDV's – and thus the 'traditional' vinyl's as well – future.

5.1.1.2.   High Definition Vinyl as a Controversy

There are many things about HD Vinyl that make it controversial among the audiophile forum users. One of them is its disputable ontological status. Due to a CAD-processing step involved in the production, some of the commenters consider HDV to be non-AAA, or even not analog at all, positioning it in the 'world' of digital. As the concept of AAA vinyl will be discussed in more detail in the following sections, for now I will only clarify that these are the records which have been recorded, produced and are later on played back using the fully analog methods only. The position of HDV on the 'analog vs. digital' axis is unclear and the degree of its 'analogness' (AAA? analog? digitally-sourced analog? digital?), as well as who and why would accept or reject it due to this position, remain some of the key questions discussed by both *r/vinyl* and *SHMF* members.

While the doubts concerning the plausibility of Rebeat's claims and promised innovations, create the atmosphere of controversy in its own right, some people go a step further, alarming that it is not whether HDV will or could succeed that is a problem for them – they see it as a threat in a more general sense. According to Roman:

"(...) This entire "HD Vinyl" thing is nothing less than toxic for the entire industry and the format itself. Nobody should be excited about this." (Roman)

"(...) if this becomes a golden marketing term they can slap on a sticker on every album they can, it just means less and less focus is going to be put into doing true AAA vinyl. Less than there already is today" (Roman)

Apart from that, Roman is especially worried by the fact that Rebeat announced the possibility of HDV records being cut in two different geometries – tangentially (as it is done currently) and on an arc (the same way as records are played back by most current turntable styli) – according to Rebeat this would eliminate the "tangential error" which occurs during the playback of tangentially-cut records:

"Yeah I think this is only gonna be a big mess for the entire industry to deal with all the way from production to distribution if it gains any real traction. And then only the consumers suffer for it. If the cutting on an arc thing they proposed actually happens, worst case scenario… I can see them doing "cut for Crosley" "cut for LP60" "cut for Technics" etc. versions of the same titles. Leading to fragmentation in the market. More work for plants. More product for distributors and retailers to deal with. More risk of unsold product. And harder for the consumer to find records made to their turntable's spec, etc… none of this was a problem till now! We had records cut on a tangent for a hundred plus years already and we liked it" (Roman)

As Roman continues, in case of HDV:

"You have a manufacturing process that stands to create severe production bottlenecks. You have a groove profile that does not conform to the traditional profile of a cutting stylus, with explicit plans to sell proprietary "HD Vinyl" branded styli for improved playback with their non-standard format. You have explicitly stated plans to cut the records at a radial offset from true tangency for gods sake. What part of this sounds good to you?" (Roman)

Summing up:

""HD Vinyl" is the very opposite of an improvement, it stands to make some of the worst sounding LPs that have ever been made all while creating massive production bottlenecks in an industry that can't handle more production bottlenecks." (Roman)

While this fatalistic perspective seems to be rather specific to this person, he is not the only one to share his fears associated with HDV. Especially the remark about "less and less focus being put into AAA vinyl" widely resonates throughout the forums' 'analog purist' fraction. Taking into account the concern about future records' prices, as well as quite numerous voices against any innovation in vinyl at all ("leave vinyl alone") – HDV turns out to be quite a controversy.

5.1.1.3.   High Definition Vinyl as a Boundary Object

Why is the HD Vinyl discussion so susceptible to controversy and what are the outcomes of it? My first answer is that, along with all the vinyl records which have a digital step included in their production, HDV is a boundary object, transgressing the binary positions of many debates that make up the audiophile world. As these debates ('analog vs. digital', 'quality vs. format', etc.) will be further discussed in the following sections, what can be said thus far is that HDV's unclear ontological position brings into question many concepts and definitions based on the common practice of *keeping the worlds of analog and digital apart* – all this while laying some serious claims to being this revolutionary improvement, i.e. the future of vinyl record. Escaping most of the categories commonly used in audiophile sense-making, HDV and the user identity type it entails (or is imagined to) can easily become a threat to the status-quo. Such threat may in turn lead to the intensification of the group identity work practices, as well as the reconsideration (*re-construction*) of seemingly obvious, key elements that make up the group's networks of meaning.

5.2.   (Re)-Constructing Vinyl

It is hard to talk about High Definition Vinyl without mentioning its predecessor, the 'traditional' vinyl record – and 'traditional' vinyl is difficult to discuss without taking into account many disputes and concepts that get to be reignited / redefined by a boundary object such as High Definition Vinyl. While the idea of 'improving' vinyl record is far from new, provoking many commenters to compare HDV with multiple previous technologies (*it has been done before*), something about this particular

idea hits close to home for the audiophile / vinyl enthusiast 'community' members, making them eager to negotiate their hobby (and especially its key artefact), preferences, values and identities all over again.

One of the most obvious things that gets to be 're-constructed' about vinyl record after one engages in discussing its potential successor, is the newly found need to differentiate between the two methods. Vinyl has thus stopped being 'the' technology – its status has to be additionally explained as 'current', 'traditional', 'old-school', etc. The fact that HDV production process includes a digital step also brings to the fore the issue of digitally-sourced vinyl, which in turn reignites the decades-long 'analog vs. digital' debate – an inseparable element of being into vinyl, requiring pretty much all of its fans to take a stance.

The dispute is even more interesting as there are almost as many definitions of what exactly 'analog' and 'digital' mean as there are vinyl enthusiasts. The aforementioned need of taking a stance, along with a necessity of explaining what the issues and concepts on which the stance has to be taken even mean, makes the 'analog vs. digital' a site of intense artefact-based identity work. There are many modes of demonstrating one's audiophile identity – the most basic ones include (1) talking about person's preferences (what kinds of records one prefers), (2) performed ownership (what kinds of records one owns), and (3) usage of particular technologies (what kinds of records one uses). Some people go a step further, engaging in what I refer to as the *historical / tribal storytelling*. The histories of vinyl are as heterogeneous as the definitions assigned to the key figures that participate in them – and they are also largely dependent on storyteller's identity. This multitude of meanings, controversies and histories is what I will try to address in this section. First, I will describe the issue of *conflicting definitions* in vinyl-related discourses, then I will move on to the detailed account of 'analog vs. digital' debate. Finally, following one of the forum members, I will ask one question that seems to be on the tip of everyone's tongue: "is a vinyl format war brewing?", which will also introduce us to the defence mechanisms of identity work.

5.2.1. Conflicting Definitions

While the conflicts regarding what is better (digital or analog, CD or LP, old or new mastering, etc.) was not that much of a surprise for me, the degree of disagreement among forum members turned out to reach much deeper, getting to some of the most basic concepts in audio. Starting from the very definition of what is to be considered an 'analog record', as well as what 'better' even means, the eternal 'analog vs. digital' discussion gained quite a scope if it comes to interpretative flexibility. No wonder that such specific, non-binary object as HD Vinyl and it's worth as a 'new' (or not new at all), 'analog' (or not analog at all) format becomes an even more complicated issue.

5.2.1.1. What is Analog?

It turns out that even something as seemingly obvious as an 'analog LP' may be an object of interpretative flexibility, and forum members were eager to discuss thoroughly what they actually mean when they say that something is 'analog'. In general, the standard process of pressing vinyl record goes as follows: (1) recording the track on magnetic tape, (2) cutting the tape to the lacquer (grooves in lacquer), (3) plating and separating lacquer to make matrix (hills on matrix), (4) plating and separating matrix to make mother (grooves in mother), (5) plating and separating mother to make stamper (hills on stamper), (6) repeating plating and separating mother to make more stampers, (7) pressing vinyl records with stamper (grooves in vinyl records).

Records for which each step in the chain of production is analog (without sound ever being converted to digital) are certified as AAA – but according to some commenters, such records are becoming a rarity. Most new releases tend to be pressed from a digital source (with sound being digitally recorded at the very beginning or converted to digital at some point), due to such advantages as cost reduction and the resulting process being easier and faster. Digitally-sourced vinyl is also portrayed as the problematic child of 'vinyl revival' and the 'digital era', causing frustration of both analog purists (not being 'truly analog' if there is a digital step), and fans of digital audio ("what is the point of putting digital on analog?") – not to mention the purist advocates of *keeping the worlds of analog and digital apart*.

Not knowing what 'analog' actually means makes it even harder to decide whether HD Vinyl is analog or not. Some of the questions regarding that were related to laser cutting, and whether it could be considered analog or not. Many claimed that "laser equals digital", due to the most common association of lasers with such digital formats as CD, DVD and Blu-Ray. Others mentioned that the 'analogness' of laser is not at all given (laser as an "optical thing") and depends on how such laser is controlled (digitally or, for example, with electric signal). Finally, there appeared a statement that if laser cuts the "normal, analog, wiggly groove" which is then traced by the stylus of "normal turntable", then the whole thing is analog as well. I refer to such negotiations of analogness as being driven by the process of *dividing into levels*, meaning that the production of a record is often fragmented into various steps, and each user has to decide which of these steps have to be 'analog' in order for him / her to consider the resulting product to be analog – i.e. how far does the analogness have to reach (to the recording, the very beginning of production process, or is the existence of vinyl groove playable by a regular turntable just enough?).

5.2.1.2. What Does "Better" Mean?

It's quite safe to assume that the majority of forum users considers themselves to be the 'audiophiles'. Although the whole 'audiophile' identity type will be discussed in more detail in the following section,

we can also assume, at least for now, that to be an audiophile means to search for the best sounding audio format possible. The question remains, what does it really mean for an audio technology to be 'better' than other available options.

The specific person's definition of 'good quality sound' is largely dependent on their audiophile identity type(s). These identities also determine this person's position on such important axis of discussion as 'analog vs. digital'. What is better – analog or digital formats? Does this differentiation matter at all? If it does, then what are the reasons why one of the options would be better from another, e.g. if someone considers vinyl to be superior, is it because they perceive it as more faithful than digital formats (less flaws and / or less loss of audio information) or because they enjoy its "colouration" and "signature sound" (a.k.a imperfections)? Interestingly, these 'reasons', for example for buying vinyl, can also be framed as 'better' or 'worse' – the fact that another person chose the same format as you, doesn't automatically mean that you're in the same team. Their reasons might be unacceptable for you and vice versa.

To make things slightly easier, there are some markers of quality in the audio 'world' that most often get to be agreed upon. The work of mastering engineers is what determines, at least to some extent, how the end product (e.g. HDV) is going to sound:

"I wonder if this [HDV] will be a bad thing or good thing for digitally sourced vinyl? I guess it depends on whether the engineers involved are experienced in audiophile listening or whether they're the type of engineers who think digital can be processed as much as you like as long as the processing is determined to be objectively transparent to human ears. I hope this is being designed by the first type of engineers rather than the second." (Mac N Cheese)

But when things get to the level of an individual's ear, this is where the agreement seems to end.

5.2.1.3.   Who is 'we'?

The following exchange caught my attention as an interesting example of the audiophile 'community's' fragmentation:

"We love vinyl because the fact that it's not perfect. Surface noise, warmth etc. Change the parameters and we might not like it anymore. I'd say, leave vinyl alone!" (Xero)

"Who is "we"?" (Nirvaner)

Both the initial use of 'we' as well as it's following negation point out to some interesting tensions in the individual, as well as the whole group's self-identification. On the one hand there exists a significant heterogeneity of opinions, definitions and values ascribed to audio formats, making it hard

to speak about a community as a whole – on the other, many self-defining statements reappear in the comments ('audiophiles', 'vinyl diehards', 'purists', etc.).

It seems to be much easier for the forum members to establish their group identity (if one exists at all) by relating it to some imagined 'others' – less knowledgeable, indifferent to key discussions, or participating in them for 'wrong' reasons. Attempts at defining some sort of 'we', as in the quote above, are in turn quite risky, and often end up being discredited or ridiculed – there is just too many conflicting definitions.

5.2.2. Analog vs. Digital

Despite the problems with establishing coherent definitions and identities that would stem from them, there exist several key discussions, which help the forum users in performing their boundary and identity works. One of the most common sites of such categorizing sense-making is the 'analog vs. digital' debate, which seems to be one of the key elements defining the vinyl technology and its fans in the context of digital era's vinyl 'revival'.

5.2.2.1. *Historical / Tribal Storytelling*

SHMF and *r/vinyl* users conceptualized HDV not only by deliberating on potential futures it may bring, but also by retrospecting the pasts of audio technologies. This *historical / tribal storytelling* is based on several different (and often contradictory) perceptions and assessments of past. One of the key building blocks of those *different histories of technology* is the tale of "Sony and their CD" a.k.a. 'vinyl death'. As I re-read the story of Sony "bringing out their CD system" and "killing off vinyl and / or music industry", several things came up to my mind. First, in this narrative the CD is often framed as 'their' (Sony's) format, thus underlining its foreignness. Second, I found it very interesting how cherished this bitter memory of vinyl's defeat is – at this point I came up with a concept of *elders' stories of destruction and betrayal* (as I imagine the vinyl lovers sitting around the bonfire, and passing on the foundational myth of how their tribe was attacked from the inside), inspired especially by the secretive tone in which one of the 'elders' suggested that he:

"(...) won't go into some underhanded ways vinyl record was deliberately killed off so CD's could be pushed" (AAAvinyl)

Another pattern which fits the 'mythological' character of this story is the punishment of culprits – little did they know that 'their' digital formats will introduce the possibility of creating "endless lossless copies" thus "undermining the business model of entire industry". It would have been quite a satisfaction in the end, if it wasn't for the fact that now the "big money boys" are once again trying to join the "vinyl bandwagon" – for example via suspicious improvements. Finally, although powerful and apparently still traumatic for many forum members, these stories are far from being agreed upon.

To begin with, it is really not settled what killed what and if anything was killed at all. Apart from a number of people claiming that CD killing vinyl "is a matter of fact" and that music industry only survived due to some righteous individuals ("music enthusiasts, artists, manufacturers, and consumers") who kept it alive, there is a number of people who say that (1) "the distinction of killing vinyl belongs to a cassette" and especially its portability (as well as the following portability of digital files), (2) it's the cassette that was killed by CD not vinyl, (3) nothing was actually killed, because vinyl would have died anyway. Those different positions were sometimes supported by pictures and graphs showing the changes in different formats' sales throughout the years – unfortunately, the commenters tended to interpret these graphs in entirely different ways, each of them supporting the interpreter's claim.

The timeline of events is also an object of discussion. While in the general story everything happens quite quickly (CD comes – vinyl dies), some forum members pointed out that this is quite a simplification. The two stories go as follows:

(1) At the beginning Sony found it quite difficult to convince record manufacturing companies (who made good money on vinyl at the time) to their new format. The breakthrough came with Sony purchasing CBS Records with its signed artists and back catalogues in order to have the platform for launching the CD. When public "had a taste of CD" (whose troubled introduction was also backed up by the revenues from analog formats), other companies "inevitably followed", also actively and deliberately pushing vinyl out, despite consumers still wanting to buy it.

(2) "Format change has been brought by technical progress" – if not Sony / Philips, some other company would have invented something similar to the CD. First couple of years after the CDs were introduced in 1983, all albums still appeared on LP and cassette, with only several titles on CD, which would also be released much later than the analog versions (only in the second half of the 1980s did they start to be released at the same time). It was around 1992 that shop shelves were cleared off from vinyl – nothing was killed off, on the contrary, CD helped the industry to achieve even higher revenues. Companies were aware of risks coming with the distribution of digital (possibility of creating lossless copies), so they killed off better quality digital formats such as DAT (Digital Audio Tape), introducing lossy compression formats instead – but the CD burners and MP3 were nevertheless inevitable.

What both of these stories have in common is the certain degree of technological / market 'determinism' – either with regards to vinyl's fate as established by the CD and big companies, or its inevitable death due to the technological development. The first story has been accused by the author of the second one as "making an evil conspiracy out of it [vinyl's death]" – while the first author distanced himself from the "conspiracy" claim, he did admit to thinking of it as a result of "dubious marketing". In the second story on the other hand, the author suggests that it is the superior digital

format, DAT that was killed off by the industry fearful of the consequences of lossless copying – with the first author claiming, perhaps in some sort of revenge for dismissing his vinyl death claims, that DAT "died because it was a flawed format". This is a good example of what I refer to as *different perceptions of technology*. Multiple formats, not only vinyl and CD, but also DAT, LaserDisc, DMM (Direct Metal Mastering), etc., as well as playback methods (e.g. analog vs. laser-based) have as many fierce supporters, as they have strong opponents. The same technology can be described as both the 'holy grail' and 'total garbage' (*technologies – symbols of failure*) if it comes to sound, quality, disposability, and how successful it was in the market and among users.

The discussion about which technologies were valuable and thus worth reproducing or bringing back were quite important in two instances. First one was the context of what I refer to as *sofa innovations* when the commenters reacted to the announcement of HDV introduction by coming up with alternative improvements of analog audio technologies that should be offered instead. Gluing together multiple previous or imagined formats, they tried to come up with an upgraded and most 'logical' new analog medium – which would be better than anything else (not only HDV but also the 'regular' vinyl), if only someone brought it into existence. Second instance in which the forum members' *different perceptions of technology* tended to clash was when HDV got to be evaluated in comparison to those previous or made up technologies: "being like something" could be understood as either an advantage or a flaw. That is also when the *it has been done before* argument was often employed, downplaying HDV on the basis of not being anything new or special at all.

5.2.2.2. *Digitally-Sourced Vinyl*

As it was already mentioned, the digitally-sourced vinyl (which according to many commenters also includes HDV) is an interesting boundary object triggering endless discussions. Apart from the straightforward, end-of-spectrum positions of *analog purism* (rejecting any employment of digital in analog) and *digitalism* (dismissing analog as anachronistic / worse than digital) – which both reject such hybrid technology, only for contradictory reasons – there also exist some less radical perspectives on mixing up the worlds of analog and digital.

Some vinyl fans have nothing against the digitally-sourced vinyl. For example, one person kept it easy with definitions, claiming that HDV is analog, as otherwise it would not play with a regular cartridge. This suggests the acceptance of digital tweaks in vinyl on the ontological basis – some people simply have much more loose definition of what analog means. Such people may claim that as long as you have the 'normal' analog playback – regular turntable with a cartridge and a needle following the groove on the record – the whole thing is analog. Others may bring up earlier 'stages' of record production whose 'analogness' is important to them, for example the cutting – but not the original recording. Although such requirements are still less strict than those of analog purists, they go a little bit deeper into the production process, than those which concern mostly what one can see during the

playback. As it was mentioned before, I identified such negotiations of what is analog and what is not as performed via *dividing into levels* – the stages of vinyl production are compartmentalized and the user has to decide for him-/herself which ones of them have to be analog in order for the format to be analog. Such strategies allow some less purist users to enjoy digitally-sourced vinyl without abandoning the realm of analog, at least in their own understanding. It is easy to imagine other reasons for embracing the digital step in vinyl than just not seeing its outcomes as digital at all, for example not having anything against the digital, or simply not caring / knowing about the 'analog vs. digital' tension in vinyl in the first place (although this position was mostly evoked as an example of how the less knowledgeable others behave, and was not really appreciated).

Despite the possibility of 'having nothing against the digital in analog' because of 'liking the digital', many digitalist-inclined people claimed that it is the digital that gets stained in this mésalliance. Digital, especially in the hi-res format, is "as good as it gets" – additionally converting it to analog only adds surface noise, with each step decreasing the quality (*conversion as degradation*). In this sense, the digitally-sourced vinyl simply doesn't make sense. This position also implies that there exist some 'inherent flaws in vinyl' – the manufacturing chain pollutes the sound with stuff that should not be there – which is yet another reason for *keeping the worlds apart*.

5.2.2.3.   Keeping the Worlds Apart

One characteristic which I found to be common for many people who engage in the 'analog vs. digital' dispute on both sides was the need of *keeping the worlds (of digital and analog) apart*. Such purism stems from the belief that neither analog nor digital could benefit from the incorporation of a 'foreign' element from the opposite side of the barricade. They both spoil each other, as their characteristics, purposes, and production methods are different (and perhaps work fine in different contexts).

Just as any other position, this one also has multiple versions – some "purists" concentrate much more on how much analog would be spoiled by digital (which leads to an end-of-spectrum position of *analog purism*), while the others are much more concerned about the digital's advantages being taken away by the conversion to analog (thus leading to *digitalism*). The importance of identifying the concept of *keeping the worlds apart* is that this is an action which many forum users seem to perform when discussing HDV – this suspicious boundary object standing in-between the two worlds. This led me to a hypothesis that there are two different types of gate-keeping performed by the forum members: (1) 'analog vs. digital' / *keeping the worlds apart* gate-keeping geared towards technologies, and (2) identity-based, 'audiophile' vs. 'average record buyer' gate-keeping geared towards other people, which will be further discussed in the following sections.

5.2.3. "Is a Vinyl Format War Brewing?"

In one of the more interesting comments I came across in the forum discussions, the author dismisses the idea behind HDV in a following way:

"Someone needs to invest in the Desktop Record Cutter instead of this crap [HDV]. (…) Also replace PVC (polyvinyl chloride) with hemp plastic, and magnetic analogue tape with something similar, as well. 3D printing could also speed up vinyl production significantly, while still keeping an all-analogue chain. This HD vinyl fad is already starting to sound outdated. [DrDolittle] You nailed it with your comments, I agree with you 100%. Glad I'm not alone. I wonder if a vinyl format war is brewing." (Chet)

Apart from being an instance of *wanting something else (than HDV)*, this excerpt also seems to reflect some feeling of uneasiness among the forum members. Something is changing (or has already changed), vinyl is not necessarily analog anymore, industry is tinkering with the format, newbies (trend-followers, hipsters) are reclaiming the technology. There are some improvements which vinyl enthusiasts would like to see – but the ones they get have little to do with their needs and expectations. Many commenters, who just like Chet, admit to *wanting some other improvements*, engage in what I already referred to as *sofa innovations*, where they come up with their own, 'new' and 'better' technologies, often the hybrids of existing, both analog and digital, formats (although almost always remembering about their inventions needing to *keep the worlds apart*). Just as in case of HDV's assessments, the character ('analogness', purity, etc.) of these imagined technologies depends on the sofa innovator's identity.

In this specific quote, it is the expression "vinyl format war" that especially caught my attention. It is most probably related to the AAA vs. digitally-sourced vinyl controversy (HDV included), as the comment which the author enthusiastically agrees with before is the harsh criticism of the very idea of putting digital on vinyl. I decided to interpret it in a more general sense as a reaction to the so-called vinyl 'revival' – a 'trend', which is seen as a both good (advancements, availability) and risky thing for the old-school 'vinyl diehards', who would almost always rather see something else (if anything at all) done to their beloved format. The results are such reactions as gate-keeping, tracking the industry's previous and upcoming 'gimmicks', trying to differentiate between 'true' and 'not true' analog. Another very common defense mechanism is the identity work and instances of *speaking about others*, which I will discuss in the next section.

5.3. Identity Work

As a controversy and boundary object, High Definition Vinyl evokes various expectations and reactions of forum members, including the re-establishing and performance of heterogeneous user identities. These identities are needed not only to present the specific person's stance towards HDV

and vinyl in general, but also to specify the technology's unclear ontological status, as the definitions assigned to many key concepts from the audiophile world are largely dependent on the identity types the specific person represents.

In my analysis I identified six 'ideal types' of identities: audiophile, vinyl enthusiast / analog purist, digitalist, imperfectionist, average record buyer, and hipster – which I also tried to order in the form of simplified 'family tree'. Although it's quite difficult to come up with a consistent classification into types and subtypes, I would argue that the first differentiating factor would be whether the identity type is more or less openly performed by forum users, or if it is only *spoken about from the outside*. This places the audiophiles, vinyl enthusiasts / analog purists, digitalists, and imperfectionists in the first group, and the average record buyers, and hipsters in the second. This doesn't mean that only the two second group types are subject to being spoken about (most often critically) – e.g. there are plenty of instances of criticism against the analog purists / freaks / fetishists – the average record buyers and hipsters are just the only ones that don't seem to have anyone in the forum openly admitting to being one of them.

Another ontological issue I came across with this classification is the notion of audiophile, which in my analysis turned out to have two (although not exclusive) meanings. Both are related to the common understanding of the word – "a person who is very interested in hi-fi equipment" / "equipment for playing recorded music that produces high-quality stereo sound" (www.oxfordlearnersdictionaries.com) – but one of them operates on a more personal, and the other on the community level. I associate the interpretative flexibility of the notion 'audiophile' with the multiplicity of audio-related definitions I delineated above. It is far from settled what does 'better' or 'high-fidelity sound' mean, and for many people who seem to self-identify as audiophiles this might mean quite the opposite things. I didn't want to fully abandon the common-sense meaning of the world audiophile, which – even if problematized in my analysis – I still find to be useful both for talking about the widely understood 'group of people who care about what they put in their ears', as well as the specific type of person who strives for the best quality / fidelity in audio reproduction. This is why I use the word 'audiophile' in a two-fold manner: (1) as a general term enclosing all the performed identity types under a common umbrella of 'audiophile forum members' or audiophile 'community' (quotation marks used on purpose in order to underline the problematic status of such group), and (2) as a type of identity also referred to as a 'quality person'. To use an example, an analog purist who is a 'format person' treating the 'analogness' of his / her medium of choice as a priority is an audiophile in a sense that sound quality is a significant matter of concern for him / her. On the other hand, as (s)he identifies this quality with 'analogness' (for example by excluding any digital formats from his / her quest for highest fidelity), the audiophiles in a 'quality' sense of the word could not see this person as truly searching for the best sound reproduction. Similarly the imperfectionist might consider him-/herself to be an audiophile, in a sense that (s)he associates vinyl imperfections with a

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quality sound that (s)he enjoys the most – but for the 'quality' audiophiles such person is a contradiction of their preferred engagement with music and audio formats.

Below I enclose the graphic representation of the relationships between the six aforementioned types of identity, including the twofold meaning of the notion of an audiophile:
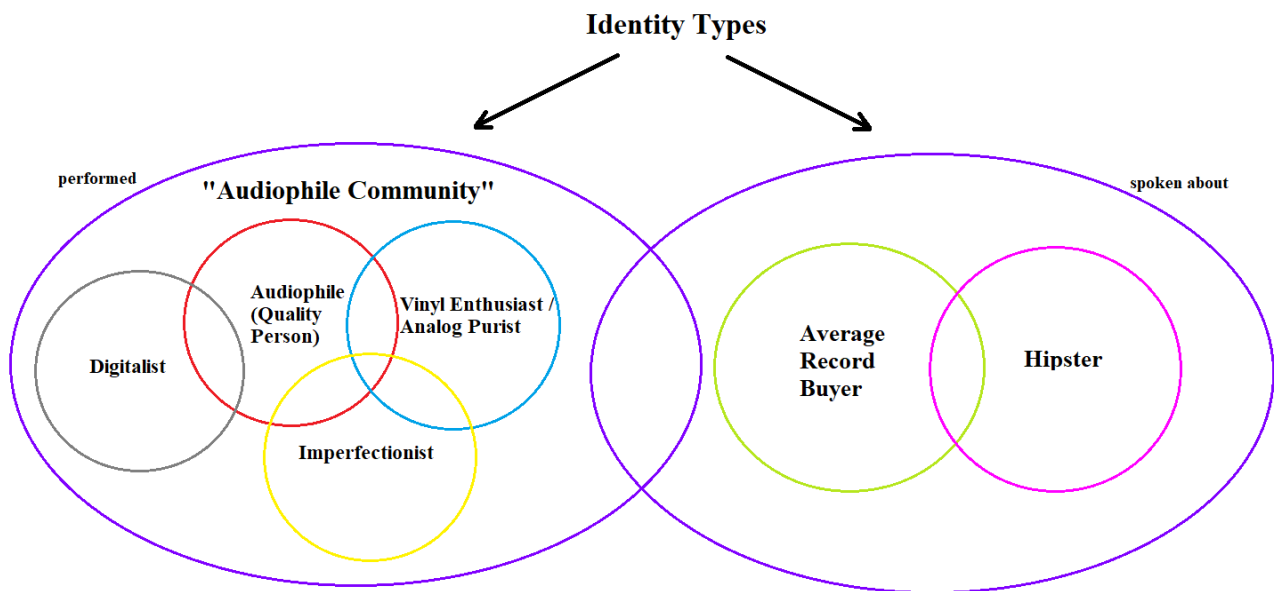
Picture 1: Identity Types Graph

The identity types will be described in this section, keeping in mind that their practical enactments are often very different from the six idealisations – the identities as performed by the forum users are heterogeneous, ambiguous, and often contradictory. They intermingle multiple different positions, sometimes questioning the 'ideal identity type' descriptions I came up with. The reason why I decided to try capturing them nevertheless is first of all to make the process of writing up easier, and its outcomes clearer, and secondly, because apart from using the identities described in this section as their own, many forum members also engage in what I already referred to as *speaking about others from the outside*. This mode of speaking fits the aforementioned practices of *historical / tribal storytelling* with their dramatised heroes and villains, outsiders and insiders, etc. – but it also encourages some degree of simplification. That's why it is important to know both how the simplified and stereotypical figure of, for example, analog purist is imagined to behave and react, as well as how such position is performed in practice, with all of its complexities and contradictions. In order to portray it I tried to supplement each 'ideal identity type' description with several practical examples from the dataset. Apart from that I will also present three actual forum members, as the examples of various types of audiophilia, in their full complexity. My goal in this is to emphasize that (1) the identities presented here are far from settled or agreed upon, and (2) that the knowledge of 'idealized' stereotypical identity types and their meaning in the audiophile landscape is also useful, as it is a frequently used narrative and identity work device.

5.3.1. Audiophile

The first definition of an 'audiophile' that comes to mind is 'a person who pays attention to sound quality and appreciates / searches for highest quality audio possible'. This definition is problematic, as it requires specifying what does high quality sound mean – and, as it was mentioned before, the definition tends to vary between different types of people, who may all consider themselves to be audiophiles (even if their personal 'audiophilias' exclude each other). One of the possible meanings of 'good quality sound' is related to its high fidelity, i.e. faithfulness to the recorded source. While highest fidelity possible is something that many audiophiles strive for as an 'objective' quality, it is also frequently framed as a form of individual and embodied perception of the sound enhanced by the user's 'gear' (e.g. "listening with one's own ears on one's own turntable") – as well as an outcome of the recordist, producer and mastering engineer's joint work, which, if done right may become a widely appreciated, but not perfect nor absolute reproduction. Sound faithfulness is an elusive goal – it is pretty much impossible to reach it, but that is fine, as the whole fun is in chasing it anyway.

My analytical decision is to refer to the people for whom this perceived faithfulness is the most important feature of audio, the 'quality (i.e. fidelity) people' – those who very often stand in contrast with so-called 'format people'. These two groups represent two ends of spectrum in another – apart from 'analog vs. digital' – important axis of discussion. While the 'quality people' engage in the quest for the best sound possible, no matter the source, 'format people' are much more dedicated to a specific medium (for example the analog record), thus paying less attention to whether their medium of choice is indeed the best sounding option. Although the first group could be simply understood as audiophiles, while the other not really, I would argue that the majority of forum users considers themselves to be the audiophiles, even though the aspects of audio which they value might be completely different. Pretty much all 'quality people' would thus be audiophiles, but not all audiophiles are the 'quality people' – some of them may for example be 'format people' and / or imperfectionists (those appreciating 'vinyl's imperfections', see below).

One could think that the 'digital vs. analog' dispute should be less of an issue for the 'quality people' as the 'realm' to which the format belongs does not automatically determine whether it will sound better or worse than those from the opposite side – and indeed, there do appear the declarations of indifference towards this divide:

"(...) I want the best sounding source available to me as a consumer. Sometimes digital, sometimes vinyl, and if HD records are a value to me as a consumer (giving me the best possible mastering available at fair price point) then that's my real priority." (Teddy)

But for many others, the question of sound fidelity is inseparable from one or another side of 'digital vs. analog' debate. In general, such people will most probably gravitate to one of the three more

specific positions – *vinyl enthusiasm* (with *analog purism* in its extreme form), *digitalism*, or more esoteric *imperfectionism*. Although these types of identity will be further discussed in the following subsections, we can already take a look on how they can affect the perception of some key matters of concern for the audiophile 'community'.

One of the examples is the evaluation of vinyl 'revival'. Sometimes forum users understand it as a step in good direction:

"I am glad that vinyl is having a second wind. Anything that highlights quality in music is good" (Snoopy)

Here I must note that after I contacted Snoopy in order to ask for his informed consent to being directly quoted, he told me that he "actually prefers hi res digital to vinyl" because he "doesn't like surface noise". This makes the quote above rather ambiguous, as his appreciation of vinyl 'revival' as a movement highlighting quality in music is not fully in line with his own definition of high quality sound. However, I still find the quote to be useful. Apart from highlighting – yet again – the fluidity and contextuality of audiophile positions, it also suggests that for some people 'analogness' is somehow associated with good quality sound – a position which is probably true for many vinyl enthusiast and analog purist inclined audiophiles (even if the author turned out not to be one of them).

Such association is also largely dependent on how one conceptualizes a frequently discussed characteristic of vinyl, that is its arguable imperfections (which for example turned out to be an issue for Snoopy). The first question would be whether vinyl has some inherent flaws (pops, crackles, "colouration") at all, and if it has – whether it's a "bug" or a feature. For imperfectionists the answer is simple – "colouration" and "warm sound" affected by the production chain is what makes vinyl unique and beloved – this is perhaps the only group that could be considered as distancing themselves from audiophilia understood as a quest for perfection (i.e. *not caring about those audiophile details*). On the other hand, there are those who claim that vinyl is not supposed to have imperfections, and if it does, there's something wrong with your records or equipment and you should take more care of it and / or replace it. Getting rid of the flaws is possible (i.e. they are not inherent) and only after that vinyl can serve its audiophile purpose. This position stands in contrast with yet another, arguably digitalist one, according to which vinyl's flaws are inherent and not much can be done about it except for switching to superior, digital formats. Of course, this is not an option for vinyl enthusiast / analog purist audiophiles, not only because of their attachment to analogness, but also the conviction that digital has the flaws of its own as well, and analog can still "defeat" it.

Apart from the discussion about whether the 'analog vs. digital' formats have inherent flaws or not, they are also historicized and given some deeper moral meanings. Vinyl is sometimes portrayed as a 'saviour' of some albums, especially those released during the so-called loudness wars era in the 90s,

when the digital masters were arguably subject to an over-compression in order to achieve louder sound, with a side-effect of eliminating many nuances from the music. Traditional analog masters, which were engineered separately from the digital ones are thus supposed to be the best sounding versions of some albums from these times. Such position often stems from certain appreciation of vinyl's limitations / "laws of analog physics" – the fact that not everything could have been done to it (for example the excessive compression) is arguably what kept records a good sounding medium. Of course, for digitalist audiophiles this is not a case, as the digital and its playback equipment has improved since then, and the mastering can be good or bad no matter whether it's digital or analog.

Just as in any other instance where the 'analog vs. digital' divide shows up, also in audiophilia the issue of *keeping the worlds apart* and a problematic status of digitally-sourced vinyl (and thus HDV) play an important role. Unsurprisingly both the digitalist and analog purist audiophiles have quite a lot against it – while for the analog supporters, the issue is about the digital step in vinyl production, which makes it a non-AAA (and thus, a worse quality) medium, for digitalists the problem is a little bit more complex. For them, it's the digital source and its fidelity that gets spoiled by converting it to analog (*adding garbage*) – they often do accept that digitally-sourced vinyl may sound good, but never better than its source, as each process of conversion equals degradation (in a sense that's also what the analog audiophiles think, only the other way around). One of the commenters suggested that digitally-sourced vinyl is probably a good idea for those who have to have their music on vinyl (i.e. 'format people'), thus putting them in opposition to self-perceived 'quality people' – this statement seems tricky to me, as many of those 'vinyl format people' also tend to prefer their records to be AAA.

Although the majority of forum users seems to perceive themselves as some sort of 'audiophiles', this group keeps on being *spoken about* as well, although not too critically – much rather as the narrative counterparts to the positions that are widely disapproved. For example, in this quote Hornet shares his / her expectations about the group (which could be conceptualized as 'audiophiles') rejecting HDV (*speaking from the outside*), while criticizing 'others' who don't care about sound quality (identity work as an audiophile):

"The problem is, that demographic isn't buying vinyl for the audio quality, and I think only the most gullible will pay for the "HD" product. Meanwhile, collectors who do care enough about audio quality to pay more already know this is bullshit. So I don't see this working out, but we'll see." (Hornet)

Another audiophile-related expectation about HDV is that the technology will eventually become a "terribly expensive" product for a couple of rich audiophiles, which also suggests other – apart from identity based – types of fragmentation in the 'community'.

Despite many differences, there are some things which the majority of audiophiles would probably agree upon. For those who are the supporters of innovation in audio, it seems clear that those

hypothetical improvements should not come at cost of sound quality. The authority of sound engineer and the importance of his or her experience in "audiophile listening", as well as the skills of "careful mastering in a tasteful way" are the crucial elements of good-sounding record – the parties involved always have a choice to "use any tool with grace or greed". The constant "hope for market appreciating better sound" and attachment to materiality are the other quite commonly shared characteristics of the audiophiles of many different kinds. Although often very critical of quality-ignorant people, they also seem to acknowledge that "not everyone is into this because of sound quality" – the position which nevertheless seems to be rather disapproved of and in need of change. General public doesn't care about sound quality enough and needs to be educated about its importance.

Let me now move on to the more specific positions that a self-identifying audiophile might take. In the following subsections I will describe three kinds of audiophilia whose instances I encountered throughout the forum: *vinyl enthusiasm / analog purism* (main value: format / analogness), *digitalism* (main value: high quality digital sound), and *imperfectionism* (main value: vinyl's imperfections and warmth).

5.3.1.1.   Vinyl Enthusiast / Analog Purist

At first, I referred to this audiophile identity type as simply 'analog purist', assuming that pretty much all of the vinyl enthusiast audiophiles are to some degree engaged on the 'analog' side of the 'analog vs. digital' barricade. However, it wasn't until I delved deeper into the multiplicity of definitions and meanings attached to such seemingly obvious terms as 'analog', when I realised that *analog purism* is just a position on a spectrum (or rather several spectrums) which *vinyl enthusiasm* consists of. There is no one 'analog' nor one 'purism', and *analog purism* is not always synonymous with *vinyl enthusiasm* – they often go in line, even reinforcing each other, but to bring them together under a common umbrella of one name would be an oversimplification, ignoring large part of the work I've done in the previous sections. On yet another hand, I still wanted to include *analog purism* in the name of this category, as reducing it to *vinyl enthusiasm* (and only elaborating about its analog purist fraction later on) seemed to me as somehow diminishing the importance of the former. Even if not an all-encompassing notion, the stereotypical figure of 'analog purist' is nevertheless one of the most important narrative devices in the whole audiophile discourse.

Speaking in the most general way, *vinyl enthusiasm* stems from a belief that for some reasons, vinyl is better than other audio technologies. Those reasons are very heterogeneous and sometimes even contradictory – some believe that it has better sound quality (audiophile-driven), some appreciate the so-called "colouration" or "warm sound" (imperfectionist-driven), some find it to be an "honest" reflection of "the way things used to be" (nostalgic-driven). The archetypical analog purist rejects any record that is not AAA (with all stages of production and usage fully analog), condemning it as digital.

To make things more complicated, being an analog purist can mean different things as well, depending on what one defines as analog – some people think that a medium is analog if it has 'normal' grooves or is playable with 'regular' cartridge / turntable, which makes pretty much every LP analog. These are the people who often use the method of *dividing (vinyl production) into levels*, as they describe which levels 'should' be analog for them to consider the resulting medium to be analog itself. Finally, there are those who don't mind the digital in analog at all – sometimes because they accept, more or less (but rather less) enthusiastically, the current state of things in the industry (most of LPs being cut from digital sources anyway), sometimes because they simply appreciate the sound of digitally-cut vinyl, and / or because the 'purity' of vinyl is much less important to them than the sound quality – so if the digital sources are HD, their users should (at least theoretically) be satisfied with the LP cut from them. Let me now move on to some more specific examples of this multiplicity of vinyl enthusiast positions, using the direct quotes of forum users reacting to High Definition Vinyl.

In the following quote, one of the analog purist forum members presents his objections against HDV:

"I believe in analog technology very strongly and I personally don't see the point in this. I very much welcome small, incremental changes to vinyl, like the addition of an anti-static compound to the plastic but not huge "innovations." Vinyl is a mature technology and has been for decades, there's a reason we still listen to it despite the fact it's close 70 years old and stereo LP's are close to 60 years old. On top of that, I'm a firm believer vinyl should stay all analog. It's an analog format, so why not take advantage of that? (...)" (TV)

According to other commenter, the HDV idea is:

"(...) Dead in the water to me. Enough digital cut vinyl out there to last a lifetime. Kind of pointless really." (Dalton)

One of the key drawbacks of HDV in case of these two excerpts is its status as a digitally-sourced, and thus not fully-analog, medium. This is why both of the forum members relate to the announced technology as pointless, similarly to this quote, in which the author explains why he doesn't consider HDV to be analog:

"Digital preview for laser control. Like a lot of 80s onwards vinyl cutting the signal is converted to digital but likely hi-res rather than 16 bit. This is pointless as modern lacquer cutting is HD and can be AAA." (Mozart)

Interestingly, some vinyl enthusiasts conceptualise HDV as pointless not only because it introduces the digital step into the format which should remain all-analog. One user, after hinting at his analog purism, dismissed HDV from the opposite perspective in a following attempt of *keeping the worlds apart*:

"So they convert music to digital first then cut mothers with laser and in the end just "transfer" all that to analog format (vinyl) ? Seems unnecessary and weird to me, just a hype. Anyway, I'm not interested, I prefer LP's because they ANALOG. If You like DIGITAL, well it's just easier to stick with CD's and hi-rez downloads." (Kronos)

This suggests that at least for some the issue is not about the digital formats themselves, but about keeping them away from the analog ones, for the sake of the purity (and thus quality) of both the analog and the digital world. But this purity and whether it still exists remains a disputable concept as well. What follows is the reply to the previous comment:

"Absolutely agree with you, but, just to nitpick - most contemporary albums go through some digital link-in-the-chain (whether sourced from a digital file, or mastered digitally etc.) before they make it to vinyl." (Luke)

In turn, the author of the original comment replied:

"Yes, of course I know that, though most music that I like is from 1960s-1970s so no modern pressings of these albums for me. As for modern music, I guess we just don't have a choice." (Kronos)

This indicates that analog purism, as well as the necessity of *keeping the worlds apart* has its limits – defined by music preferences (AAA vinyl is more easily available when one listens to music from the pre-digital era – but it gets more problematic for modern releases) and the current state of industry, which often leads to analog purists "having no choice" if it comes to the digitally-sourced vinyl.

On the other hand, some vinyl enthusiasts have much less issues with the 'analogness' (or its lack) of modern mass market releases, as they negotiate it engaging in the practices of *dividing into levels*. One of the forum members who clearly admitted to "not getting the digital vinyl" and "doubting whether a digital process can improve an analog one" also pointed out several times that his definition of 'analog' is much less strict than that of some purists:

"Analog in this case [of mass market vinyl] [is] from the cutting of the grooves to the output of your playback chain. Not whether or not it is recorded and mastered on protools or whatever." (Bohemian)

"My concern wasn't whether the music had some digitization in its creation, half my records are made by djs/producers. Rather it was more about the cutting process being analog. This 3D printing process will be done through a computer, hence the reason I brought up Digital. People jumped to the conclusion I was rehashing their tired arguement about digital vs analog." (Bohemian)

These quotes show (1) how the process of *dividing into levels* helps some vinyl enthusiasts in negotiating which boundary objects are on which side of the 'analog vs. digital' barricade (for

example enabling them to use these objects, and still remain in their preferred position) and (2) that even they can get irritated with one of the key discussions driving their 'community'.

Dividing into levels allows vinyl fans to negotiate the analogness of their vinyl records, even to a degree where "if it is playable on conventional TT then it is a normal analogue wiggly groove, not pits and lands like a CD" (Pac-Man). But for some people even that is not necessary, as it turns out that not all vinyl enthusiasts are analog purists, and thus they don't need to justify the analogness of their audio choices:

"I'm not an analogue purist, so am happy with vinyl sourced from top quality digital masters. (...)" (Charlie)

Another interesting example of what many purists would see as a frivolity comes from the person who actually enjoys *mixing up the worlds of digital and analog*:

"I believe: 1) That high quality digital can be as high quality (or higher) as analog if done properly; and, 2) I have found that high quality digital sources appear to sound better when transferred to vinyl and played on a modest TT (assuming you have a decent, well set up TT) than when played on a modest digital player. (…) I personally enjoy vinyl more than digital in general because my TT does a better job than my CD/DAC of getting the most out of music, and since much of my music was recorded onto tape/vinyl 30-50 years ago. However, I also own many reissues which were digitally remastered and they sound better on my TT than the hi-res files (used to makes the album) do on my DAC. I believe that they will be able to provide much higher end DAC playback for substantially less cost (hopefully) in the future but in the meantime, I look to my TT for digital and analog quality." (Lennox)

This person is thus a vinyl enthusiast, but not an analog purist, intentionally experimenting with various hybrids of analog and digital audio technologies – a position which seems to be quite rare among the forum users. Both worlds are portrayed as equally helpful in the goal of achieving the highest quality sound – that's an audiophile side of this approach. On the other hand, Lennox also admits to the emotional attachment to analogness, backed up by the ownership of both "music recorded onto tape/vinyl 30-50 years ago" and the "digitally remastered reissues", which he enjoys more than the source files – an exact opposition of the approach presented by DrDolittle, a purist audiophile whom I will bring up at the end of this section as one of the three examples of audiophile identities as performed in practice.

Apart from technology-dedicated *keeping the worlds apart*, there also exists a second type of gate-keeping, directed towards people. I identified the key action on which it is based as *speaking about (others) from the outside*. These 'others' include such outsiders as the so-called average record buyers or hipsters – those are the people who buy vinyl for arguably 'wrong' reasons (coolness, decoration,

being a "hefty / tangible piece of art"). For vinyl fans / analog purists, the outsiders may come from the foreign, digital 'world' – for example when the article about HDV was published on a digital news website, or when someone pointed out to Rebeat's origins as a digital audio distributor. This gate-keeping is not free from tensions though – some vinyl enthusiasts do realise that new players entering the field with new ideas may be a good thing for the format, the problem is that these new ideas are not always (or rather rarely) in line with their own expectations. The need for progress is contrasted with attachment to "ol' fashioned methods", and the requests for AAA clash with such issues as the current, 'digitalised' situation in the industry ("almost nobody cuts from analog", "digitally-cut vinyl is a norm"), the deterioration of many old masters, and the question of music recorded (digitally) after the "golden 60s-70s".

Outsiders are not the only ones subject to *being spoken about* – so are the very members of vinyl enthusiast group, especially the analog purists. For example, one person shared his expectations about the analog purists' uptake of HDV, including the ironic remark about one of the all-analog audiophile gurus, Michael Fremer:

"The real issue with HD vinyl is that the process, by definition, requires a digital step - you can't have AAA mastering using this HD vinyl process. That will be the real holy war. I'm sure Fremer's already written his column trashing the sound quality of the first HD vinyl albums because they're not AAA. When they come out, he'll just fill in the titles and artist names and be ready to publish immediately. (…) it will be really really interesting to see if the "AAA" all-analogue vinyl purists consider such a system to still be all-analogue for sonic purposes, or if they condemn it as "digital."" (Moth)

Surprisingly, many people (sometimes also those who identify as vinyl fans), tend to have some critical comments about "AAA freaks" or "analog fetishists". They are often framed as non-knowledgeable ("not knowing how digital audio / sampling works"), with their analog purist opinions based on "widely shared misconception of vinyl sounding better because it's analog" or the "simple perceptual bias". According to those critics the "crap about vinyl warmth" is based on the so-called "cold sound" of early CDs – the way those myths are spread is compared to conspiracy theories, which goes in line with common accusation that analog purists have their "minds and ears closed", not only to technological progress, but also to facts and empirical evidence.

Apart from such harsh comments, some critics also engage in deliberations about what *analog purists should want / reject if they were rational* – for example when making up and discussing new and supposedly better all-analog formats in the instances of *sofa innovations*. Such imagined, hybrid technologies were often framed as better than vinyl – a move which was arguably supposed to curb the vinyl enthusiasts, showing them that their beloved format could be improved not only in an easy, but also more 'rational' way. This is why I interpreted such instances of saying 'what analog purists

should want' not as a 'prescriptive' receipt for 'what one should do in order to become the real analog purist', but rather a display and simultaneous teasing of some imaginary figure of an analog purist.

These more or less subtle taunts made it understandable why the vinyl enthusiast tribe is so protective of the technology it admires. Such protectiveness may also stem from the format's dramatic, and somehow theatrical history (heyday, introduction of digital, industry purposefully destroying the format, vinyl's death, loudness wars, vinyl revival), and the way the record itself is often framed as fragile and / or subject to constant destruction each time it is played back. With vinyl frequently declared as 'dead', 'obsolete', or 'archaic', the 'community's' fragmentation, and new technology in the making, this protectiveness seems to be only increasing.

5.3.1.2. Digitalist

Digitalist people, just like the majority of vinyl enthusiasts / analog purists, most probably consider themselves to be audiophiles – they just believe that the goal of 'truest sound possible' can be accomplished only by entirely different, that is the digital, means:

"(...) Vinyl records have flaws inherent to their format. It doesn't mean that they sound bad it just means that they present a less faithful reproduction than modern digital formats. You can throw 10s of thousands of dollars at equipment and care products and not change that. It doesn't make it a bad format but CD, DVD and Blu-ray audio are vastly superior in the fact that they can replicate every nuance of vinyl recordings and not the other way around." (Weasley)

They often frame vinyl as 'out-of-date' and 'anachronistic', also pointing out to many practical issues that come along with analog, and not the digital technologies. Digital files have better and consistent quality, cheap storage and less 'needs', which is not the case if it comes to analog formats and playback equipment. As one of the forum members states:

"(...) I've heard many arguments for vinyl over the years,but have never heard an argument made that turntables are more reliable and robust than CD players.By definition turntables are more fragile and inconsistent.They are more sensitive to damage,heavy handedness and hard use.The very way that music is reproduced on a turntable minutely damages both the player and the record on each use.A turntable also needs constant adjustment,alignments,oiling,fine tuning to maintain optimum performance whereas CD players needs no attention in order to maintain 100% playback quality. (...)" (Fiddle)

These are some interesting accusations, as all this hassle and 'sacrifices' one has to make in order to produce (and then play back) a good-sounding record do seem to be one of the reasons why many vinyl enthusiasts find the format to be superior and more 'noble' in the first place. This does not convince the digitalists though:

"(...) digital doesn't care if you record it on a spinning disc with lasers, on a tape, hard drive or memory chips, or even with a stylus on a disc. Digital is the future now. When there are no errors, it is the same audio that the digital recorder captured in the studio, played back in your home. Vinyl's "comeback" is ponderous." (Harold)

But not all of the digitalists fully reject vinyl. As one of them admits:

"(...) I don't have a problem listening to digitally-sourced vinyl if the mastering and provenance is good, but I'd rather just have the digital master on a CD or as a file. Despite the limited generational loss proposed by HD Vinyl, there will still be generational loss. Why bother when one could just have the digital master instead?" (Smith)

This means that the digitalists might agree with the analog purists on one thing – although for entirely different reasons – and that is the senselessness of digitally-sourced vinyl, HDV included. Of course, as I mentioned before, there are some who don't seem to mind it – and many more who really like to use its existence (and how it is a norm since early 80s or even 70s) as a great way to tease analog purists, whom they see as obsessing about something that is digital in the end. Despite that, digitalists tend to perceive this boundary object as equally disrupting for digital as it is seen for analog by the opposite side. As DrDolittle pointed out:

"What this [HDV] is doing is trying to make advancements to give the most accurate representation of the source. That's good. The problem is, the source is digital. That source could be sold in 100% accurate sound over internet connections. No need to go through all this hassle just to add a bunch of distortion. That's all that is happening in the process of digitally sourced vinyl. Why make all kinds of advancements in vinyl production trying to achieve sound which is closer to the digital source, which can already be delivered in perfect form to customers with no production costs? Do people really have such a vinyl fetish that they are willing to overlook the obvious when it comes to sound quality? If I hear one more person at a record store saying how vinyl sounds better than CD because it's analog, as they flip through the new section of 99.999% digitally cut LPs, I'm going to… well, I'm going to post about it here." (DrDolittle)

Unfortunately, as one of the forum members complained, the focus right now is not on releasing good quality digital (both files and CD) – files are easily shareable online, whereas vinyl-experience (even in its cheaper, digitally-sourced version) is not, thus making it a safe bet for industry, especially considering the recent vinyl 'revival' trend. This means that for many digitalists as well, the digitally-sourced vinyl is an obstacle for their preferred format (high definition files) to flourish – just as it is for analog purists and their medium of choice, AAA vinyl.

5.3.1.3. *Imperfectionist*

Imprerfectionists might be seen as an opposite of 'quality people', although it's worth keeping in mind that according to my understanding of audiophilia which goes beyond simply 'caring about perfect sound reproduction', an imperfectionist might still consider him-/herself to be an audiophile. Similarly to digitalists, they believe that vinyl, and analog audio in general, does have some 'inherent flaws' – but this is exactly the reason why they enjoy it.

Those vinyl imperfections are described in multiple ways – "crackle", "warmth", "surface noise", "coloration" – and although many digitalists and quality people dismiss the format due to such characteristics, with vinyl enthusiast audiophiles claiming that they are possible to eliminate, others may find them to be a key feature of vinyl records:

"I could understand why someone might prefer the lps despite the coloration you mention. I think there are people out there who prefer the coloration as it actually adds (even though for you it's subtracting) something to the SQ." (Liddell)

 According to another person:

"Much of the signature sound of analog is a result of the flaws of the recording and reproducing chain – those people that enjoy this analog sound are not going to want a format that sounds perfect" (AAAvinyl)

To use a larger example from the data, I will quote one forum member, who came up with some sort of 'imperfectionist manifesto':

"Why do we need high definition vinyl? The vinyl revolution is thankfully here. Vinyl is awesome just at it is. So, personally, I don't think we need high def version. Is it not like a more modern version of a CD when the whole idea of vinyl is to listen to the imperfections that it gives. Don't fix it if it ain't broke. (...) The good majority of the people I know that listen to vinyl, of course, to listen to the music. But, they also love to "hear" that crackle that goes hand in hand with older vinyl. That crackling is the imperfections that have been built up over the years of folks loving music, handling their vinyl. It's specks of dust and grease that add a patina to the record. Similarly to antique furniture, that patina is what experts love to see. And, again, the good majority of the music loving and vinyl loving people I know love that particular sound. Cd's came in, DAT came in,digital downloads came in, and I've no doubt, that if this is true, about high definition vinyl coming in, then it will please certain people, including you [Nico]. Yes, technological advancement will always strive for the "perfect sound", and those guys will be over the moon at something new and giving an amazing aural experience. But, I won't buy it and will still enjoy the crackle, the patina and amazing warm sound from old records." (Russell)

In reply to this, Iggy, a fellow imperfectionist stated that:

"I have the same argument with remastered albums! And in fact have had serious discussion with people in relation to the subject. Just leave them be! They are classic and timeless albums as it is, why amp them up!? (...) I don't particularly care if there's a cow bell that Ringo Starr hits on a classic Beatles track that you can hear, that's never been heard before! Don't get me wrong it's good they can do it, for those who really are that interested in discovering these unheard notes, and instruments, but it's just not for me." (Iggy)

The author of the original comment fully agreed:

"Another beauty of the vinyl is how there are different versions and pressings of classic albums that make it such a worthwhile and interesting pastime. If you make it too new and "perfect", there will be no need for different pressings, etc, ultimately dulling its interest potential." (Russell)

Looking at this exchange, one sees several elements that make up the imperfectionist stance on vinyl. Apart from the appreciation of the format's flaws, the position includes a strong belief that others should "leave vinyl alone" (rejection of technological innovations and / or re-mastering of old albums). This resistance to change seems to stem from (1) the need to preserve a so-called 'character' ("signature sound" / "magic") of vinyl, and (2) some sort of nostalgia ("being taken back to past" / "the way things used to be"). As one commenter states:

"If it ain't broke, dont fix it. Let me amend this: to the production studios that are positing this notion, eff you!!! Seriously. The reason why a lot of us gravitate to this format isn't just about sound quality, it is about the way things used to be. Why do people always have to go out of their way to change/ruin a good thing? It is driving me insane! This format, for all intents and purposes was dead, and it was ultimately resussitated and revived because people loved it for what it was. And now people want to screw with the format. When will people ever learn?!!" (Joshua)

The need of preservation, as well as some prescriptive definitions of what vinyl is supposed to mean, can also be seen in this quote by Howard Carson, product development consultant, posting as Agitater:

"The whole point of music on LP - traditionally mastered, traditionally pressed - is to recreate a specific experience, a definitively recognizable sound, a widely appreciate type of fidelity, and a traditionally and widely understood engagement with music." (Agitater)

The imperfectionists often engage in what I refer to as *vinyl poetry*. It is a mode of speaking about the analog technologies in a romanticised, magic-evoking way, a classic example of which was the 'imperfectionist manifesto' I quoted above. The *vinyl poetry* talk often refers to the analog 'magic' or the 'magic of vinyl records', and how much people 'love' it, for example:

"The "sweet sound of vinyl" is an amalgam of many flavors, not the least of which is the signal chain of the cutting head. If you laser-cut the album, you can kiss the goodness of those final tube amps goodbye, making albums sound a bit "sterile"." (J.D.)

Apart from being an instance of *vinyl poetry*, this quote includes another aspect of audio that the imperfectionists are against, that is the 'sterility'. In a quite similar statement, one person sums up the idea behind HDV:

"The magic of analogue vinyl records is about to be given the sterile treatment. Every record to sound perfect. No colouration from all the steps in the record making chain. That sounds boring to me." (AAAvinyl)

Some quotes also point out to a certain degree of nostalgia that is present in the imperfectionist worldview. Taking into account the aforementioned 'way things used to be', 'traditional / old fashioned methods' (and the 'magic' that stems from them) or the 'traditionally and widely understood engagement with music', the imperfectionist stance on vinyl seems to be strongly related to the appreciation of the past. One forum member stated that:

"At the moment each LP title that is made will have a certain sound effected by the whole production process. This in my opinion makes vinyl unique. If people want a perfect recording then SACD would be a better choice but it's boring when every recording is technically perfect. This is like the slick Hollywood movies where the production is so perfect, that the life of the movie has been stripped out of it. If I listen to artists and songs of the past I want to feel like I am taken back to that time and that means the recording shouldn't be remastered to sound like it was recorded yesterday. Leave the atmosphere intact. It's like seeing a colourized version of the Marx Bros movies. Doesn't work for me." (AAAvinyl)

As it can be seen in pretty much all of these quotes directed against HDV, imperfectionists seem to be yet another group that has a problem with this new technology – for the more analog purist fraction the issue might stem from its questionable analogness (i.e. being digitally-sourced), but it is another quote that caught my attention, as it is specifically related to the typical imperfectionist rejection of change and the attachment to vinyl's flaws:

"(...) No wonder several in this thread are just drawn out to express their disbelief at improving something that's loved as much for its flaws as for its capabilities!" (The Wrestler)

5.3.2. Audiophile Examples

When performed in practice, the idealised types of audiophile identities I delineated above become much less structured, with the boundaries between them more and more blurry. Each individual position is a mixture of different identities stemming from the multiplicity of definitions. In order to

highlight this heterogeneity, I will now present three actual forum members whom I identified as different kinds of audiophiles: (1) the analog purist, (2) the vinyl-enthusiast digitalist and (3) the purist.

5.3.2.1. Macclesfield

Macclesfield regularly points out to his vinyl enthusiasm, as well as the need of *keeping the worlds apart* – digital is not bad (although perhaps worse than analog), it just shouldn't be mixed with analog. He "prefers analog to stay analog" but also realizes that "some masters are past being usable to cut a record due to deterioration or other issues" (Macclesfield). He finds it important to "have a choice" if it comes to audio equipment and its technological options (e.g. the output or the possibility of replacing parts).

Macclesfield is critical of HDV and perhaps the improvements in vinyl in general. In the following quote he points out to several things that matter to him in audio, including the 'purity' of both the analog and digital formats, using proven methods, respecting vinyl's limitations, as well as sticking to some sort of "real world" and practice of evaluating the results of hypothetical innovations with the listeners' "own ears":

"Analog sources matter, quality master sources from tape matter! Careful mastering in a tasteful way matters. If I want digital, there's other purer ways to get that. And we need LP discs cut at real world levels, and not BRICKWALLED or capable of being BRICKWALLED! Again, this new so called HD vinyl is a theory and not yet a reality. The processes we have for vinyl work just fine when done right, they're proven. They can deliver quality results. For me I am a results man! It is or it is not. The proof is in the listening. And right now, we don't have any samples to listen to. Lasers are not proven, it is not debugged. Neumann is proven, Scully is proven, Ortofon is proven, Vinyl's limitations keep it a good sounding medium, you can't go too far from wrong without issues. Let's keep vinyl sounding honest. Get me and folks here something to evaluate and listen to. That we can hear on our systems with our own ears. I want to hear results, not theory which so far hasn't cut one record by anybody. Then I can live with the new method and see for myself if it has potential." (Macclesfield)

Except from pointing out to some attachment to practice (i.e. practical enactments of technologies, not promises or announcements) Macclesfield's referring to himself as "a results man" also positions him as a 'rational expert'. Such picture is complemented by the instances of usage-based identity work:

"Your 5-10 year replacement for me is more like every 1-2 years due to high use. I put more hours on audio gear than home users do, because I do lots of transfer, archival, and broadcast work." (Macclesfield)

The intense use of audio equipment (perhaps also due to the professional occupation) thus makes Macclesfield an expert. The way he distances himself from the average record buyer can especially be sensed as he claims that "sometimes you need tools, not play toys for consumers" (Macclesfield)

But Macclesfield seems to be an analog enthusiast also on a more emotional, not only expertise-driven, level. One can sense his attachment to the materiality of analog technologies in the following quote, where he describes his turntable:

"I have a turntable which was built for 18 hour a day use, EVERY DAY. With no more than twice a year maintenance. (two drops of turbine oil) and styli changed as necessary. See my profile for it. It is my Technics SP-25 motor unit, with Audio Technica ATP 16-T 12" transcription tonearm, and currently uses a Shure M 44-7 cartridge, tracked at 2 grams tracking force. It was built for on the air use on the AM/FM airwaves, with very high performance. It's outlasted cars and many other things in my life. Reliable and as high performance as there can be had. And it's been in continuous use since 1983, when I bought this example new." (Macclesfield)

Another quite emotional moment could have been spotted in this excerpt from the aforementioned quote:

"(...) Vinyl's limitations keep it a good sounding medium, you can't go too far from wrong without issues. Let's keep vinyl sounding honest." (Macclesfield)

Not everything can be done to vinyl due to its limitations, and this is what keeps it an honest, good sounding medium. Although it might seem that for an audiophile there should be no limits in trying to reach the goal of 'truest sound possible', that is not the case at all – at least for the vinyl enthusiasts / analog purists. Vinyl is a sacrifice – it requires special treatment, certain expertise, and humility in any attempts to enhance it – this is what makes it more noble and sophisticated than the digital formats.

5.3.2.2.   Nico

Nico is an interesting example of vinyl-liking digitalist audiophile. His / her relationship with analog is rather ambiguous and reflexive towards the whole 'community':

"I'm not one of those anti-digital types (quite the opposite!) but I bet a large minority (at least!) of the current vinyl fans are. If your new vinyl technology requires digital audio, you've lost a lot of your potential market right out of the gate." (Nico)

(S)he continues to share his / her stance on the 'analog vs. digital' debate:

"There's no fundamental difference between digitally reproduced audio and analog audio. Your ears can't tell the difference. But there's this common misconception that analog (and in particular vinyl)

sounds "better", and it's kind of a self-fulfilling misconception. So many people on here think their records sound better than, say, Spotify, only because *everyone has told them they do*. Maybe they do, maybe they don't. But it isn't a digital/analog thing. And with some of the equipment (and pressings!) we see on this subreddit, they *definitely* don't sound better! Of course, not everyone is into this because of sound quality. But as an older dude who remembers when records were the only viable, affordable format for quality sound, I really can't relate to the whole vinyl fetish "tangible object" thing." (Nico)

In this extremely interesting quote, Nico points at several opinions that differentiate him / her from the stereotypical figure of vinyl enthusiast. Summing up the 'analog vs. digital' debate as irrelevant, as "there's no fundamental difference between digitally reproduced audio and analog audio" seems to be quite a statement in a 'community' more or less driven by a decades-long conflict between these two worlds. Apart from that, (s)he hints at his scepticism towards analog purism as being somehow driven by the generational difference – a move frequently used when talking about hipsters and their engagement with vinyl (see below). The quote also suggest that (s)he is quite critical of some key qualities associated with vinyl in the context of its current revival, for example the tangibility of the object as a counter-reaction to the arguable dematerialization of music. In the following excerpt he also addresses the imperfectionists' favourite, that is the 'vinyl warmth':

"Well, a lot of the early CDs, like from back in the 1980s, didn't sound very good. In the rush to get things on the market, the record companies just grabbed any old tape off the shelf and put it on the discs. And the digital technology itself was fairly primitive by today's standards, so both the digitizations and the playback could sound, for want of a better term, "frosty". (All that crap about "vinyl warmth" was initially a reaction to the "cold" sound of some early CDs played on early CD players. A lot of them sound considerably better played on newer equipment. Others ... don't.)" (Nico)

His / her attitude towards HDV is sceptical, but not because (s)he disapproves of the digital step in its production. It's much more about being against the improvements in vinyl – but yet again not because of the nostalgic attachment to 'the way things used to be'. For him / her, there's simply not much more that can be done to vinyl, and ideas such as HDV are just marketing gimmicks:

"So yes, there are a lot of ways to make digital sound worse than analog. But that's not directly related to digital. That's humans doing that. And when you take into account all the ways there are to screw up ANALOG audio (starting with generation loss), it's silly to declare the old format has any fundamental superiority to the new one – especially when the new one is still being improved, whereas the old one ... well, it's getting nothing but snake-oily things like HD Vinyl. And with good reason. There really are no further improvements that can be made to it without "breaking the standard" (ie creating a new version of the format that's not compatible with the current one). There's also the common misunderstanding about how digital sampling works. ("It's stairsteps! It doesn't reproduce the sound

waves accurately!") There's not much you can do to disabuse people of their headcanon once they've become emotionally committed to it." (Nico)

Nico's position crystallizes itself even more, when (s)he encounters a person whose stance on vinyl is arguably a contradiction of his / her own. The aforementioned 'imperfectionist manifesto' by Russell, is what really drove Nico mad:

(In reply to "the whole idea of vinyl is to listen to the imperfections that it gives"):

"Now THIS ... THIS right here ... is what triggers me way more than people posting the same dumb article six times. No, it is NOT supposed to have imperfections, dammit." (Nico)

(In reply to "that patina is what experts love to see"):

"Nope. Not even slightly. Surface noise is a bug, not a feature. Put down the ganja. Sincerely, an expert." (Nico)

(In reply to "will still enjoy the crackle, the patina and amazing warm sound from old records"):

"You should run over your collection with a car a couple times. Then they'll sound REALLY good." (Nico)

Interestingly, although the picture I've painted here presents Nico as an extremely analog-sceptical person, it's not fully the case as well. In response to another, clearly digitalist person who also criticized the 'imperfectionist's manifesto', claiming that vinyl has 'inherent flaws', which means it will always be less faithful than modern digital formats, Nico stated that:

"(...) you're wrong, because of the limitations of ADCs/DACs, rounding errors, jitter, and dozens of other reasons. Throw enough money at it (it's quite a bit), and vinyl can still kick digital's ass." (Nico)

The two parts of this discussion show how much the identities performed by forum users are dependent on interactions with other people. Taken out of the context of each other, these two situations would position Nico as either 'simply' an audiophile (in a sense that (s)he's critical of those who put emotions above sound quality), or a vinyl enthusiast – after putting them together, one can see that Nico does have a "vinyl enthusiast" side to his / her disenchanted audiophilia – even if derived of what (s)he finds to be the analog purist / imperfectionist delusions. His position seems to be best summed up by the following quote:

"Digital is the present and the future. Vinyl is the past. It's OK to believe this and still like (and buy) vinyl, otherwise I wouldn't be here." (Nico)

DrDolittle is an audiophile purist with a huge need of *keeping the worlds apart*, which (s)he directs especially against the digitally-sourced vinyl, but all this while taking a more digitalist perspective than the previous users. (S)he is first and foremost an audiophile, for whom the sound quality is far more important than the format in which it is delivered. This positions him / her on the 'quality' end of the 'quality vs. format people' spectrum. Despite (or maybe due to) that, (s)he seems to have a certain appreciation for those audio technologies that are the 'pure' representations of both the analog and digital realms – the AAA vinyl and the digital (HD) files. Analogically, the technologies that transgress the boundary between the two worlds, such as the digitally-sourced vinyl (that HDV, according to him / her, is an example of) are most often 'senseless' – unless some specific circumstances make them a necessity.

DrDolittle is dissatisfied with the way things are usually done in music industry these days:

"AAA involves more cost and time and thus lessens the profit margin. That's the main reason analog is being converted to digital for cutting vinyl. All these gimmicks are about convincing the buyer that digital cutting can be superior. Sorry, old school AAA is still king when it comes to vinyl. Sure, digitally sourced vinyl can still sound great. But you know what sounds even better? The digital source. Just sell me that before you junk it all up with a vinyl generation." (DrDolittle)

This quote indicates that DrDolittle is both an analog purist ("old school AAA is still king when it comes to vinyl"), and a digitalist who thinks that digital formats are "junked up with vinyl generation". The main problem is thus the very conversion between the two realms (*mixing up of the worlds*) – according to him / her, analog doesn't have much to offer to digital if it comes to sound quality. In an already mentioned quote, (s)he explains why HDV is a bad idea:

"What this [HDV] is doing is trying to make advancements to give the most accurate representation of the source. That's good. The problem is, the source is digital. That source could be sold in 100% accurate sound over internet connections. No need to go through all this hassle just to add a bunch of distortion. That's all that is happening in the process of digitally sourced vinyl. Why make all kinds of advancements in vinyl production trying to achieve sound which is closer to the digital source, which can already be delivered in perfect form to customers with no production costs? Do people really have such a vinyl fetish that they are willing to overlook the obvious when it comes to sound quality? If I hear one more person at a record store saying how vinyl sounds better than CD because it's analog, as they flip through the new section of 99.999% digitally cut LPs, I'm going to… well, I'm going to post about it here." (DrDolittle)

DrDolittle has thus two purist modes to his / her audiophilia: *analog purism* and *digitalism* (which could also be described as 'digitalism once the conversion to digital has been done'). Let me now concentrate in more detail on the ways in which (s)he makes sense of three audio technologies that are somehow symbolic representations of what 'should' be the (un)-preferred medium for those different positions – the two purist ends of spectrum (AAA vinyl and digital file), and one boundary object (digitally-sourced vinyl / HDV).

"(…) I know some digitally sourced vinyl sounds better than some digital releases, but as you say, that's only when the mastering/source is different. There's no reason they have to be. The digital source which would be pressed to vinyl is as good as that sound is going to get and could be easily made available for purchase. Much more easily than selling it on vinyl. Pressing digital to vinyl only serves to satisfy those who must have the music on the vinyl format. And that's fine, but let's be honest about it. If the goal is producing the truest sound, just sell the digital file as-is. It's getting no better than that and pressing it to vinyl only makes it much worse. Rumble, crackle, hiss, distortion, wavering pitch, etc. This is all that's been added. Sure, that's true for AAA vinyl as well, but selling us all the source tape isn't an option, so vinyl remains a great delivery system for analog sound and I'm all for advancements in doing that. Once something is converted to digital, there's no limitation on delivery or need to compromise sound. Digitally sourced vinyl is the worst of both worlds." (DrDolittle)

"Promises of superior vinyl production which include digital sourcing just sounds silly to those of us whose main concern is sound quality and not format. There just isn't a good consumer-based reason to put digital audio on vinyl as opposed to a digital delivery, other than it's much cooler. That's oversimplifying it, I know, but that's basically it. Some people just love vinyl, so I understand the desire to buy everything on that format. It's just fact, though, that a digital file sounds better than vinyl cut from that same digital file, no matter how large the advancements in vinyl production. So these advancements just seem pointless. My attitude on this is towards the industry and their gimmicks, not towards those buying digitally sourced vinyl. Whatever anyone enjoys, is what they should buy and sometimes, yes, digitally sourced vinyl might even be the best option the industry makes available for a particular recording." (DrDolittle)

"I have no problem with the advancement of vinyl. I have a problem with the regression of sound quality, like putting digital audio onto vinyl when there's no advantage over digital delivery. I'm not saying they should or shouldn't or that people should or shouldn't buy them. I'm just saying what I feel about it and I find it pointless. The fact is, you are adding garbage with the vinyl process. With AAA, that can't be avoided as there's no better mass analog delivery format to chose from at this point and being that it's all analog, it's offering something unique which digital delivery can not. Once it's in digital form, why add garbage? If you must have the recording on vinyl and it's worth sacrificing

quality for that, then I guess it's a good thing. I don't want to sacrifice quality to have something on a specific format, though." (DrDolittle)

If mastering is the same, the digital source will always sound better than the digitally-sourced vinyl cut from it – AAA vinyl is not free from the imperfections DrDolittle associates with vinyl process in general (*adding garbage*), but it remains "a great delivery system for analog sound", "offering something unique which digital delivery can not". Finally, digitally-sourced vinyl is "the worst of both worlds" – DrDolittle gets much more digitalist in his / her critique of this boundary object, as the majority of flaws (s)he mentions ("distortions", "production costs", "problems with delivery") are derived from the analog world.

Interestingly, DrDolittle understands that those are just his / her preferences, and there does exist certain spectrum of positions – just because (s)he is a 'quality person' doesn't mean that 'format people' who have to have everything on vinyl should reject digitally-sourced vinyl just like him / her. Despite that, one can sense that the 'format people' approach is something that (s)he slightly disapproves of. Remarks such as "if you must have recording on vinyl and it's worth sacrificing quality" and "if the goal is producing the truest sound, just sell the digital file as it is" clearly show which way of doing things is correct and more rational according to their author.

Although DrDolittle is not a fan of digitally-sourced vinyl, (s)he does not reject it categorically. First of all, in the aforementioned quotes (s)he acknowledged several times that "digitally-sourced vinyl can still sound great" – for example due to great mastering – it's only that it won't sound better than its digital source that was mastered in the same way. Another issue is the availability of this digital source:

"The vinyl process can add nothing positive over the actual digital source. I'd just prefer to have the digital source. In absence of that, I understand why some digitally sourced vinyl is considered the best sounding option. That's an issue of availability, though. My point is that there's no good sound quality driven reason to cut digital to vinyl when the digital could be easily sold. So it makes claims of these advances towards truest sound seem silly to me when we're talking digitally sourced vinyl. Once you convert to digital, it's never getting any truer than that file." (DrDolittle)

In the absence of digital source, DrDolittle "understands why digitally-sourced vinyl is considered best sounding option" This suggests what is the second position on his / her hierarchy of values if it comes to choosing the audio format. With the most important aspect being the sound quality ("not wanting to sacrifice quality to have something on specific format"), the second criterion is the availability, i.e. using the best option available.

5.3.3. The Spoken-About Others

Two of the identity types I identified throughout the dataset were not really performed by any of the forum users – they existed rather as narrative devices, i.e. the (imagined) others that only got to be spoken about, mostly in a critical way.

5.3.3.1.   Average Record Buyer

Nobody relates to themselves nor wants to be called an 'average record buyer'. They are most often portrayed as non-knowledgeable, and thus indifferent / ignorant towards many important issues (such as sound quality and digitally-sourced vinyl). One of their key imagined characteristics is the fact that they buy vinyl for 'wrong' reasons – not for audio quality, but "because it's a hefty piece of art, retro thingy, cool or whatever" (Xero). Following that, they "play LPs through junk gear, or the music is truncated through the turntables' Bluetooth connection before it reaches their ears" (Henry). Their authenticity and dedication is also frequently questioned – for example, Mozart "doesn't see people who buy vinyl for the artefact or trendiness sticking with it for that long" (Mozart).

There are two interesting observations that I had while investigating the audiophile perception of an average record buyer. First, I had a feeling that the existence of this figure, and the need to specify and talk about it is strongly related to the current context of vinyl 'revival' (just as the need to differentiate the 'traditional' vinyl record is an outcome of announced HDV introduction). I would argue that out of the three main vinyl 'eras' – pre-digital heyday, vinyl 'death', and vinyl 'revival' – it is only in this last era that such person as average record buyer had to be brought into being (at least that actively). Of course this research is set in the vinyl 'revival' era, so my deliberations on previous eras could be distorted, but it seems that:

(1) during the heyday, vinyl was an only viable, affordable format for quality sound, making it an everyday object – everyone bought it and thus pretty much everyone was an 'average record buyer'; of course also then there have been some more audiophile-inclined or 'expert' users, but it seems that their identity as 'quality people' was much less item-related (because the item was too obvious / ubiquitous), making it unnecessary to distance themselves from its average buyers – it was their expertise that differentiated them;

(2) despite the whole trauma of vinyl 'death' it seems to be only then when the analog 'world' became unprecedentedly purified from the average buyers, who moved on to digital formats; the ones who stayed tended to perceive themselves as those who pay much more attention to what they put in their ears than the 'everymen' – in case of those experts who identified themselves with a vinyl enthusiast / analog purist position, this audiophile identity became increasingly object-related;

(3) with the vinyl 'revival', the analog 'world' started being (re)-populated with new (or old-new) people; the format's position as telling something about its user (e.g. that (s)he cares about what (s)he listens to) stopped being so obvious, and the audiophiles had to come up with some new ontological tools in order to distance themselves (once again) from these unfaithful others – hence the figure of an average record buyer.

A good example of this kind of person was brought up by Keith who talked about his friend getting back into vinyl because of its reclaimed 'coolness':

"(…) He asked me for advice to buy a turntable and talked to him about a Rega or a new Marantz, but I warned him that his old and trashed LPs (i've seen many of his old LP's) from the 70's and early 80's (he got his first CD player in 1983) won't sound good regardless on the TT he plays them with. He went and got an inexpensive Sony turntable, the one with an USB output that can convert records to either Hi Res PCM or DSD, he set it up the best he could (he wanted me to do it but I wanted him to do it by himself and feel the disappointment by himself) and played some of his Abba records. He called me in a panic state saying that all he gout out of his records was some music with loud frying French fries noise-like. I camed him down by saying him that his new TT would look cool (his key word) next to some of his records and the rest of his equipment. It was like a miracle, he relaxed like if he just got a 10 mmg. needle of Diazepan. I hate when people takes analog playing like records or R2R in a posch and unserious way, I get so much pleasure out of my records and my humble Goldring GR-1 TT with its new Audio Technica VM540ML cart and an EAR 834 "clone" Phono preamp with my beloved Matsushita 12AX7/12AU7 tubes that is unthinkable for me to see them as decoration." (Keith)

This story has a quite patronising ring to it, as Keith clearly disapproves of his friend's attitude towards vinyl. The way in which he wanted him to "feel the disappointment by himself" after most probably setting up his equipment in a wrong way reminded me somehow of a figure of strict teacher – or a gate-keeping attitude of 'protecting the knowledge', at least from giving it up to the outsiders too easily. It also seems to be a good explanation of vinyl enthusiasts' hostility towards the average record buyers or those whom they find to be driven by 'wrong' reasons. It must be difficult watching their territory being (re)-populated by 'traitors' who abandoned it when the first opportunity came (and for all those years didn't care about the format – both in a general sense, as well as their very own records), but also the newbies who don't even know what the 'real' vinyl lovers went through to preserve it. And on top of that all, they seem to be so careless about it that they treat it only as a 'cool' decoration!

Another thing that needs pointing out in this analysis, is the (separately described) figure of hipster, as another type of identity that triggers a lot of criticism and mockery. Vinyl revival is often framed as 'brought to you by hipsters', which makes them responsible for this influx of average record buyers

back to the format – there are many characteristics that hipsters and average record buyers seem to have in common: buying vinyl for 'wrong' reasons, not caring about sound quality enough, lack of knowledge, etc. In my opinion, one of the key differentiating factors is the *threat-inducing potential*. While the average record buyers don't seem to be perceived as a threat to the format – much more as a little bit irritating dummies who need to (and could) be educated ("demographic not buying vinyl for audio quality"; "challenge of getting the masses to care about sound quality") – the hipsters are looked at with much more anxiety. In the end they were powerful enough to 'bring vinyl back', which is arguably a good thing – but for what reasons? There seems to be quite a different philosophy behind their vinyl enthusiasm, making the audiophile position less certain, perhaps also due to the generational conflict.

5.3.3.2. Hipster

This is another personality type that is mostly talked about / criticized from the outside – but this critique seems to be slightly more complex and filled with anxiety, than in the case of average record buyer. Although also seen as non-knowledgeable, the emphasis is put even more on hipsters having 'wrong' reasons for being into vinyl:

"Yup, a big challenge is getting the masses to care about sound quality. They don't. Even if HD Vinyl mitigates many problems of modern pressings, it won't change the fact that most vinyl newbies are playing LPs through junk gear. Or the music is truncated through the turntables' Bluetooth connection before it reaches their ears. I predict the Hipster trend of buying LPs,either for nostalgia or alleged SQ, will be in heavy decline by the time HD Vinyl is ready to "uptake." Hopefully I'm wrong." (Henry)

Of course the 'wrong' reasons differ depending on what one sees as the 'right' ones – for example the "alleged sound quality" remark from Henry's quote may indicate either that he doesn't believe in vinyl having anything exceptional to offer if it comes to sound quality (anti-vinyl-enthusiast, and / or digitalist), or that he finds the hipster way of buying and using vinyl (e.g. choosing the digitally-sourced releases or playing them on "junk gear") is what makes their quality-searching claims "alleged".

There are some typical emblems of 'hipsterhood' that often reappear in the instances of talking about hipsters and their engagement with vinyl – this includes such well-known figures as:

(1) Crosley – a brand of vintage-looking turntables widely perceived as low-quality (a.k.a 'shitty') and associated with hipsters; nothing works on Crosley and its users are the objects of constant mockery and / or hate,

(2) Urban Outfitters – a clothing chain store, which also sells various hipster-dedicated gadgets, including vinyl (generally perceived as overpriced) and turntables (for example Crosleys) – if you buy your equipment there, you're probably a hipster and don't know much about records,

(3) the word 'vinyls' – an incorrect plural form of the word vinyl (which doesn't have one); most often associated with non-knowledgeable vinyl users, both hipsters and average record buyers.

Another, much more problematic concept frequently associated with hipsters is the vinyl 'revival' / 'resurgence' itself, and the changes that stem from it. On one hand a good thing for the format, on the other, it is an object of some criticism as well:

"(...) The current vinyl "boom" is fueled by hipsters who primarily value the format's novelty and how it looks on the shelf, not necessarily its audio quality." (Luke)

"(...) And I still think the vinyl resurgence is a fad. It'll go back to being nobody but hipsters and audiophiles eventually, as soon as (1) it sinks in that it's really NOT a superior format, and it makes moving a pain in the ass, and (2) some other shiny new format shows up to capture people's attention." (Nico).

Of course such assessments are largely dependent on the author's own position – some may see the whole revival as a negative or unnecessary phenomenon (i.e. in case of having digitalist opinions), some may appreciate it, except for the 'wrong' reasons why it was started. Some of those expecting this "fad" to go away may not have problem with the trend itself – and for example hope that their pessimistic expectations will turn out to be wrong – but no matter what one's position is, the hipster movement in audio seems to be perceived as quite disruptive by the majority of commenters, who react to it in a twofold manner – with mockery and / or fear-induced gate-keeping.

Yet again, what the (imagined) hipsters are being mocked for depends on one's own identity. For example one person made fun of a hypothetical, 'hipster' way of getting a fully-analog record, simultaneously ridiculing the analog purist position:

"Sound is not electricity, though. Sound is movement of air. The problem is not the mechanical part - the problem is the electrical part. We need to get back to the days before electric recording and playback. Those discs from 1910 that were recorded by someone pressing start on 10 disc cutters in the same room as the musicians. Cutters that had acoustic diaphragms and horns, and the air movement of the instruments in the studio was all that created the same disc that was played by consumers. Take off the recorded discs, load up new blank platters, and the musicians played again for another batch of records. Then played back as pure as the original on customer's gramophones, where the air movement recorded on the disc is again directly coupled to the air for you to hear. That will be

the new hipster way of getting "analog". Forget these HD vinyls that are fake analog created on digital workstations and emailed to the pressing plant." (Harold)

While this excerpt mocks hipsters for their excessive engagement with unnecessarily outdated technologies, the following criticism comes from entirely different perspective, as it accuses hipsters (along with HDV) of not being 'analog' enough:

"This passing through a digital PCM stage regardless of resolution will only make us appreciate full analog cut records from Audio Fidelity, Analogue Productions or MoFi even more. For hipsters, this [HDV] will be a new novelty item to show their visits and friends, 'though they will keep listening to music on their "bitten forbidden fruit" cell phones." (Keith)

Here, the hipsters and HDV's authenticity is questioned from an analog purist position. Not only HDV won't be a legitimate analog format, but also those who will use it (hipsters) will treat it as a gadget to show off – while secretly sticking to even less analog formats (music files on cell phones).

Apart from being an object of mockery, hipsters also tend to be seen as a threat to the format, whole industry, and vinyl enthusiasts' identities – they introduce new values, practices and artefacts to the analog 'world', often standing in conflict with what the 'old boys' know and admire. According to one person:

"Has the market always been the same until the vnyl "boom" when trust fund hipsters started buying vinyl." (Surf_Rock)

Such opinions are also related to the frequent accusations that hipster-fuelled vinyl 'revival' led to the increase in records' prices. Interestingly, this hipster hate is acknowledged enough to be an object of mockery in its own right – replying to the Surf_Rock's comment, another person came up with this ironic diatribe:

"Hipsters: simultaneously the cause of, and everything wrong with, the vinyl resurgence. Will no one stop these audio boogey-men from driving up vinyl prices with their trust funds? I have it on good authority (audiophiles on internet forums) that hipsters only listen to records because vinyl is "cool." Don't they know that vinyl definitely isn't a fun way to enjoy music by their favorite bands, and is only worthwhile if played on a $10,000 rig by dudes over the age of 50? Posers." (Ian)

Although not quite serious, I treat Ian's comment as a nice auto-ironic summary of the 'community's' stance towards hipsters, and the current situation of vinyl industry in general. This is also a great introduction to the next section in which I will present my interpretation of where all these intense reactions stem from.

5.4.   Gentrification of Vinyl

What does the announcement of High Definition Vinyl's introduction do to the user perspectives on 'traditional' vinyl's current situation and future? How are these reactions related to the forum members' identities, their personal histories of vinyl and the technology's (re)-constructed and disputed meanings?

As a boundary object (digitally-sourced vinyl) and a self-proclaimed candidate to the title of 'the future of vinyl', HDV fulfils multiple criteria of a controversy. Its unclear ontological status is thoroughly discussed (is it analog? digital? an improvement? a step in a wrong direction?), reigniting some of the most crucial discussions in the audiophile 'community' (which is a problematic notion in its own right). The discussions such as 'analog vs. digital' or 'quality vs. format' require the participants to both perform their own audiophile identities, as well as bring into being the imagined identities of others – this is necessary in order for them to come up with the very definitions of concepts they discuss (such as an 'analog record'). Two of the identities that play a role in those narratives are only *spoken about from the outside* – these are the unwanted, disapproved of, and mocked identity types of the average record buyer and hipster. While both of these groups are imagined as non-knowledgeable and listening to vinyl for 'wrong' reasons and in 'wrong' ways, it seems that the hipster has much more of a *threat-inducing potential*. My interpretation of where this fear may come from is that the hipsters are seen as those largely responsible for the so-called vinyl 'revival' – they repopulated the vinyl enthusiast world, but on their own, unfamiliar to the old members, and often controversial terms. This is what I refer to as the *gentrification of vinyl* – the side effect of vinyl 'revival', which causes so much uneasiness among the 'old-school' audiophiles. But before I'll explain it in more detail, I want to go back for a moment to the aforementioned histories of vinyl – and especially its 'death', as it seems difficult to fully understand the format's 'revival' without the larger context of its 'mortality'.

Although the vinyl's death is most often understood as a single event (even if stretched in time) related to the introduction of digital formats, I also sensed that there exists another kind of death, constantly looming in the more or less distant future, imminently threatening the always fragile and once already betrayed format. This is why I started to conceptualize this phenomenon in a more plural way – as not only a traumatic event from the past, but also a frightening prospect for the future, as well as an ongoing process in between, all of which contribute to the concept of *vinyl death(s)* – which also turns out to be an important time stamp, helping to differentiate between various 'generations' of vinyl users.

5.4.1. Vinyl Death(s) as a Generational Stamp

Even though the time obviously plays an important role in the forum discussions (e.g. talking about the music recorded in 'golden 60s and 70s', digital step in vinyl being a norm since 70s / 80s, a lot of appreciation for the 'good old days'', rejection of 'obsolete' or 'anachronistic' technologies, etc.), the issue of commenters' age or the so-called 'generational conflict' seemed to be treated much more as a matter of fact or several discrete jokes at best. One of the forum members referred to him-/herself as an "older dude" remembering when vinyl was an only format available, some other person made fun of the future, "10-15 years from now when most of the forum would be dead, in a nursing home, or too senile to care" (George). Except for such short, identity-related or ironic examples, I noticed two instances in which the age of vinyl users, and tensions that stem from it, were discussed in more detail – the generational stamp of vinyl 'death', and the 'hipster talk'.

A very interesting discussion took place between the members of what I interpreted as two generations of vinyl users, as defined in relation to the time stamp of having witnessed the first vinyl death. According to Nico, an already mentioned 'vinyl-liking digitalist audiophile', and a representative of an older generation marked by this traumatic event:

 "(…) those of us who were around for the first "death of vinyl" are all to a man fully expecting that the second will be along any second ... because we remember WHY it died, and this time isn't different. (And HD Vinyl won't change that *at all*.)" (Nico)

Sonic, on the other hand, claimed that:

"I'm less certain, but then I'm not part of the group you're referencing, only having been into it for the last 10 to 15 years or so, so you may well be right. I wouldn't bet on it happening any time soon, but I guess we'll see (…) While "HD Vinyl" may not [change that], the tone around these discussions seems very cynical toward technology changing the manufacturing process at all. While this particular technology might not be it, I wouldn't be surprised if the current demand (which is still a point of fact, regardless of whether it may die off soon) drove some advances that change the industry" (Sonic)

In turn, Nico justified his / her doubtful approach in a following way:

"Well, there ARE a lot of snake oil salespeople out there. (…) This is an *educated* cynicism, and it's based on our evaluation of HD Vinyl's own ad copy. Because another thing us olds have seen a lot of, it's "new, improved" records. For every DMM, there's five or six Haeco-CSGs, Dynagrooves, and Duophonics. We're pretty good at spotting BS. We've had lots of practice." (Nico)

What seems to happen here is the generation-based difference of opinions / definitions (in contrast to the previous ones, based on identity). For Nico, one of the 'olds', the vinyl 'revival' is somewhat of an illusion. (S)he expects the format being back to the status of 'dead' anytime, due to the

disenchantment of witnessing its "first death" as well as multiple 'bullshit' improvements which turned out to be the *technologies – symbols of failure*. Sonic, the member of younger generation, is more optimistic – maybe not in the form of HDV, but the breakthrough still can and will come, especially in the face of current demand for vinyl, which (s)he treats as a "point of fact".

The reason why I brought up this exchange is not to make any claims if it comes to the degree of optimism among various vinyl-listening generations, it is much more to show how powerful the memory of vinyl 'death' is – in fact it is so powerful, that it might even obliterate the seemingly agreed upon fact of vinyl 'revival'. For Nico, speaking about vinyl 'death' in a singular form and a past tense is somehow naïve. It is not only a bitter memory, but also a more or less inevitable future ("the second [vinyl death] will be along any second") and potentially an ongoing present reality – driven by "snake oil salespeople" and fake-ish "new, improved" technologies such as HDV. The number of other critical and fear-induced comments makes one think that Nico is not alone – vinyl death is far from over, and the second one awaits or maybe is already here.

5.4.2. Vinyl Revival as the Gentrification of Vinyl

While the previous instance of generation talk introduced me to the notion of ongoing vinyl death(s) and how the *technologies – symbols of failure* (which HDV is often expected to be an upcoming example of) are the potential carriers of the format's 'second death', the next one concentrates much more on other people as the sources of threat. This way, I will also get back to the types of identity, which I delineated in a previous section, focusing specifically on the one which is commonly accused of being "simultaneously the cause of, and everything wrong with, the vinyl resurgence" (Ian) – the new, hipster generation of vinyl users.

Despite the downplaying comments of many digitalists, or 'old school' audiophiles such as Nico, the growing demand for vinyl is something that most of the commenters treats as a matter of fact, and an inseparable context of everything that happens to the format these days. Although they see some advantages – availability, new record stores, growing interest in physical media and sound quality – there are many aspects of vinyl revival that forum members tend to be worried about. The trend is allegedly driving the manufacturing process close to its capacity (production bottlenecks), resulting in the industry "ripe for disruption" – and thus in need of some sort of savior, 'breakthrough' innovation. However, such potential technology (if at all possible) would have to develop in the very temporarily specific context of digital times. As some people point out, almost all modern day pressings are digitally mastered, because the majority of artists does not record on tape anymore – this makes the direction of possible change not as analog as some audiophiles (and especially analog purists) would perhaps want it to be.

Another set of concerns related to the new vinyl market circles around the issues of quality and price. Record industry has always been something to complain about due to its greed, marketing strategies and problems with quality control (not to mention killing vinyl!), but some new actors seem to take it a step further, at least in terms of lowering the quality standards. Cheap Crosley turntables and overpriced mainstream records distributed by Urban Outfitters are the symbolic artifacts of hipster (and thus 'wrong') engagement with vinyl. It seems that along with the format's 'resurgence', the vinyl landscape started being repopulated not only with respectable and genuine users (maybe according to some these are only those who have never left?), but also with non-knowledgeable average record buyers and, even worse, the representatives of new and strange generation of hipsters, which is both so easy and too difficult to ridicule, as they seem to reclaim and transform the format as their own.

Gentrification of technology is the term with which I choose to explain the amount of emotions and frustration surrounding High Definition Vinyl, as well as the format's problematic, 'revived' yet shaky, situation. Just as with the urban gentrification that turns the once abandoned, decayed and unpopular neighborhoods into hot spots for newcomers, hipsters, and various businesses that are no longer related to the needs and identities of previous inhabitants – who are in turn pushed out of the area – the vinyl 'revival' is also a form of gentrification, but of a particular technology, that is the analog vinyl record. In this case, the new generation of post-vinyl-revival users reclaims the format, often using it for entirely different ('wrong') reasons, not related to the values and identities of 'old-school' users. These unfamiliar, imagined understandings of technology as a "trendy piece of art" or "a tangible object" trigger the ferocious instances of boundary / identity work and gate-keeping (us vs. 'the others'), as well as the willingness to protect the format, especially considering its history of previous (and still expected) 'death(s)'. Apart from the irritating newcomers, vinyl should also be protected from the shady innovators, greedy salespeople and marketing-inspired alterations. Companies such as Crosley or Urban Outfitters seem to be the symbols of this low-quality, both cheap on the one hand and overpriced on the other, 'trendy' turn, and HDV raises suspicions as a potential continuation of this wave – both a failure and a threat with a power to disrupt the industry in an unwanted way, staining and weakening the always fragile format.

6. Conclusion

In this last chapter, I will summarize and conceptualize the outcomes of my data analysis in relation to the relevant literature, completing the argumentation presented in this thesis. In my work I attempted to answer the following research questions:

RQ: How do the members of online audiophile communities of *r/vinyl* Reddit and *Steve Hoffman Music Forums* react to the announced introduction of High Definition Vinyl?

SQ1: How is the vinyl technology (re)-constructed in reaction to its potential new version?

SQ2: What role do the histories of vinyl play in the user narratives, how are they told and what are the functions of these stories?

SQ3: What are the types of people and identities performed / brought into action?

SQ4: What are the assessments of vinyl's situation and expectations for its future that emerge from the forum discussions?

In general, High Definition Vinyl is an ambiguous entity, highlighting all the uncertainties of modern 'vinyl landscape'. As a controversy and a boundary object intermingling the realms of 'digital' and 'analog' it also questions the purity of 'traditional' vinyl, turning it into a boundary object itself. As a highly questioned prospect for future, it triggers various modes of historical storytelling, recollections of past technologies, and dramaticised narratives of technological 'death(s)' and 'revival(s)'. The actors scripted in these narratives represent different audiophile identity types, whose practical enactments determine the users' stance not only on HDV, but also some key axes of discussion in the 'community' – as well as the assessments of the state in which the format finds itself in these days. Let me now move on to some more specific examples of these user-technology entanglements and how they relate to the literature I delineated earlier on in this thesis.

6.1. (High Definition) Vinyl as a Controversial Boundary Object

Due to the digital step being included in its manufacturing process, High Definition Vinyl questions many ideals crucial to purist engagement in audio technologies, such as the necessity of keeping the worlds of analog and digital apart. Depending on the user's stance on this particular axis of discussion, HDV acquires different meanings – an analog, digital, or digitally-sourced analog format, a good, bad, or sensless idea, etc. – thus making it a subject to interpretative flexibility (Pinch, & Bijker, 1984).

According to Star and Griesemer (1989), interpretative flexibility is one of the three characteristics of the so-called "boundary objects" – entities flexible enough to adapt to various "relevant social groups" (Pinch, & Bijker 1987), while maintaining a coherent identity across different sites of use. The other

two characteristics of boundary objects are (1) their organizational / communicative dimension – meaning that they allow certain groups of people to cooperate, even without consensus, and (2) constant moving back-and-forth between the well-structured and ill-structured elements of their arrangements, which the aforementioned actors, their groups, and related institutions try to control (Star, 2010). High Definition Vinyl seems to fulfil these requirements, although, interestingly, in a somehow reverse way. While Star (2010) does conceptualize the problematic (i.e. consensus-lacking) cooperation enabled by boundary objects as based not only on common work, but also play, which fits the hobbyists nature of forum members' discussions, the HDV is not as much a helpful tool freely chosen to be used in this collective play, as it is the (often despised) necessity which has to be addressed and 'worked upon'.

However, the work that HDV enables (or forces) the forum users to engage in, is the one of protecting their territory. By questioning some of its key tenets and definitions, this foreign entity required them to stand up for themselves and their beloved artefact. Interestingly, it seems to be exactly the HDV's similarity to the 'traditional' vinyl that made this call for action so effective – in a way, vinyl itself had to be protected from becoming a boundary object. This is why its (multiple) meanings had to be explained, paradoxically only reinforcing the HDV's destabilizing character. The results were far from satisfying – the LP that emerged from forum discussions turned out to be uncertain, endangered and fragile – even if still filled with (also disputed) value. As the task of protecting it on an ontological basis turned out to be too complex, the users moved on to other kinds of HDV-triggered labour – historicizing the technology, human and non-human directed gate-keeping and personal identity work.

6.2.   Scripting an Icon – Vinyl Histories

In a way, *SHMF* and *r/vinyl* members turned out to be much better historians of technology than many actual scholars of the topic, at least according to Edgerton's (1999) and Bijker, Hughes, & Pinch's (1987) directives concerning the social construction of technology. As a whole, their historiography of audio formats is heterogeneous, often contradictory and emotionally engaged – but, above all, concerned primarily with the technologies-in-use, moments of transition, adaptation, and change, instead of the, arguably much more popular, innovation. Quite on the contrary, it is the innovation (such as the HDV) that gets to be downplayed as something that has been done before, as well as creatively played upon in the instances of the recycling-driven *sofa innovations*. Although frequently technologically or market-wise deterministic, even these arguably problematic aspects of forum users' histories of audio play an important role in the general narrative. They dramaticise it and make it personal, thus populating it with different sorts of heroes and villains.

Technologies are similar to stories (Woolgar, 1990), also in a sense that they get to be inscribed with certain modes of use, user roles and identities, as well as possible futures (Akrich, 1992). By the means of *historical / tribal storytelling*, the forum members reclaim audio landscape, so frequently

conceptualized as a site of betrayal, unwanted change, and greed. The space they create is also elitist, based on insides and outsides, 'good' and 'wrong' modes of use – but at least it is their own arrangement, and with the right amount of (auto)-irony, its paradoxes and strictness can be overcome and 'domesticated'.

6.3. Audiophiles and Villains

As a highly subjective account (even if written from the multiple contradictory perspectives), the history of vinyl as written by the forum members, is a highly prescriptive one, delineating the wanted and unwanted modes of interacting with the technology, and judging its users accordingly. This personal vinyl landscape is inhabited by three audiophile identity types: (1) vinyl enthusiast / analog purist, (2), digitalist, and (3) imperfectionist, as well as two 'negative' identity types that only got to be *spoken about from the outside*: (1) the average record buyer, and (2) hipster. The identities as performed by specific forum members tended to be the mixtures of those 'ideal' types – heterogeneous, ambiguous, and full of inner contradictions. These practical enactments often differed from the 'ideal type' descriptions derived from the instances of *speaking about from the outside*, especially when the idealized, imagined, and often stereotypical figures (for example of the average record buyer, hipster, but also the analog purist) were constructed and turned into narrative devices, that helped in the *historical / tribal storytelling*, self-identification (for example in contrast to some disapproved of 'other'), as well as the protective gate-keeping against the outsiders and villains of audio.

Gate-keeping against the average record buyers and hipsters, coupled with the more technology-dedicated *keeping the worlds of analog and digital apart* were the two most common types of boundary work performed by forum users. The sense of threat that ambiguous technologies such as HDV, and inauthentic vinyl users such as hipsters posed to the format made me think of this fragmented, yet close-knit and engaged 'community' as being under some sort of siege. The seemingly positive turn in the history of vinyl – its 'revival' – turned out to be much more questioned, as seen from the perspective of the technology's most faithful fans. For them, the audiophile 'community', already weakened by the vinyl death(s) – both past and the expected one(s) – seems to be intensely gentrified by the disturbing 'others'. Ambiguous hybrid technologies, new users with foreign values and meanings attached to the format, "snake oil salespeople" seeking for the profit, not the format's wellbeing – these are the elements that more and more often shape the forum users' expectations for the future of vinyl record – future that turns out to be painted in much less glorious colours than the past.

6.4. Gentrification of Vinyl

Term coined by Ruth Glass (1964), gentrification is "the conversion of socially marginal and working-class areas of the central city to middle-class residential use" (Zukin, 1987, p. 129). This initial association of the phenomenon with middle-class, has currently switched to the more popular perception that links it to the so-called 'hipsters':

"Hipsters are a subculture of men and women typically in their 20's and 30's that value independent thinking, counter-culture, progressive politics, an appreciation of art and indierock, creativity, intelligence, and witty banter. The greatest concentrations of hipsters can be found living in the Williamsburg, Wicker Park, and Mission District neighborhoods of major cosmopolitan centers such as New York, Chicago, and San Francisco respectively." (*Urban Dictionary*, as quoted in Maly, & Varis, 2016, p. 639)

Following this common (and perhaps stereotypical) understanding, the gentrified areas are thus turned into 'hot spots' for hipsters, with all the emblems of 'hipster culture' (cafes, boutiques, and – obviously – record stores) transforming the urban space, into the one that is frequently unaffordable and culturally foreign to the original inhabitants. One of the most dramatic outcomes of the phenomenon is the destruction of communities – people who lived in the area for their entire lives (or even generations) are pushed out due to increasing costs of living and rent, alienation, and even dubious actions of the real estate developers.

Personally, I see some strong correlations between the case of High Definition Vinyl – as well as the vinyl 'revival' in general – and the issue of urban gentrification. After the traumatic 'death', vinyl landscape has been 'repopulated' with newcomers, whom the forum members frequently relate to as hipsters. These newcomers inscribe the technology with their own meanings and values, such as 'tangibility', 'warmth', 'aesthetics' and 'coolness', that are frequently foreign and even inacceptable for the 'old school' users. This foreignness, coupled with the feelings of protectiveness, sense of ownership and responsibility for the technology that has a history of previous (and expected) 'deaths', and that so many of these 'insiders' have contributed to 'keeping alive' results in very intense practices of gate-keeping, ridiculing the 'others' and even hostility towards them.

Hipsters are frequently accused of driving up the records prices, while contributing to such problems as production bottlenecks, decreasing quality of pressings, and the popularity of digitally-sourced vinyl. Perhaps there is also another side to this frustration, as the very phenomenon of vinyl 'revival' is frequently associated with hipster's interest in the format. Could it be the jealousy of their success at bringing vinyl back with little or no effort – without even witnessing the trauma of its 'death' nor caring enough? How should one feel about the trend that is arguably positive for the cherished technology – while guiding it into unknown or unwanted directions?

However, I am also aware of some problems related to this theory. The notion of hipster is a very unclear one, rooted in stereotypes and 'common sense' understandings. Such are also the notions of vinyl 'death' and 'revival' – as I tried to show in this thesis, it is very difficult to establish precisely what died when and whether it did die in the first place. Finally, and perhaps most importantly, the original gentrification is a story of personal and very 'real' tragedies – displacements, bankruptcies, friendships lost, dying communities, abandoned homes – it is very difficult to compare such events to the relatively harmless experience of witnessing your favourite technology change. My intention is by no means to diminish the seriousness of this issue – the theory I have constructed in this thesis is based on a subjective and somehow 'symbolic' connotation. The term *gentrification of technology* is much more of a concise metaphor capturing the impressions I had while analysing the forum discussions, and hopefully making them more accessible to the reader, rather than it is a full-fledged, 1:1 translation of the phenomenon's dramatic meaning into the realm of audio technologies.

6.5.   Where is the Nostalgia?

Is nostalgia really a useful term for conceptualizing such phenomena as vinyl 'revival', record collecting, or my grounded theory of the gentrification of technology? Is it possible to assess whether someone manifests and acts according to certain emotions or not? How is nostalgia – the meta interest behind this study – (non)present in the narratives presented and performed by the S*HMF* and *r/vinyl* members? The answer is perhaps disappointing – it's complicated and depends on one's subjective interpretation.

Many commenters actively distanced themselves from the nostalgic feelings towards LP records and analog technologies in general. They often associated them with the typically 'hipster' engagement with vinyl, and downplayed it as one of the 'wrong' reasons for using the technology. Most of the few audiophile users who admitted to some degree of nostalgia ('wanting to be taken back in time', 'appreciating the way things used to be') were also the ones whom I associated with the quite specific position of 'imperfectionism'. This might position nostalgia as a feeling somehow repressed from the general, 'official' and 'professional', audiophile discourse, making it a thing of at best overly romantic, esoteric and thus not taken seriously 'imperfectionist' users, or – at the worst – the openly discredited, foreign and even threatening 'others', such as the hipsters. But what if nostalgia is there, even in case of the most 'rational', seemingly emotionally detached users? Let me now move on to some speculations.

Svetlana Boym (2001) differentiates between the two types of nostalgia, the "restorative" and "reflective" one. While the restorative nostalgia's goal is to directly recreate the 'lost home' of the past, treating it not only as a possible, but also a 'right' thing to do, the reflective nostalgia is based mostly on fantasies and imaginaries concerning some idealized pasts, as well as the attempts to recreate them – aesthetically, symbolically, or via some non-defined 'ambience' – but probably not in

a way that a restorative nostalgic would consider 'accurate'. One could argue that the HDV conflict – as well as the gentrification of technology one – is an instance of restorative and reflective nostalgias clashing over the meaning of their object of longing. Perhaps the new, post-vinyl-'revival' wave of format's users (such as the infamous hipsters) represents the reflective strand of record-engagement, with such non-traditional takes on technology as digitally-sourced vinyl, attachment to the object's tangibility and aesthetic value (a.k.a. 'how it looks on the shelf') – while the restorative, 'old-school' users are, just as they have been since the introduction of the CD, mostly preoccupied with keeping the technology 'alive', 'pure', and 'intact'. Although it might seem that these two groups' goals should not necessarily exclude each other, there are obviously some tensions that arise in the forum discussions – if not the technological / practical (senselessness and threat of digitally-sourced vinyl / HDV, bottlenecks, driving up the prices, issues with quality control), then at least the symbolic ones (who 'owns' vinyl, who 'saved' it, who uses it 'correctly'). Another interesting take from Boym's typology of nostalgia is that the restorative nostalgics do not necessarily consider themselves to be nostalgic, as their quest lies in restoring the 'truth' lost in the past, not these pasts themselves – which may (but also may not) explain many forum members' rejection of this sort of emotions.

The reason why I cling on to nostalgia so much is that I strongly disagree with many scholars' tendency to downplay its role in the analog technologies, and especially vinyl's 'resurgence'. Not only a powerful and fascinating emotion, it is also one of the most popular tropes in modern (pop)-culture of reissues and (self)-referencing (Reynolds, 2011). Fashion from the 90s, movies and series set in the 80s, music videos shot as imitations of the home recordings from the 70s – we all seem to be nostalgic about some non-specific 'past' we've never even experienced. I definitely 'sense' nostalgia in the material I analyzed for this thesis – but that's just it, the sensation and more of a 'hunch'. The timeframe of my project, as well as the methodology, despite its perfect fit to my actual research questions, did not allow me to come up with anything more than some cautious guesses. However, I'm quite positive that technostalgia (and especially its potential repression, or the instances among those 'too young to remember') remains an important subject for possible future research, rather than an 'obviousness' to refute.

6.6.   High Definition Vinyl – an STS Case Study

This thesis is my attempt at coming up with a new, generalizable case study contributing to such STS-related theoretical frameworks as technology studies, user studies, and sociology of expectations. Built around a central artefact of interest, the High Definition Vinyl, it uses this object as a pretext for taking a closer look at some deep-level socio-technical arrangements concerning the user identities, values, and meanings attached to daily life technologies. Whether my grounded theory of gentrification of technology, and the following speculations concerning the role of nostalgia in vinyl 'revival' discourses are convincing, remains to the decision of the reader – but I do hope that my study has at

least offered some methodologically valuable insights about working in an uncertain, academically ambiguous research environment.

As I have already mentioned, internet is the space of in-betweens. Both visual and textual, official and personal, dissolving boundaries, while establishing new ones, with an uncertain ownership and privacy status, it seems to confuse many researchers who struggle coming up with a consistent definition of both online space and the methods that should be applied to it. I argue that this ambiguity should be embraced much more often, especially in a field as embedded in the constructivist, postmodern perspectives on human-nonhuman interaction as STS. The ethnography of internet should not – as well as doesn't have to – be a direct translation of classic anthropological approaches into the realm of information and communication technologies. Maintaining an ethnographic sensibility, attention to one's own hunches, keeping your data ordered and easy to access, and responsible, yet 'rational' and flexible approach to research ethics are some of the key elements of successful netnographic research, according to my experience.

Finally, I want to extend Pinch and Bijsterveld's (2004) call for more STS research dedicated to the so-called Sound Studies. According to Susan Leigh Star (1999), we should concentrate more on studying "boring things" (p. 377) – I would paraphrase this suggestion by adding the 'unserious things' as well. STS doesn't only have to be about huge techno-scientific developments, life-saving and world-changing technologies and front page controversies. Scholars such as David Edgerton (1999) have for a long time advocated for more down-to-earth approaches to science-technology-society interactions and their histories. Focusing on 'small' things such as audio technologies, their seemingly insignificant improvements, or minor online communities for whom these issues are of great importance, may result in some fascinating, in-depth accounts and new theories enriching some of the most vital STS frameworks. Hopefully, this thesis has provided its reader with one of such local, intimate accounts of a snippet of user-technology interrelations.

References

2014 Nielsen Music Report. (2015, July 1). Retrieved from: https://www.nielsen.com/us/en/press-releases/2015/2014-nielsen-music-report

About Us | Record Store Day. (n.d.). Retrieved from: http://recordstoreday.com/CustomPage/614

Akrich, M. (1992). The De-Scription of Technical Objects. In Wiebe E. Bijker; John Law (Eds.), *Shaping technology / building society : studies in sociotechnical change.* Cambridge, Mass. [u.a.]: MIT Press.

Audiophile noun — Definition, pictures, pronunciation and usage notes | Oxford Advanced Learner's Dictionary at OxfordLearnersDictionaries.com. (n.d.). Retrieved from https://www.oxfordlearnersdictionaries.com/definition/english/audiophile?q=audiophile

Bargh, J. A., & McKenna, K. Y. A. (2004). The Internet and Social Life. *Annual Review of Psychology*, *55*(1), 573–590. https://doi.org/10.1146/annurev.psych.55.090902.141922

Bartmanski, D., & Woodward, I. (2015). The vinyl: The analogue medium in the age of digital reproduction. *Journal of Consumer Culture*, *15*(1), 3–27. https://doi.org/10.1177/1469540513488403

Bartmanski, D., & Woodward, I. (2018). Vinyl record: A cultural icon. *Consumption Markets & Culture*, *21*(2), 171–177. https://doi.org/10.1080/10253866.2016.1212709

Bennett, A., & Rogers, I. (2016). Popular Music and Materiality: Memorabilia and Memory Traces. *Popular Music and Society*, *39*(1), 28–42. https://doi.org/10.1080/03007766.2015.1061339

Bevan, T., & Simmons, R. (Producers), & Frears, S. (Director). (2000). *High Fidelity.* [Motion Picture]. United States: Buena Vista Pictures.

Bigelow, J. (1829). *Elements of Technology*, 2nd ed. Boston: Hilliard, Gray, Little & Wilkins.

Bijker, W. E., Hughes, T. P., & Pinch, T. (Eds.). (1987). *The social construction of technological systems: New directions in the sociology and history of technology*. Cambridge, Mass: MIT Press.

Bijsterveld, K., & Van Dijck, J. (2009). Sound souvenirs: Audio technologies, memory and cultural practices (Transformations in art and culture). Amsterdam: Amsterdam University Press.

Bijsterveld, K., & Peters, P. F. (2010). Composing Claims on Musical Instrument Development: A Science and Technology Studies' Contribution. *Interdisciplinary Science Reviews*, *35*(2), 106–121. https://doi.org/10.1179/030801810X12723585301039

Bolin, G. (2016). Passion and nostalgia in generational media experiences. *European Journal of Cultural Studies*, *19*(3), 250–264.

Borup, M., Brown, N., Konrad, K., & Van Lente, H. (2006). The sociology of expectations in science and technology. *Technology Analysis & Strategic Management*, *18*(3–4), 285–298.

boyd, d. (2007). Why Youth (Heart) Social Network Sites: The Role of Networked Publics in Teenage Social Life. *MacArthur Foundation Series on Digital Learning – Youth, Identity, and Digital Media Volume* (Ed. David Buckingham). Cambridge, MA: MIT Press.

Boym, S. (2001). *The future of nostalgia*. New York: Basic Books.

Breckenridge, R. S., & Tsitsos, W. (2017). Revitalizing Vinyl. *Contexts*, *16*(4), 72–74. https://doi.org/10.1177/1536504217742398

Brown, N., & Michael, M. (2003). A Sociology of Expectations: Retrospecting Prospects and Prospecting Retrospects. *Technology Analysis & Strategic Management*, *15*(1), 3–18.

Brown, N., Rappert, B., & Webster, A. (2000). Introducing contested futures. In *Contested futures: A sociology of prospective techno-science*, N. Brown, B. Rappert, & A. Webster, (Eds.), pp. 3-20. Aldershot: Ashgate.

Carroll, L. S. L. (2017). A Comprehensive Definition of Technology from an Ethological Perspective. *Social Sciences*, *6*(4), 126. https://doi.org/10.3390/socsci6040126

Charmaz, K. (2006). An Invitation to Grounded Theory. In *Constructing Grounded Theory: A Practical Guide Through Qualitative Analysis* (pp. 1-12). London/New Delhi/Thousand Oaks: Sage.

Chivers Yochim, E., & Biddinger, M. (2008). `It kind of gives you that vintage feel': Vinyl records and the trope of death. *Media, Culture & Society*, *30*(2), 183–195. https://doi.org/10.1177/0163443707086860

Costello, L., McDermott, M.-L., & Wallace, R. (2017). Netnography: Range of Practices, Misperceptions, and Missed Opportunities. *International Journal of Qualitative Methods*,

16(1), 160940691770064. https://doi.org/10.1177/1609406917700647

Crutchfield, W. (1987, June 7). The Invasion of the Compact Disks: A Battle Plan. *The New York Times*. Retrieved from: https://www.nytimes.com/1987/06/07/arts/the-invasion-of-the-compact-disks-a-battle-plan.html

Davis, F. (1979). *Yearning for yesterday: A sociology of nostalgia.* New York, NY: Free Press.

De Grazia, V. (1996). "Introduction," in V. de Grazia with E. Furlough (Eds.) *The Sex of Things: Gender and Consumption in Historical Perspective*. Berkeley, Los Angeles, and London: University of California Press. pp. 1–10.

Denora, T. (1999). Music as a technology of the self. *Poetics, 27*(1), 31-56.

Deuze, M. (2006). Participation, Remediation, Bricolage: Considering Principal Components of a Digital Culture. *The Information Society, 22*(2), 63-75.

Devine, K. (2013). Imperfect sound forever: Loudness wars, listening formations and the history of sound reproduction. *Popular Music*, *32*(2), 159–176. http://dx-doi-org.uaccess.univie.ac.at/10.1017/S0261143013000032

Downes, K. (2010). „Perfect Sound Forever": Innovation, Aesthetics, and the Re-making of Compact Disc Playback. *Technology and Culture*, *51*(2), 305–331. https://doi.org/10.1353/tech.0.0442

Du Gay, P., S. Hall, L. Janes, H. Mackay, & K. Negus (1997) *Doing Cultural Studies. The Story of the Sony Walkman.* Thousand Oaks, CA, London, and New Delhi: Sage.

Edgerton, D. (1999). From innovation to use: Ten eclectic theses on the historiography of technology. *History and Technology*, *16*(2), 111–136. https://doi.org/10.1080/07341519908581961

Edgerton, D. (2007). The stuff of technofantasy. *New Scientist*, *193*(2588), 46–47. https://doi.org/10.1016/S0262-4079(07)60232-2

Glaser, B. G., & Strauss, A. L. (1968). *The Discovery of grounded theory : Strategies for qualitative research.* (1. publ. in Great Britain. ed., Observations). London: Weidenfeld & Nicolson.

Glass, R. (1964). *London: aspects of change*. London: MacGibbon and Kee.

Hales, S. D. (2017). Audiophile aesthetics. *American Philosophical Quarterly, 54*(2), 195-208.

Hamilton, A. (2003). The Art of Recording and the Aesthetics of Perfection. *The British Journal of Aesthetics*, *43*(4), 345–362. https://doi.org/10.1093/bjaesthetics/43.4.345

Harper, A. (2019). To Have and to Hold: Touch and the Vinyl Resurgence. *Tempo*, *73*(287), 52–61. https://doi.org/10.1017/S0040298218000645

Harvey, E. (2017). Siding with vinyl: Record Store Day and the branding of independent music. *International Journal of Cultural Studies*, *20*(6), 585–602. https://doi.org/10.1177/1367877915582105

Hayes, D. (2006). "Take Those Old Records off the Shelf": Youth and Music Consumption in the Postmodern Age. *Popular Music & Society*, *29*(1), 51–68. https://doi.org/10.1080/03007760500167370

HD Vinyl (n.d.). HD Vinyl: The Future of Vinyl Records. Retrieved from: https://hdvinyl.org/

HD Vinyl (2019 August 30). Retrieved from https://www.facebook.com/HDVinylRebeat/photos/a.2272133732812269/3533712903321006/?type=3&theater

He, W., & Yan, G. (2015). Mining Blogs And Forums To Understand the Use of Social Media in Customer Co-creation. *The Computer Journal*, *58*(9), 1909–1920. https://doi.org/10.1093/comjnl/bxu038

hi-fi_2 noun—Definition, pictures, pronunciation and usage notes | Oxford Advanced Learner's Dictionary at OxfordLearnersDictionaries.com. (n.d.). Retrieved from https://www.oxfordlearnersdictionaries.com/definition/english/hi-fi_2

Hine, C. (2015). *Ethnography for the Internet: Embedded, Embodied and Everyday*. Huntingdon, GBR: Bloomsbury Publishing, 2015

Hogan, M. (2018 April 11). "High Definition Vinyl" Is Happening, Possibly as Early as Next Year. *Pitchfork.* Retrieved from: https://pitchfork.com/news/high-definition-vinyl-is-happening-possibly-as-early-as-next-year/

Holland, B. (1983, March 31). Digital Compact Disks: Replacement for Lps? *The New York Times*. Retrieved from: https://www.nytimes.com/1983/03/31/arts/digital-compact-disks-replacement-for-lps.html

Hornby, N. (1995). *High Fidelity.* (London)

Ivory, C. (2013). The role of the imagined user in planning and design narratives. *Planning Theory*,

12(4), 425–441.

James, B., & Tribune, I. H. (1991, November 8). Death of LPs May Be Greatly Exaggerated. *The New York Times*. Retrieved from: https://www.nytimes.com/1991/11/08/style/IHT-death-of-lps-may-be-greatly-exaggerated.html

Jensen, E., & Laurie, C. (2016). *Doing real research : A practical guide to social research*. London: Sage.

Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of Social Media. *Business Horizons*, *53*(1), 59–68. https://doi.org/10.1016/j.bushor.2009.09.003

Kjus, Y. (2016). Reclaiming the music: The power of local and physical music distribution in the age of global online services. *New Media & Society*, *18*(9), 2116–2132. https://doi.org/10.1177/1461444815580414

Konrad, K. (2006). The social dynamics of expectations: The interaction of collective and actor-specific expectations on electronic commerce and interactive television. *Technology Analysis & Strategic Management*, *18*(3–4), 429–444.

Kozinets, R. V. (1998). On Netnography: Initial Reflections on Consumer Research Investigations of Cyberculture. in *Advances in Consumer Research,25*, 366-371.

Kozinets, R. V. (2010). *Netnography: ethnographic research in the age of the internet* (1st ed). Thousand Oaks, CA: Sage Publications Ltd.

Langer, R., & Beckman, S. (2005). Sensitive research topics: Netnography revisited. *Qualitative Market Research, 8*, 189–203.

Latour, B. (1987). *Science in Action: How to Follow Scientists and Engineers Through Society*. Harvard University Press, Cambridge, MA.

Law, J. (2017). STS as Method. In U. Felt, R. Fouche, C. Miller, L. Smith-Doerr (Eds.), *The Handbook of Science and Technology Studies* (4th edition) (pp. 31-57). Cambridge: The MIT Press.

Lee, H. (2005). Implosion, virtuality, and interaction in an internet discussion group. *Information, Communication & Society*, *8*(1), 47–63. https://doi.org/10.1080/13691180500066862

Magaudda, P. (2011). When materiality 'bites back': Digital music consumption practices in the age

of dematerialization. *Journal of Consumer Culture*, *11*(1), 15–36. https://doi.org/10.1177/1469540510390499

Maly, I., & Varis, P. (2016). The 21st–century hipster: On micro-populations in times of superdiversity. *European Journal of Cultural Studies 19*(6), pp. 637-653.

Marks, L. (2002). *Touch : Sensuous theory and multisensory media*. Minneapolis, Minn. [u.a.]: Univ. of Minnesota Press.

Miller, G. (1992, July 18). Short Journey Into Obsolescence for LP's. *The New York Times*. Retrieved from: https://www.nytimes.com/1992/07/18/news/short-journey-into-obsolescence-for-lp-s.html

Moran, K. (2015, September 14). A Vinyl LP Frenzy. *The New York Times*. Retrieved from: https://www.nytimes.com/slideshow/2015/09/15/business/tk-tk.html

Niemeyer, K. (2014). Media and nostalgia : Yearning for the past, present and future (1. publ.. ed., Palgrave Macmillan memory studies). New York, NY: Palgrave Macmillan.

Nokelainen, T., & Dedehayir, O. (2015). Technological adoption and use after mass market displacement: The case of the LP record. *Technovation*, *36–37*, 65–76. https://doi.org/10.1016/j.technovation.2014.10.006

O'Reilly, T. (2005). *What is web 2.0?* Retrieved from: https://www.oreilly.com/pub/a/web2/archive/what-is-web-20.html?page=5

Oudshoorn, N. (2003). *The male pill: a biography of a technology in the making*, Durham: Duke University Press.

Oudshoorn, N., & Pinch, T. (Eds.). (2003). *How users matter: The co-construction of users and technologies*. Cambridge, Mass: MIT Press.

Oudshoorn, N., & Pinch, T. (2008) User-Technology Relationships: Some Recent Developments, In E.J. Hackett, O. Amsterdamska, M. Lynch and J. Wajcman (eds.) *The Handbook of Science and Technology Studies (3rd ed).* The MIT Press, London, England. pp. 541-565.

Ozzi, D. (2018, April 19). Every Nerd You Meet on Record Store Day. Retrieved from: https://www.vice.com/en_ca/article/bjp3bd/every-nerd-you-meet-on-record-store-day

Pader, E. (2006). Seeing with an Ethnographic Sensibility. In D. Yanow, & P. Schwartz-Shea (Eds.),

Interpretation and Method: Empirical Research Methods and the Interpretive Turn (pp. 161-175). Armonk, NY: ME Sharpe.

Palm, M. (2017). Analog backlog: Pressing records during the vinyl revival. *Journal of Popular Music Studies*, *29*(4), e12247. https://doi.org/10.1111/jpms.12247

Pariser, E. (2011). *The filter bubble: What the Internet is hiding from you*. New York: Penguin Press.

Perlman, M. (2004). Golden Ears and Meter Readers: The Contest for Epistemic Authority in Audiophilia. *Social Studies of Science*, *34*(5), 783–807. https://doi.org/10.1177/0306312704047613

Pinch, T. J., & Bijker, W. E. (1984). The Social Construction of Facts and Artefacts: Or How the Sociology of Science and the Sociology of Technology Might Benefit Each Other. *Social Studies of Science*, *14*(3), 399–441.

Pinch, T. J., & Bijker, W. E. (1987). The social construction of facts and artifacts: Or how the sociology of science and the sociology of technology might benefit each other. In W. E. Bijker, T. P. Hughes, & T. Pinch (Eds.) *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology* (pp. 11-44). Cambridge, Mass: The MIT Press.

Pinch, T., & Bijsterveld, K. (2004). Sound Studies: New Technologies and Music. *Social Studies of Science*, *34*(5), 635–648.

Pinch T. & Reinecke D. (2009) Technostalgia: How old gear lives on in new music. In: Bijsterveld K. and Van Dijck J. (eds) *Sound Souvenirs: Audio Technologies, Memory and Cultural Practices*. Amsterdam: Amsterdam University Press, pp.152–166.

Pinch, T., & Trocco, F. (2002). *Analog days: The invention and impact of the Moog synthesizer*. Cambridge, MA: Harvard University Press.

Plasketes, G. (1992). Romancing the Record: The Vinyl De-Evolution and Subcultural Evolution. *Journal of Popular Culture; Oxford*, *26*(1), 109.

Pollack, A. (1990, April 1). Recording Enters a New Era, And You Can't Find It on LP. *The New York Times*. Retrieved from: https://www.nytimes.com/1990/04/01/us/recording-enters-a-new-era-and-you-can-t-find-it-on-lp.html

Henshall, M. (2018, September 18). Q&A: HD Vinyl – The Future of Record Manufacturing? *Sound Matters*. Retrieved from: https://www.yoursoundmatters.com/hd-vinyl-future-record-manufacturing/

Rawson, E. (2006). Perfect Listening: Audiophilia, Ambiguity, and the Reduction of the Arbitrary. *The Journal of American Culture; Malden*, *29*(2), 202–212.

Reed, L. (1967). Heroin [Recorded by The Velvet Underground]. On *The Velvet Underground & Nico*. New York: Verve.

Reynolds, S. (2011). *Retromania : Pop culture's addiction to its own past*. London: Faber & Faber.

Sade-Beck, L. (2004). Internet Ethnography: Online and Offline. *International Journal of Qualitative Methods*, *3*(2), 45–51.

Saldaña, J. (2011). A survey of qualitative data analytic methods. In *Fundamentals of qualitative research* (pp. 89-138). Oxford: Oxford University Press.

Salzmann-Erikson, M., & Eriksson, H. (2012). LiLEDDA: A six-step forum-based netnographic research method for nursing science. *Aporia, 4*, 6–18.

Sarpong, D., Dong, S., & Appiah, G. (2016). 'Vinyl never say die': The re-incarnation, adoption and diffusion of retro-technologies. *Technological Forecasting and Social Change*, *103*, 109–118. https://doi.org/10.1016/j.techfore.2015.10.012

Schrey, D. (2014). Analogue Nostalgia and the Aesthetics of Digital Remediation. In K. Niemeyer (Ed.), *Media and Nostalgia*. Palgrave Macmillan.

Shuker, R. (2004). Beyond the 'high fidelity' stereotype: Defining the (contemporary) record collector. *Popular Music*, *23*(3), 311–330. https://doi.org/10.1017/S0261143004000224

Silverstone, R., & E. Hirsch (Eds.) (1992). *Consuming Technologies: Media and Information in Domestic Spaces*. London: Routledge.

Sisario, B. (2014, April 18). Watch Out, iTunes. Vinyl Still Lives. *The New York Times*. Retrieved from: https://www.nytimes.com/2014/04/19/arts/music/record-store-day-underscores-a-small-renaissance.html

Star, S. L. (1999). The ethnography of infrastructure. *American behavioral scientist, 43*(3), 377-391.

Star, S. L. (2010). This is Not a Boundary Object: Reflections on the Origin of a Concept. *Science,*

Technology, & Human Values, *35*(5), 601–617.

Star, S. L., & Griesemer, J. R. (1989). Institutional Ecology, `Translations' and Boundary Objects: Amateurs and Professionals in Berkeley's Museum of Vertebrate Zoology, 1907-39. *Social Studies of Science*, *19*(3), 387–420. https://doi.org/10.1177/030631289019003001

Sterne, J. (2003). *The audible past: Cultural origins of sound reproduction.* Durham, NC [u.a.]: Duke Univ. Press.

Sterne, J. (2006). The death and life of digital audio. *Interdisciplinary Science Reviews*, *31*(4), 338–348. https://doi.org/10.1179/030801806X143277

Strauss, N. (1994, December 8). Music Lovers Are Voting for Vinyl. *The New York Times*. Retrieved from: https://www.nytimes.com/1994/12/08/arts/music-lovers-are-voting-for-vinyl.html

Stuhl, A. K. (2014). Reactions to Analog Fetishism in Sound-Recording Cultures. *The Velvet Light Trap - A Critical Journal of Film and Television; Madison, Wis, Etc.*, (74), 42–53.

Styvén, M. E. (2010). The need to touch: Exploring the link between music involvement and tangibility preference. *Journal of Business Research*, *63*(9), 1088–1094. https://doi.org/10.1016/j.jbusres.2008.11.010

The New Oxford Dictionary of English. (1998). Oxford, UK: Oxford University Press.

Thorén, C., Edenius, M., Lundström, J. E., & Kitzmann, A. (2019). The hipster's dilemma: What is analogue or digital in the post-digital society? *Convergence*, *25*(2), 324–339. https://doi.org/10.1177/1354856517713139

Toffler, A. (1980) *The Third Wave*. New York: Morrow.

Tunçalp, D., & L. Lê, P. (2014). (Re)Locating boundaries: a systematic review of online ethnography. *Journal of Organizational Ethnography*, *3*(1), 59–79.

Urban Dictionary: Hipster. (n.d.). Retrieved from Urban Dictionary website: https://www.urbandictionary.com/define.php?term=hipster

van der Heijden, T. (2015). Technostalgia of the present: From technologies of memory to a memory of technologies. *NECSUS. European Journal of Media Studies*, *4*(2), 103–121.

Van Lente, H. (2006). Expected behavior. In P.-P. Verbeek, & A. F. L. Slob, (Eds.). *User behaviour*

and technology development: Shaping sustainable relations between consumers and technologies (pp. 211–219). Dordrecht: Springer.

Van Lente, H. (2012). Navigating foresight in a sea of expectations: Lessons from the sociology of expectations. *Technology Analysis & Strategic Management*, *24*(8), 769–782. https://doi.org/10.1080/09537325.2012.715478

Volti, R. (2009). *Society and Technological Change*, 7th ed. New York: Worth Publishers.

Welcome! (2019, September 17). Retrieved from: https://www.stevehoffman.tv/

Williams, A. (2008, August 29). Another Spin for Vinyl Records. *The New York Times*. Retrieved from: https://www.nytimes.com/2008/08/31/fashion/31vinyl.html

Woolgar, S. (1990). Configuring the user: the case of usability trials. *The Sociological Review*, *38*(S1), 58–99.

Zukin, S. (1987). Gentrification: Culture and Capital in the Urban Core. *Annual Review of Sociology, 13*, pp. 129-147

Abstract (English)

In 2016, an Austrian company Rebeat Innovation announced the introduction of High Definition Vinyl (HDV) – new method of manufacturing vinyl records, which results in disks pressed with more precision, higher quality of sound, and longer playing time than the 'traditional' LPs. Although still not available in the market, HDV has already triggered dozens of discussions on the online, audio-dedicated forums. How do the members of these forums react to this retro-innovation of a seemingly obsolete, yet lately 'revived' technology? In this thesis I perform the netnographic study of HDV-related discussions from two online audiophile communities – *Steve Hoffman Music Forums* (*SHMF*) and Reddit's subreddit *r/vinyl*. Using the insights and sensitizing concepts from such Science-Technology-Society (STS) theoretical frameworks as technology studies, user studies, and sociology of expectations, I delineate an account of a 'community' under (re)-construction. How is the HDV situated in a broader historiography of vinyl record? How is the meaning of a format reconstructed in the face of potential innovation, as well as its thriving 'revival'? What are the needs, values, fears, and anticipations concerning these audio technologies and how do they reflect the user identities as performed and imagined in the forum discussions? I will answer these questions by showing how vinyl is a technology subject to 'gentrification' – repopulated, reclaimed, and redefined by the new 'types' of users, whose values and identities clash with those of the 'old-school', pre-vinyl-'revival' record collectors.

Abstract (German)

Im Jahr 2016 kündigte die österreichische Firma Rebeat Innovation die Einführung von High Definition Vinyl (HDV) an – ein neues Herstellungsverfahren, in dem Vinylschallplatten mit höherer Präzision gepresst werden, und welches LPs von besserer Klangqualität und mit längerer Spieldauer erzeugen soll. Obwohl die Technologie bisher nicht auf dem Markt erhältlich ist, hat HDV bereits zahlreiche Diskussionen in verschiedenen Internetforen mit Audio-Schwerpunkt ausgelöst. Wie reagieren die Mitglieder dieser Foren auf die Retro-Innovation einer scheinbar obsoleten, dennoch kürzlich ‚wiederbelebten' Technologie? Meine Arbeit ist eine netnografische Studie der Diskussionen über HDV, die in zwei audiophilen Online-Community Foren – dem *Steve Hoffman Music Forums* (*SHMF*) und dem Subreddit *r/vinyl* auf Reddit – geführt wurden. Aufbauend auf Theorien, Konzepten und Erkenntnissen aus Bereichen von Science-Technology-Society (STS) wie Technikforschung, User Studien und der Soziologie der Erwartungen, schildere ich eine ‚Gemeinschaft' in einer Phase der (Re)Konstruktion. Wie wird HDV in der breiteren Historiographie der Vinylschallplatte positioniert? Wie wird die Bedeutung des Formats, angesichts der potenziellen Innovation aber auch angesichts des erfolgreichen Comebacks, rekonstruiert? Was sind die Bedürfnisse, Werte, Befürchtungen und Erwartungen im Bezug auf diese Audio-Technologien und wie reflektieren sie die User-Identitäten, wie sie in Forumsdiskussionen performt und imaginiert werden? Ich werde diese Fragen beantworten, indem ich zeige, dass die Vinylschallplatte eine Technologie ist, die einer Gentrifizierung unterliegt – sie wird neu besetzt, zurückerobert und redefiniert von neuen User-Typen, deren Werte und Identitäten im Konflikt mit jenen der 'old-school', pre-Vinyl-Comeback Schallplatten-Sammelnden stehen.