

Electronic Thesis and Dissertation Repository

---

5-11-2020 1:00 PM

## "Dance like nobody's paying": Spotify and Surveillance as the Soundtrack of Our Lives

T. Andrew Braun, *The University of Western Ontario*

Supervisor: Stahl, Matt, *The University of Western Ontario*

A thesis submitted in partial fulfillment of the requirements for the Master of Arts degree in Popular Music and Culture

© T. Andrew Braun 2020

Follow this and additional works at: <https://ir.lib.uwo.ca/etd>



Part of the [Communication Technology and New Media Commons](#), and the [Other Music Commons](#)

---

### Recommended Citation

Braun, T. Andrew, "'Dance like nobody's paying": Spotify and Surveillance as the Soundtrack of Our Lives" (2020). *Electronic Thesis and Dissertation Repository*. 7001.

<https://ir.lib.uwo.ca/etd/7001>

This Dissertation/Thesis is brought to you for free and open access by Scholarship@Western. It has been accepted for inclusion in Electronic Thesis and Dissertation Repository by an authorized administrator of Scholarship@Western. For more information, please contact [wlsadmin@uwo.ca](mailto:wlsadmin@uwo.ca).

## Abstract

This thesis examines Spotify, the world's most popular music streaming service, and its usage of music as a data extraction tool. I position Spotify as a surveillance capitalist firm that puts music at the centre of an enclosed environment designed to condition users' affective responses and behaviors and reorient production of music. I analyze three features of the platform: a campaign in which Spotify invites users and producers to share the data it collects about them, the arrangement of the platform's architecture into mood-based playlists, and its penchant for music that is "Chill." I show how each serves the surveillance machine's goals of collecting and contextualizing data from music and music consumption that it claims can quantify, predict, and condition behaviour.

Using a framework of social and economic theory alongside data and musical analysis, I position Spotify and its exploitation of music within broader implications of life under surveillance capitalism.

## Keywords

Spotify, music streaming, surveillance capitalism, data gathering, individual/dividual, playlists, mood-based music, chill music.

## Summary for Lay Audience

Spotify is the world's most popular music streaming platform, providing more than 270 million users with access to over 50 million songs. While Spotify positions itself as a neutral distributor of music, its actions are anything but neutral. In this thesis I look at the ways in which Spotify uses music to extract data from its users with the goal of predicting and eventually influencing their behaviour while I examine the ways in which it uses data to reorient the production of popular music.

Because of music's deep connection to our sense of self and to our emotions, it acts as an effective tool for gathering data. As music consumption becomes omnipresent and ubiquitous due to portable devices and network connectivity, Spotify offers "music for every mood" and seeks to embed itself within its users' lives to extract data from every moment.

Meanwhile, despite claims of democratizing and saving the music industry, Spotify's market share and power subjects producers of music to a system of distribution where they must adapt to Spotify's logic in order to find an audience. I show how Spotify diverts listeners to its branded playlists, where it controls what songs are included, and leverages its power within the industry in order to compel music makers to produce songs that operate efficiently within its organizational system.

I look at three characteristics of Spotify: "Wrapped," a promotion in which it invites users and music producers to share their yearly Spotify statistics, creating a self-referential, closed system around them; mood-based sorting, in which Spotify creates functional and situational categories designed to provide emotion-based context for its data; and "Chill" playlists, a mood within the closed system that offers a representation of escape from making choices or making meaning.

I use a broad range of social and economic theory in collaboration with music and data analysis to illustrate how Spotify's usage has shifted the consumption and production of popular music. I investigate and question what these changes in music can tell us about a life where we increasingly see ourselves, experience emotions, and even seek escape on the terms of those who are monitoring us.

## Acknowledgments

Thank you to my supervisor, Dr. Matt Stahl for knowing when to let me wander around in this maze and knowing how and when to guide me through.

Thank you to Dr. Alison Hearne for her insight as my second reader and to the other FIMS faculty who have helped along the way including Dr. Norma Coates, Dr. Keir Keightley, and Dr. Tom Streeter.

Infinite thanks to my mom and dad. And to Laura for enduring this time in “the in-between.”



# Table of Contents

Abstract.....	ii
Summary for Lay Audience.....	iii
Acknowledgments.....	iv
Table of Contents.....	v
<b>1 Introduction: “On demand” .....</b>	<b>1</b>
1.1 Introduction and main research questions.....	1
1.2 Analytical Framework .....	4
1.2.1 The Spotify machine.....	4
1.2.2 Music and the code of surveillance capitalism .....	7
1.2.3 Rendering data from music.....	9
1.3 Contextualizing Spotify .....	12
1.3.1 Market share and product differentiation.....	12
1.3.2 Free to be a target.....	14
1.3.3 Savior or new “gatekeeper”? .....	16
1.3.4 The branded playlist is king.....	20
1.4 Literature Review.....	23
1.4.1 Key texts .....	23
1.4.2 Chapter specific literature .....	30
1.4.3 The algorithm.....	34
1.5 Methodology.....	35
1.5.1 Data collection .....	35
1.5.2 Case study selection.....	38
1.5.3 Musical analysis.....	39
<b>2 Believe: “Be free” .....</b>	<b>40</b>
2.1 Wrapping Belief.....	44
2.1.1 Ragle Gumm is wrapped.....	44
2.1.2 Producer case study #1: Zola Jesus – recontextualizing “Wrapped” .....	47
2.2 Using Belief .....	55
2.2.1 Habituation.....	55
2.2.2 User wrap .....	60
2.3 Producing Belief .....	63

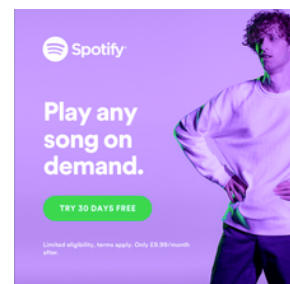
2.3.1	Internalizing “Wrapped” .....	63
2.3.2	A human touch: unpacking the promise of data .....	65
2.3.3	Producer case study #2: Neanderthal – accepting the terms .....	68
2.3.4	Producer case study #3: Nina Nesbitt – the feeling’s mutual .....	72
2.3.5	Out of joint: outrage.....	77
2.4	Conclusions.....	80
<b>3</b>	<b>Forget: “Be happy” .....</b>	<b>82</b>
3.1	The Essentials .....	85
3.1.1	Playlist territorialization.....	85
3.1.2	Darwinian data: building musical essentialism.....	87
3.1.3	Architects of choice: the interface and framing meaning .....	90
3.1.4	Visualizing mood.....	93
3.2	Constructed .....	97
3.2.1	Repetition: how emotions are played.....	97
3.2.2	What it sounds like when “Life Sucks” .....	99
3.2.3	Temporal diversion .....	100
3.2.4	Taking data offline.....	101
3.3	Happy Hits, Happy Subjects.....	104
3.3.1	Musical targets .....	104
3.3.2	Big mood data.....	105
3.3.3	Playlist case study: “Happy Hits” .....	110
3.4	Conclusions.....	118
<b>4</b>	<b>Silence: “Feel more of whatever you’re feeling” .....</b>	<b>121</b>
4.1	Creating Chill Zones.....	126
4.1.1	The machine zone .....	126
4.1.2	Lost in space: designed for extraction .....	129
4.1.3	Keeping attention .....	131
4.1.4	Losing time .....	132
4.1.5	Losing identity: eliminating risk and silencing the self.....	137
4.2	Designed to Stream.....	140
4.2.1	Compression .....	140
4.2.2	Optimal differentiation.....	141

4.2.3 Playlist case study: “Chill Vibes” .....	144
4.3 Conclusions.....	155
<b>5 Conclusion: “Dance like nobody’s paying” .....</b>	<b>158</b>
<b>6 Bibliography .....</b>	<b>166</b>
Appendix.....	176
Curriculum Vitae .....	181

# 1 Introduction: “On demand”

## 1.1 Introduction and main research questions

“Spotify can tell if you’re sad. And...that should scare you,” writes Arwa Mahdawi in a 2018 *Guardian* piece.<sup>1</sup> As the world’s most widely used music streaming service, Spotify has an ongoing presence in the homes, vehicles, workplaces, and earbuds of its over 270 million “monthly active users.”<sup>2</sup> Offering “music for every



**Figure 1.1:** Spotify advertisement retrieved by the author, March 27, 2020.

moment,”<sup>3</sup> Spotify exploits its privileged access to each user’s personal “space” and seeks to worm its way into their sense of self, their affective responses, their emotions, and their willingness to make meaning, while it gathers and renders data from their connections to and interactions with music. Andy Haldane, Chief Economist for the Bank of England, declared in an April 2018 speech that “data on music downloads from Spotify has been used, in tandem with semantic search techniques applied to the words of songs, to provide an indicator of people’s sentiment.”<sup>4</sup> These data gleaned from digital music consumption and their alleged usefulness in indicating “people’s sentiment” have

---

1. Arwa Mahdawi, “Spotify Can Tell If You’re Sad. Here’s Why That Should Scare You” *The Guardian*, September 16, 2018, <https://www.theguardian.com/commentisfree/2018/sep/16/spotify-can-tell-if-youre-sad-heres-why-that-should-scare-you>.

2. Spotify, “Shareholder Letter Q4-2019,” February 5, 2020, <https://investors.spotify.com/financials/default.aspx>.

3. Spotify Canada (@SpotifyCanada), Twitter, accessed March 6, 2020, <https://twitter.com/SpotifyCanada>.

4. Andy Haldane, “Will Big Data Keep Its Promise? - Speech by Andy Haldane,” Bank of England, August 30, 2018, <https://www.bankofengland.co.uk/speech/2018/andy-haldane-centre-for-data-analytics-for-finance-and-macro>.

increasingly become recognized by capitalist interests as a major source of economic value and market power. In *The Age of Surveillance Capitalism*, Shoshana Zuboff argues that we are now “the objects of a technologically advanced and increasingly inescapable...extraction operation” that “unilaterally claims human experience as free raw material for hidden commercial practices of extraction, prediction, and sales.”<sup>5</sup> In this thesis, I position Spotify within Zuboff’s framework of surveillance capitalism and illustrate some of the ways in which it claims human-music interactions and experiences as raw material for an operation that extracts music-related data in order to predict behaviour and facilitate sales of streaming subscriptions and targeted advertising.

“Music,” Sofia Johansson writes in *Streaming Music: Practices Media, Cultures*, “can transform moods and bring back memories, it can accompany daily routines, and it can be used in the formation of identities.”<sup>6</sup> Throughout this thesis I work to show how Spotify exploits these commonly understood attributes of music in order to capture, render, reify, and valorize the data that contributes to the company’s cultivation of a \$20 billion market valuation despite its inability to become profitable.<sup>7</sup> The company claims “how people stream...tells us a lot about who they are.”<sup>8</sup> I look at some of the ways in

---

5. Shoshana Zuboff, *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power* (New York: PublicAffairs, 2019), 8, vii.

6. Sofia Johansson et al., “Online Music in Everyday Life,” in *Streaming Music: Practices, Media, Cultures* (New York, NY: Routledge, 2018), 27.

7. Andrew Nusca, “Spotify Saved the Music Industry. Now What?” *Fortune*, January 22, 2020, <https://fortune.com/longform/spotify-music-industry-profits-apple-amazon/>.

8. “Audiences,” Spotify for Brands, accessed March 5, 2020, <https://www.spotifyforbrands.com/en-CA/audiences/>.

which Spotify seeks to condition its users' affective responses to music in order to maximize data extraction and at some of the ways it uses data to reorient the production of music in order to better serve its own interests. I begin chapter two, "Believe: Be free," with a "bird's-eye" perspective. Using the image of Spotify's "Wrapped" promotion—a yearly campaign that invites users and music producers to view and then share their Spotify data on social media—I show how the platform seeks to create a controlled environment, normalizing its surveillance by inviting both parties to "see" and express themselves on the terms of its self-referential and decontextualized data. In chapter three, "Forget: Be happy," I look at how Spotify organizes and compartmentalizes its environment into mood-based playlists. By sorting music into relatable, functional categories, Spotify contextualizes users' musical choices in order to extract and render emotional data that, it claims, can be used to predict emotional behaviour within and beyond the platform, while creating mood-based targets for advertisers. Finally, in chapter four, "Silence: Feel more of whatever you're feeling," I "zoom in" on a singular Spotify mood category, Chill. I discuss the features and characteristics of Spotify's Chill music, what appears to be a paradigmatic culmination of individualized provision and consumption of music that thrives within the closed and compartmentalized spaces identified in the first two chapters. My thesis is built around speaking to these key "big picture" questions:

*How does Spotify work to use music and data to condition its users' affective responses and behaviors? How does it use data to reorient the production of popular music? How does Spotify objectify and valorize the data it collects from the consumption and production of music? In what ways does it treat users and producers as both subject and*

*object? How does Spotify use playlists and mood-based categorization as tools of exploitation? And finally, how can Spotify's use of music help illuminate some of the broader social and cultural implications of the subjectivization and data-fication of life under surveillance capitalism?*

## 1.2 Analytical Framework

### 1.2.1 The Spotify machine

In this thesis, I call Spotify's operational structure of music distribution and data extraction and all of its co-operating component parts—human actors, algorithmic technologies, platform logic—the “machine.” In many facets of Spotify's system, it becomes difficult to separate the human actors from the technological components. For instance, the majority of the playlists I discuss are curated by humans but informed by algorithmic analysis of user and song data and influenced by industry relationships. Thus, instead of attempting to separate human and technological components I treat the workings of Spotify in accordance with the framework provided by Lewis Mumford's “megamachine,”<sup>9</sup> and Gilles Deleuze and Félix Guattari's “apparatus of capture;”<sup>10</sup> a cooperative network of human and technical components working to achieve the same end. In this case, the components work to streamline an operation of media distribution designed to gather data from the inputs and outputs captured from users' interaction with music and from music itself.

---

9. Lewis Mumford, “The First Megamachine,” *Diogenes* 14, no. 55 (1966): 2, <https://doi.org/10.1177/039219216601405501>.

10. Gilles Deleuze and Félix Guattari, *A Thousand Plateaus* trans. Brian Massumi (Minneapolis: University of Minnesota Press, [1980] 1987), 444.

Mumford writes that the first megamachine “was composed solely of human parts,” with “each part behaving as a mechanical component of the mechanized whole.”<sup>11</sup> Deleuze and Guattari discuss “humans-machines systems” in which “the relation between human and machine is based on internal, mutual communication.”<sup>12</sup> In *Signs and Machines*, Maurizio Lazzarato expands the concept to include “machinisms that have invaded our daily lives; they now ‘assist’ our ways of speaking, hearing, seeing writing and feeling.”<sup>13</sup> He further develops the notion, describing “social machines in which ‘humans’ and ‘non-humans’ function together as component parts in corporate, welfare-state, and media assemblages.”<sup>14</sup> Spotify operates as a machinic media assemblage to which even its users and music producers contribute as component parts of “the mechanized whole.”<sup>15</sup>

Deleuze and Guattari write: “It’s not machines that have created capitalism, but capitalism that creates machines, and that is consistently introducing breaks and cleavages [such as digitization] through which it revolutionizes its technical modes of

---

11. Mumford, “Megamachine,” 2, 6.

12. Deleuze and Guattari, *A Thousand Plateaus*, 458.

13. Maurizio Lazzarato, *Signs and Machines: Capitalism and the Production of Subjectivity* trans. Joshua David Jordan (Los Angeles, CA: Semiotext(e), 2014), 13.

14. Lazzarato, *Signs and Machines*, 13.

15. Mumford, “Megamachine,” 6.



production.”<sup>16</sup> Networked technologies and platformization of media and culture provided infrastructure for the development of Spotify’s music-listening machine. However, surveillance capitalism’s expansion of where and how value can be extracted has led to the creation of a two-way listening machine that fundamentally alters the terms of the exchange taking place. Like other music distribution formats before it, Spotify’s machine has begun to reorient the consumption and production of music, introducing new technologies and new possibilities. However, at the same time, it has restored and even exaggerated the music industry’s long-standing imbalances of power and wealth between those who produce music and those who control its distribution. Spotify’s biggest “disruption” of the music industry itself is its creation of a machine that listens to its listeners and endeavours to restructure how they listen, what they listen to, and what music means to them. In surveillance capitalism, Zuboff writes: “The aim now is not to dominate nature but rather human nature. The focus has shifted from machines that overcome the limits of bodies to machines that modify the behavior of individuals, groups, and populations in the service of market objectives.”<sup>17</sup> I argue that Spotify’s machine seeks to dominate the nature of musical experience in the service of its data collection objectives.

Mumford writes that the ancient Egyptian megamachine’s “one lasting contribution...was the myth of the machine itself: the notion that this machine was, by its very nature, absolutely irresistible—and yet, provided one did not oppose it, ultimately

---

16. Gilles Deleuze and Félix Guattari, *Anti-Oedipus: Capitalism and Schizophrenia* trans. Robert Hurley, Mark Seem, and Helen R. Lane (New York: Penguin Books, 2009), 233; also quoted in Lazzarato, *Signs and Machines*, 23.

17. Zuboff, *Surveillance Capitalism*, 515.

beneficent. That magical spell still enralls both the controllers and the mass victims of the megamachine today.”<sup>18</sup> In this thesis I examine how Spotify casts its spell as a surveillance-capitalist machine operationalizing popular music and new technology, as well as Spotify’s readings of listeners’ behaviours and emotions. I argue that Spotify, as the controller of the machine, uses music as a tool to extract data and to subjectivize and objectify “today’s victims,” both those who use the platform to consume music—whom I hereafter refer to as “users”—and those who make music and rely on the platform to distribute it—whom, for the purposes of this thesis, I call “producers.”

### 1.2.2 Music and the code of surveillance capitalism

In *Noise*, Jacques Attali writes: “Music is prophecy. Its styles and economic organization are ahead of the rest of society because it explores, much faster than material reality can, the entire range of possibilities in a given code,”<sup>19</sup> that is, in a given historical social formation. My thesis investigates how Spotify uses music within the ascending “code” of surveillance capitalism in which, as Zuboff details, corporations generate power and wealth by gathering details of the human experience as “raw material” and rendering them into data that they claim can predict and modify future behaviour.<sup>20</sup> Though Spotify’s practice differs in some ways from the “code” developed and normalized by Google and Facebook and articulated by Zuboff, its usage of music to mine and gather data presents a compelling case study. Spotify’s presence as an actor in

---

18. Lewis Mumford, *The Myth of the Machine* (San Diego: Harcourt, 1967), 224.

19. Jacques Attali, *Noise: The Political Economy of Music*, trans. Brian Massumi (Minneapolis: University of Minnesota Press, [1985] 2017), 11.

20. Zuboff, *Surveillance Capitalism*, vii.

surveillance capitalism (in addition to the existence of music services run by surveillance titans like Google and Amazon) gives weight to Attali's notion that "[e]very code of music is rooted in the ideologies and technologies of its age, and at the same time produces them."<sup>21</sup>

In fact, Zuboff puts a shift in music consumption at the origin of her surveillance capitalism "code." She marks the day Apple debuted the iTunes store, August 11, 2011, as a defining moment in the initiation of surveillance capitalism. In providing single digital songs for purchase, she writes, "Apple was among the first to experience explosive commercial success by tapping into a new society of individuals and their demand for individualized consumption."<sup>22</sup> The iTunes store took the self-serve/single-serve model of digitized, personalized music consumption that was already popular on peer to peer file sharing sites like Napster, and monetized it to great success (for a relatively short time). The iTunes Store untethered individual songs from the format of the album, serviced them to consumers excited by the opportunity to indulge their individuality, and attached them to Apple's own portable, individualized mode of consumption—the iPod.<sup>23</sup>

In *Spotify Teardown*, Maria Eriksson, Rasmus Fleischer, Anna Johansson, Pelle Snickars, and Patrick Vonderau detail Spotify's continued development of personalized

---

21. Attali, *Noise*, 19.

22. Zuboff, *Surveillance Capitalism*, 30.

23. Of course, single songs were available on other formats (45s, cassettes and CD singles) but they were always songs of the record company's choosing. In the digital model, *every* song became individually available.

music consumption. In a 2008 promotional video titled “Spotify—The Story,” they argue that “music streaming is presented as the culmination of a media history that developed toward the maximization of individual choice.”<sup>24</sup> Spotify took the single serve model of the iTunes Store, assembled its own apparatus of personalized consumption, and connected music to *its* product: Spotify. Spotify’s data gathering requires the by-products of individualized consumption and personal choice on which surveillance capitalism itself depends and as the company claims, “[t]he more they stream, the more we learn.”<sup>25</sup>

### 1.2.3 Rendering data from music

Patrick Vonderau in “The Spotify Effect” writes that “music has become data, and data in turn has become contextual material for user targeting at scale.”<sup>26</sup> Spotify for Brands, the targeted advertising branch of the company, pitches the idea to prospective clients that “[t]he music...that people listen to reveal[s] who they are.”<sup>27</sup> The perceived nearness of music to individuality rationalizes Spotify’s power as a data broker, creating “truth” for the freedom of personalization it offers. Eriksson et al. explain that Spotify’s surveillance apparatus allows it to “generate data based on its music streaming that allow

---

24. Maria Eriksson et al., *Spotify Teardown: Inside the Black Box of Streaming Music* (Cambridge, MA: MIT Press, 2019), 4.

25. “Audiences,” Spotify for Brands.

26. Patrick Vonderau, “The Spotify Effect: Digital Distribution and Financial Growth.” *Television and New Media* 20, no.1 (2019): 5, <http://doi.org/10.1177/1527476417741200>.

27. “The New Golden Age of Audio,” Spotify for Brands, accessed March 5, 2020, <https://www.spotifyforbrands.com/en-CA/insights/the-new-golden-age-of-audio/>.

for the study of human behaviour.”<sup>28</sup> Meanwhile, Spotify for Brands claims: “Every swipe, search, skip, and shuffle tells us a story about our audience.”<sup>29</sup> Using the “story” told by their interactions with music, Spotify builds a “Taste Profile” for each user, which is not publicly available, logging their consumption habits through interactions with music such as “follows,” “likes,” “repeats,” “downloads,” and “skips.”<sup>30</sup> These user actions, that I call “traceable inputs,” can be contextualized by corresponding artist-related data and/or mood-based playlists and combined with extensive demographic information to build Spotify’s evolving data-fied representation of each individual user.

Individual songs, too, undergo a process of data-fication once inside the Spotify machine. Users’ “traceable inputs” are bundled into the machine’s profile of a song, but each is also subjected to additional digital dissection. In Spring of 2014, Spotify acquired Massachusetts-based music analysis firm The Echo Nest as part of its development of an infrastructure increasingly focused on algorithmic curation.<sup>31</sup> The Echo Nest’s software “listens” to each song on the platform in order to create intricate data portraits. Media scholar Jeremy Wade Morris explains that the company’s “machine listening” technology “parses an entire song in a few seconds and processes the signal into thousands of unique

---

28. Eriksson et al., *Spotify Teardown*, 4.

29. “Audiences,” Spotify for Brands.

30. Jeremy Wade Morris, “Curation By Code: Informediaries and the Data Mining of Taste.” *European Journal of Cultural Studies* (2015): 18, <https://doi.org/10.1177/1367549415577387>.

31. Eriksson et al., *Spotify Teardown*, 63.

segments.”<sup>32</sup> The Echo Nest’s literature claims this process replicates “how people perceive music [by incorporating] principles of psychoacoustics, music perception, and adaptive learning to model both the physical and cognitive processes of human listening.”<sup>33</sup> The data extracted from songs is subsequently paired with “qualitative information about artists based on text analyses of artist mentions in digital articles and blog posts.”<sup>34</sup> The cumulative data Spotify packages into each song contextualizes users’ “traceable inputs,” determines its value to the machine, and can have great impact on its “success” or “failure” within the platform.

The implications of Big Data in Spotify are much broader than what song will play next, as digitalization and platformization have allowed music to become a tool for surveillance capitalism. Music’s intimate connection to individuality—sense of self, affect, emotion—makes it a potent tool for the parasitic logic of capitalism that, as Deleuze and Guattari write, “confronts its own limits and simultaneously displaces them, setting them down further along.”<sup>35</sup> Throughout this thesis I argue that Spotify claims music and all of its associated 1s and 0s provide economically valuable, yet not necessarily accurate, insight into the emotions, social structures, and balances of power throughout an increasingly data-driven civilization and uses its power as the world’s most

---

32. Morris, “Curation by Code,” 453. See my data methodology below and appendix A for more detailed descriptions of the Echo Nest, its categories, and my collection methods.

33. Quoted in Morris, 454.

34. Noah Askin and Michael Mauskopf, “What Makes Popular Culture Popular? Product Features and Optimal Differentiation in Music,” *American Sociological Review* 82, no. 5 (June 2017): 918, <https://doi.org/10.1177/0003122417728662>.

35. Deleuze and Guattari, *Anti-Oedipus*, 463.

widely used music streaming service to rationalize data about its users and producers as “truth.” Attali argues that music “makes audible the new world that will gradually become visible.”<sup>36</sup> I argue that Spotify’s sorting and hierarchization practices have become audible in the songs that “succeed” on the platform and I illustrate how surveillance capitalism’s goal of predicting and modifying human behavior for the production, ultimately, of economic surplus becomes visible within the workings of Spotify’s machine and in the components simultaneously subjectivized and objectified by it.

### 1.3 Contextualizing Spotify

In the following sections I provide a brief overview of Spotify as a company, what distinguishes it from other streaming platforms, its position in the music industry, its operational structure, and the sites from which it draws power. I provide this contextual outline in an introductory manner in order to devote a more detailed analytical approach to specific aspects of Spotify in the main body of my thesis.

#### 1.3.1 Market share and product differentiation

Spotify was founded in Sweden and launched in 2006 as a semi-legal peer-to-peer file sharing service by two previously successful technology entrepreneurs, Daniel Ek and Martin Lorentzon, and has since grown into the world’s leading provider of digital music streaming. While there are other major operators in the music streaming business, Spotify, claiming 36% of the global market share, is by far the most widely used. Apple Music (18% of global market share as of December 2019), Amazon Music (13%),

---

36. Attali, *Noise*, 11.

Tencent (10%) Google Play (3%) are its closest competitors.<sup>37</sup> What distinguishes Spotify from these competitors is that music has historically been at the core of its operation.<sup>38</sup> Apple uses music to sell phones and computers, Amazon uses music to sell “Prime” subscriptions and smart speakers (and everything else). Music is only a small portion of Tencent’s video-game and social media driven conglomerate and Google’s music distribution is just a tiny fraction of its data collection empire.<sup>39</sup>

Spotify operates as a “platform” that hosts more than 50 million songs. Nick Srnicek, in *Platform Capitalism*, writes that platforms “are characterised by providing the infrastructure to intermediate between different user groups...and by having a designed core architecture that governs interaction possibilities.”<sup>40</sup> Spotify provides the online structure for music streaming and mediates between consumers and producers of audio recordings and its apparatus is designed to govern the musical choices which it subsequently renders into data. However, in *Spotify Teardown*, a rigorous scholarly excavation of the company’s “black box,” Eriksson et al. argue that Spotify can be viewed not exclusively as an “intermediary,” but additionally as “the provider of a new

---

37. Amy Watson, “Music Streaming Market Share,” *Statista*, December 9, 2019, <https://www.statista.com/statistics/653926/music-streaming-service-subscriber-share/>.

38. Spotify’s recent interest in podcast represents a shift in music being its only focus.

39. Spotify entered into a “stock swap” with Tencent Music, the music streaming platform of the Chinese mega-conglomerate, in February 2018, which gives Spotify a nine percent share of Tencent Music and gives Tencent 7.5% of Spotify (making it one of the company’s largest shareholders), so they are no longer really competitors. See, Jon Russell, “Tencent Music, Spotify’s Strategic Partner in China, Is Valued at over \$12B,” *TechCrunch*, March 1, 2018, <https://techcrunch.com/2018/02/28/tencent-music-spotify/>.

40. Nick Srnicek, *Platform Capitalism* (Cambridge, UK: Polity, 2017), 48.



commodity—a personalized music experience.”<sup>41</sup> I argue that Spotify distinguishes itself from other streaming platforms not only because of its sizeable market share and historically more singular focus, but also because of its ability to depict itself as the provider of a unique service: the “Spotifyfied” soundtrack of its users’ lives. Spotify uses music to sell Spotify. Despite music distribution being the centre of its business, Eriksson et al. and Vonderau emphasize Spotify’s adamant assertions that it is a technology company and not a media company, “since investors see greater potential in the technology sector than the media sector.”<sup>42</sup> Thus, while the key operations around which my research is centred (individualized consumption, sharing streaming data, mood-based sorting, chill playlists) are employed to varying degrees by other music streaming and media platforms, I focus this work almost entirely on Spotify and its particular versions of these practices. While I rarely make reference to other music streaming services or media platforms, I acknowledge Spotify is far from a monopoly operator in the realm of online music streaming, nor is it completely unique as a media platform. I explain techniques of media distribution, platformization, and surveillance capitalism within the singular realm of Spotify, recognizing the overlap with other music streaming and media platforms with the hope that my analysis of this specific circumstance can inspire questions about others with similar attributes.

### 1.3.2 Free to be a target

Another distinguishing feature that has significant bearing on Spotify’s data collection practices and sets it apart from its closest competitor, Apple Music, is a free,

---

41. Eriksson et al., *Spotify Teardown*, 32.

42. Vonderau, “The Spotify Effect,” 9; Eriksson et al., *Spotify Teardown*, 3.

ad-supported tier.<sup>43</sup> Vonderau notes that Spotify's 2015 financial report, in an "unintentionally sarcastic" tone, reads: "Subscription-only models have not proven scale and free user models, whilst scaling, have not proven a path to profitability. Spotify has combined the power of both."<sup>44</sup> On February 5, 2020, in its final quarterly shareholder letter from 2019, Spotify claimed 124 million of its 271 million "monthly active users" were "Premium" subscribers (those who pay \$9.99 for unlimited access uninterrupted by advertisements).<sup>45</sup> The remaining 147 million "non-Premium" users access Spotify via its "Free" tier, on which they face restrictive limits on how and to what they can listen (no skipping songs, no full albums or artist catalogues) while becoming a commodified audience for targeted advertisements. Advertisements appear between songs and are targeted toward users based on previous behaviour, listening habits, demographics, location, and, as I will illustrate in chapter three, the context provided by their indication of mood. Subscriptions accounted for 88% of Spotify's revenue in the final quarter of 2019 but have still not proven to be profitable on their own.<sup>46</sup> As Spotify claims to have ambitions of becoming the "third-largest player" in the targeted advertising business behind Google and Facebook,<sup>47</sup> its advertising division exerts significant influence on

---

43. Google Play and Amazon also now have free, ad-supported tiers, which makes sense given that Google, in particular, is built around targeted advertising and already has the necessary infrastructure and reputation.

44. Quoted in Vonderau, "The Spotify Effect," 5.

45. "Shareholder Letter Q4-2019," Spotify.

46. "Shareholder Letter Q4-2019," Spotify.

47. Alexandra Bruell, "Spotify Has Big Ambitions for Ad Business," *The Wall Street Journal*, August 17, 2017, <https://www.wsj.com/articles/spotify-has-big-ambitions-for-ad-business-1502964001>.

how the company packages, sorts, and presents music. Funds generated by the “Ad-Supported tier” have risen from just under \$80 million in the first quarter of 2017 to approximately \$240 million in the final quarter of 2019 and Spotify continues to try to maximize “the power of both” subscription and advertising-based music consumption models in its struggle to become a profitable company.<sup>48</sup>

### 1.3.3 Savior or new “gatekeeper”?

The company’s market share majority in conjunction with its systematic cultivation of confidence from economists, investors, and advertisers in what Vonderau calls its “aura of Nordic cool,”<sup>49</sup> allowed Spotify to achieve its goal of becoming valuable long before it was profitable.<sup>50</sup> This mirrors a disjunction between profits and market value that is increasingly common for technology platforms such as Über. Spotify’s cultivation of belief in the validity and value of its data, its strategic growth, its securing of substantial venture capital investment, and positioning itself “at the sexy, cool end of digital innovation” led to a highly publicized public offering in April 2018 that would make it one of world’s most valuable music companies, if it chose to recognize itself as a music company.<sup>51</sup> As of October 2019, *Forbes* estimates Spotify’s value at \$21 billion

---

48. All funds converted from € and listed in USD based on exchange rates at the end of each specified quarter.

49. Vonderau, “The Spotify Effect,” 6.

50. Eriksson et al., *Spotify Teardown*, 32.

51. Vonderau, “The Spotify Effect,” 9.

despite posting just three profitable quarters since launching in 2006, one due to a tax adjustment, against several billion dollars in losses.<sup>52</sup>

According to the Record Industry Association of America, streaming accounted for 79% of the American recording industry revenue in 2019.<sup>53</sup> Because of its apparent grip on a large share of the music streaming market and surging major label profits, many publications including *Fortune* and *The Guardian* have hailed Spotify as the “savior” of the music industry.<sup>54</sup> CEO Daniel Ek says, “I think we are in the process of creating a more fair and equal music industry than it’s ever been in the past,”<sup>55</sup> yet most of the money generated from Spotify streaming continues to trickle upward. Ek and his co-founder Martin Lorentzon each have a net-worth in the billions.<sup>56</sup> Universal, Sony, and Warner, “The Big Three” major record labels, made an estimated total of \$8 billion from streaming in 2019 and have additional interest in Spotify’s dominance of the market:

---

52. Joan E. Solsman, “Spotify Is Profitable for Once, Sort of...,” *CNET*, November 1, 2018, <https://www.cnet.com/news/spotify-is-profitable-for-once-hits-87-million-subscribers-keeping-it-worlds-biggest-streaming-music-service/>; Dani Deahl, “Spotify Is Profitable Once Again as It Cuts Costs and Adds Cheaper Plans,” *The Verge*, October 28, 2019, <https://www.theverge.com/2019/10/28/20936612/spotify-q3-earnings-cheaper-plans-profitable-costs-cuts>.

53. Joshua P. Friedlander “2019 Revenue Report,” Record Industry Association of America, February 25, 2020.

54. Nusca, “Spotify Saved the Music Industry. Now What?,” Sam Wolfson, “‘We’ve Got More Money Swirling around’: How Streaming Saved the Music Industry,” *The Guardian*, April 24, 2018, <https://www.theguardian.com/music/2018/apr/24/weve-got-more-money-swirling-around-how-streaming-saved-the-music-industry>.

55. Quoted in Stephen J. Dubner and Matt Frassica, “How Spotify Saved the Music Industry (But Not Necessarily Musicians) (Ep. 374),” *Freakonomics*, April 10, 2019, <https://freakonomics.com/podcast/spotify/>.

56. Stephen Witt, “Spotify Is, For Now, The World’s Most Valuable Music Company,” *NPR*, April 4, 2018, <https://www.npr.org/sections/therecord/2018/04/04/599385111/spotify-is-for-now-the-worlds-most-valuable-music-company>.

Universal owns approximately 3.5% of Spotify and Sony owns 2.85%.<sup>57</sup> Warner sold its Spotify shares for \$504 million in August of 2018.<sup>58</sup> Global recording industry revenue is still not near the pre-digital peak achieved in the late 1990s, but, after a 2010-2015 lull, has shown substantial recovery in recent years, much of it due to streaming revenues.

While tech CEOs (as Ek and Lorentzon prefer to be viewed) and major media conglomerates collect billions of dollars, independent producers of music struggle to survive off the \$.004 to \$.006 per stream (before distributor fees, which vary) that Spotify pays out.<sup>59</sup> Spotify's "stream share" model pays producers based on their percentage of the total number of streams on the platform each month. In a video on Spotify for Artists, the company's data portal for producers, Alan Galbraith of Spotify's licensing department explains: "For instance, if there are a million eligible streams in a month, and you have 100,000 streams in that month, then your stream share is 10% of the revenue pool, or pie."<sup>60</sup>

---

57. Tim Ingham, "The Major Labels Will Generate over \$14bn in 2019, as Warner Bucks Trend of Streaming Slowdown (Just)," *Music Business Worldwide*, December 10, 2019, <https://www.musicbusinessworldwide.com/major-labels-will-generate-over-xbn-in-2019-as-warner-bucks-trend-of-streaming-slowdown-just/>; "One Reason Why Spotify's Deals with the Major Labels Are Balanced on a Knife-Edge," *Music Business Worldwide*, November 14, 2018, <https://www.musicbusinessworldwide.com/one-reason-why-spotifys-deals-with-the-major-labels-rest-on-a-knife-edge/>.

58. Etan Vlessing, "Warner Music Group Sells Spotify Stake for \$504M," *The Hollywood Reporter*, August 7, 2018, <https://www.hollywoodreporter.com/news/warner-music-group-sells-spotify-stake-504m-1132692>.

59. Apple Music pays substantially more than Spotify, on average \$.007 per stream and Google Play pays \$.0067. Amazon pays slightly less than Spotify. However, all artists must upload their music to major streaming platforms via a third-party distributor. Some distributors take a flat fee and some take a percentage (10-15) of royalties earned. In 2019, Spotify experimented briefly with a model in which producers could upload their music directly to the platform, but quickly abandoned the project.

60. "How Spotify Pays Artists," Spotify for Artists, accessed March 7, 2020, <https://artists.spotify.com/videos/the-game-plan/how-spotify-pays-you>.

Eriksson et al. write: “Spotify’s business model never benefitted all musicians in the same manner but rather appeared—and still appears—highly skewed toward major label stars and record labels, establishing a winner-takes-all market familiar from the traditional media industries.”<sup>61</sup> A 2018 *Buzz Angle* document reports that 93.6% of streams (across all platforms) are accumulated by the top 500,000 most streamed songs (out of over 50 million).<sup>62</sup> Established stars such as Drake, who made an estimated \$66 million from Spotify alone in 2018, benefit greatly from Spotify’s “share stream” model and from privileged positioning on the platform.<sup>63</sup> Of course, major stars have always accounted for a disproportionate amount of recording revenues, but Spotify has not made anything more “fair” or “equal” for the independent music producer and has, in many ways, squeezed the producer middle class out of existence. DJ Gareth Emery tells *The Guardian* in 2018:

Artists get crumbs from the table...Even with over a million listeners, and tens of millions of streams, I couldn’t rely on Spotify for an income – so it blows my mind how smaller artists are supposed to manage.<sup>64</sup>

Still, because of Spotify’s market share and perceived power in the music industry, working within the platform appears necessary for any producer who envisions their

---

61. Eriksson et al., *Spotify Teardown*, 3.

62. “Buzz Angle Music 2017 U.S. Report,” BuzzAngle Music, January 2018, <https://www.buzzanglemusic.com/buzzanglemusic-2017-reports/>.

63. Tim Ingham, “Drake Has Generated over \$100m on Apple Music and Spotify Alone,” *Music Business Worldwide*, July 23, 2018, <https://www.musicbusinessworldwide.com/drake-is-the-biggest-artist-of-all-time-on-apple-music-and-spotify-generating-over-50m/>.

64. Alex Hern, “Is Spotify Really Worth \$20bn?,” *The Guardian*, March 2, 2018, <https://www.theguardian.com/technology/2018/mar/02/is-spotify-really-worth-20bn>.

audience anywhere in the vicinity of the mainstream. There are other options for digital music distribution. Bandcamp, for instance, is popular among independent producers, but, for most, Spotify's audience is just too big to ignore; the magic spell of its machine is too irresistible.<sup>65</sup>

### 1.3.4 The branded playlist is king

Despite offering a potential audience of over 270 million users, Eriksson et al. write: "Approximately 20 percent of Spotify's catalogue has not been listened to by anyone even once."<sup>66</sup> Meanwhile, Daniel Ek told investors in April of 2019 that 40,000 new songs are uploaded to Spotify daily.<sup>67</sup> The easiest way for a song to stand out from Spotify's selection of 50 million others and find its way into the devices and ears of new users is via a playlist. Playlists appear as a digital, AI-enhanced evolution of the mixtape, compilation CD, or radio rotation; songs can be added and subtracted at the whim of a human curator or the calculation of an algorithm. Patrick Åker notes the term "playlist" itself is derived from radio language.<sup>68</sup> Playlists help producers find an audience outside of their established listener base, as they offer built-in audiences, many much bigger than an independent or unestablished artist's own.

---

65. Mumford, *The Myth of the Machine*, 224.

66. Eriksson et al., *Spotify Teardown*, 98.

67. Tim Ingham, "Nearly 40,000 Tracks Are Now Being Added to Spotify Every Single Day," *Music Business Worldwide*, April 29, 2019, <https://www.musicbusinessworldwide.com/nearly-40000-tracks-are-now-being-added-to-spotify-every-single-day/>.

68. Patrick Åker, "Spotify as the soundtrack to your life," in *Streaming Music: Practices, Media, Cultures* (New York, NY: Routledge, 2018), 95.

Spotify users can make their own playlists and labels, media outlets, and many major brands all have their own imprints. However, Spotify's branded playlists are the centerpiece of its platform and are leveraged as a site of power. The machine offers an array of playlists that sort, categorize, and prioritize music into coherent consumable packages and Spotify's interface is designed to siphon users toward them. "There is a certain hierarchy between the playlists," writes Åker, "whereby those created by Spotify are easier to reach and have a more dominant position on the page than those created by other actors."<sup>69</sup> Due in large part to their dominant positioning and the reputation Spotify has established for its playlists, *Business Insider* reports that nearly 1/3 of Spotify listening is mediated through its curated/branded playlists.<sup>70</sup>

A Spotify content editor tells Tiziano Bonini and Alessandro Gandini: "we have three different types of playlists on Spotify...we have 100% handcrafted curated playlists [those programmed by humans]...*algotorial playlists* [a combination of human and algorithmic curation]...then we've got 100% fully algorithm-based playlists."<sup>71</sup> However, Bonini and Gandini argue that "every playlist...contains both logics [algorithmic and editorial] in an inextricable way: every playlist is *algo-torial*, much more than the curators themselves believe."<sup>72</sup> The mood-based Spotify playlists on which I focus in this

---

69. Åker "Spotify as the soundtrack," 93.

70. Greg Sandoval, "The Major Music Labels Are Upset That They Don't Get More Play on Spotify's Mega-Popular Playlists, Says Deutsche Bank," *Business Insider*, July 12, 2018, <https://www.businessinsider.com/spotify-curated-playlists-labels-2018-7>.

71. Tiziano Bonini and Alessandro Gandini, "'First Week Is Editorial, Second Week Is Algorithmic': Platform Gatekeepers and the Platformization of Music Curation," *Social Media Society* 5, no. 4 (2019): 6, <https://doi.org/10.1177/2056305119880006>.

72. Bonini and Gandini, 6.



work are *algo-torial*, that is, while a song may be picked by human curators, both its initial selection and sustained presence depend highly on the data-fied representation of its ability to serve the function the playlist requires.

Eriksson et al. write that Spotify “consolidated the playlist’s status as a privileged object of its streaming universe and also reframed the playlist from being a primary social and interactive element to being an object of editorial and algorithmic expertise.”<sup>73</sup> While it becomes hard to pinpoint all the sorting features that might land a song on a branded playlist (between editorial staff, algorithmic data, label influence, past success), Laura Snapes argues in *The Guardian* that “Spotify looks like a neutral platform but behaves like a gatekeeper.”<sup>74</sup> A coveted playlist spot (the most popular on the platform is “Today’s Top Hits” with nearly 26 million followers) provides an immediate, tangible, and valuable boost to a song’s potential audience and Spotify decides which songs to boost. Kal Raustiala and Christopher Jon Sprigman write in the *NYU Law Review* that inclusion on “Today’s Top Hits,” “is worth...between \$116,000 and \$163,000 and creates an additional 19.4 million streams on average,” over the streaming “life” of a song.<sup>75</sup> Because of the growing belief that Spotify’s top branded playlists can “in short, make

---

73. Eriksson et al., *Spotify Teardown*, 117.

74. Ben Beaumont-Thomas and Laura Snapes, “Has 10 Years of Spotify Ruined Music?” *The Guardian*, October 5, 2018, <https://www.theguardian.com/music/2018/oct/05/10-years-of-spotify-should-we-celebrate-or-despair>.

75. Kal Jon Raustiala and Christopher Jon Sprigman, “The Second Digital Disruption: Streaming and the Dawn of Data-Driven Creativity,” *New York University Law Review* 94 (December 2019): 140, <https://www.nyulawreview.org/issues/volume-94-number-6/the-second-digital-disruption-streaming-and-the-dawn-of-data-drive-creativity/>.

hits,”<sup>76</sup> they command the attention of any producer who wants to have a hit. However, because of the ownership ties between “The Big Three” major labels and Spotify, the majority of these coveted branded playlist spots are reserved for either already established producers or major-label backed newcomers, which continues to exaggerate the industry’s wealth gap. Still, as the easiest way to be heard amidst 50 million other songs, producers increasingly see playlists as musical “targets” to aspire and tune their songs to. “It feels like the artist is dead and the playlist is king,” an anonymous artist manager tells *The Guardian*.<sup>77</sup> Spotify, through its playlist architecture, has substantial influence over what songs get played and, thus, over what users hear and which producers and labels get paid.

## 1.4 Literature Review

### 1.4.1 Key texts

Four major theoretical texts provide the guiding framework for my analysis. In *Noise: The Political Economy of Music* Jacques Attali writes: “Music is more than an object of study: it is a way of perceiving the world. A tool of understanding.”<sup>78</sup> His polemic provocation of relationships between power and music maps onto my analysis of Spotify and its use of music for data extraction. *Noise* provides historical context for music being at the centre of an economic “code,” in this case that of surveillance

---

76. Raustiala and Sprigman, 140.

77. Nosheen Iqbal, “Forget the DJs: Spotify Playlists Are the New Musical Starmakers,” *The Guardian*, April 28, 2019, <https://www.theguardian.com/music/2019/apr/28/streaming-music-algorithms-spotify>.

78. Attali, *Noise*, 4.

capitalism, and I use music as a tool to try to understand its perils and implications. To that end, *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power* by Shoshana Zuboff provides guidance with its detailed analysis of surveillance capitalism and helps me to assess Spotify's data collection practices and position the company and its strategies in relation to other surveillance capitalist firms such as Google and Facebook. *Governing by Debt* and *Signs and Machines* by Maurizio Lazzarato enable me to contextualize surveillance capitalism as a progression that is a part of modern cultivation of subjectivity and not, as Zuboff argues, something "unprecedented."<sup>79</sup> Like Attali, these texts ground my work in a broader historical context. While Spotify's usage of music for the purpose of data gathering is, in many ways, a new phenomenon, I see its treatment of users and producers simultaneously as subjects and objects as a continuation of previously established practices of capitalism. Finally, *Spotify Teardown: Inside the Black Box of Streaming Music* by Maria Eriksson, Rasmus Fleischer, Anna Johansson, Pelle Snickars, and Patrick Vonderau provides corporate history and scholarly insight that allows me to more clearly decipher Spotify's motives and practices and also distinguish them from those described by Zuboff. These key texts remain important resources throughout my thesis, each contributing key components to the analytical framework.

#### 1.4.1.1 *Noise: A Political Economy of Music*

In *Noise*, Jacques Attali aims to construct "a map, a structure of interferences and dependencies between society and its music."<sup>80</sup> I adapt his map to help connect the

---

79. Zuboff, *Surveillance Capitalism*, vii.

80. Attali, *Noise*, 19.

various features of Spotify to its role within a networked society governed by neoliberal ideals of individuality and personalization and increasingly under surveillance. He continues: “it is possible to distinguish on our map three zones, three stages, three strategic usages of music by power.... Make people Forget, make them Believe, Silence them.”<sup>81</sup> My thesis uses Attali’s three zones of music and power as chapter titles and as framing devices to show how Spotify uses music to encourage its users to *believe* in its data as an expression of individuality and “success,” to *forget* the perils of the world around them, and to ultimately *silence* their ability to make meaning, their “will to will.” While Attali’s characterizations of the power and importance of music and noise may feel hubristic or overstated, his grandiosity offers rich possibilities for adaptation and interpretation. His underlying premise that “[m]ore than colors and forms, it is sounds and their arrangements that fashion societies” is at the heart of my argument that Spotify’s usage of music as a data extraction tool can provide insight into the manner in which our society is fashioned—that is, increasingly susceptible to the influence of surveillance firms.<sup>82</sup>

#### 1.4.1.2 *The Age of Surveillance Capitalism: The fight for a human future at the new frontier of power*

Attali writes: “Every code of music is rooted in the ideologies and technologies of its age, and at the same time produces them.”<sup>83</sup> I use *Noise* to identify links from Spotify’s use of music to a key contemporary text for my research, Zuboff’s *The Age of*

---

81. Attali, 19.

82. Attali, 6.

83. Attali, 19.

*Surveillance Capitalism*. Though she spends some 600+ pages elaborating, Zuboff succinctly defines surveillance capitalism as: “A new economic order that claims human experience as free raw material for hidden commercial practices of extraction, prediction and sales” and “[a] rogue mutation of capitalism marked by concentrations of wealth, knowledge, and power unprecedented in human history.”<sup>84</sup> I dispute her characterization of much of the system’s logic as “new” or “rogue,” though Zuboff’s work is rich with framing devices and terms that I adapt to my characterization of Spotify’s surveillance capitalism. For instance, she explains surveillance capitalism’s mobilization of “economies of action.” “Economies of action,” for Zuboff, are the ways in which surveillance firms use their data to coax behavioural change in their users. She suggests three methods through which they work to achieve this aim: tuning, herding, and conditioning. I adapt her use of these terms to show how Spotify “tunes” users and producers with “cues designed to subtly shape the flow of behaviour” and “herds” their “behavior along a path of heightened probability that approximates certainty.”<sup>85</sup> I argue that Spotify eventually seeks to condition behaviour by offering rewards, to both users and producers, in order to “amplify some actions at the expense of others.”<sup>86</sup>

#### 1.4.1.3 *Governing by Debt and Signs and Machines: Capitalism and the Production of Subjectivity*

Zuboff writes: “Individualism has sent each one of us on the prowl for the resources we need to ensure effective life, but at each turn we are forced to do battle with

---

84. Zuboff, *Surveillance Capitalism*, vii.

85. Zuboff, 294.

86. Zuboff, 296.

an economics and politics from whose vantage point we are but ciphers.”<sup>87</sup> This approach, particularly Zuboff’s notion of “cipher,” connects to another guiding analytical frame of my research: Maurizio Lazzarato’s adaptation of Deleuze and Guattari’s interlocking binaries of “social subjection” and “machinic enslavement;” and “individual” and “dividual;” developed extensively in Lazzarato’s *Signs and Machines*.

Lazzarato writes: “The production of wealth (and production, period) operates at the intersection of two heterogeneous power apparatuses—social subjection and machinic enslavement.”<sup>88</sup> The former indicates consciousness and narrative subjectivity, the latter embodiment, habit, and physiology. My analysis of Spotify focuses on this point of intersection as producers and consumers interface with its data-driven wealth producing infrastructure that treats users and producers as both (social) subject and (enslaved) object, component parts in its data extraction machine. Lazzarato elaborates: “Social subjection equips us with a subjectivity, assigning us an identity, a sex, a body, a profession,”<sup>89</sup> and Spotify offers an expression of this identity through individual musical taste. Simultaneously, “machinic enslavement” dissects each entity (user, listener, singer, songwriter, song) within Spotify’s platform, strips it of its individuality and treats it as “a gear, a cog, a component part...in the media assemblage.”<sup>90</sup>

---

87. Zuboff, 45.

88. Lazzarato, *Signs and Machines*, 24.

89. Lazzarato, 12.

90. Lazzarato, 25.

For Lazzarato, “individual” refers to a person’s conscious, narratable identity, whereas “[d]ividuals have a statistical existence controlled by apparatuses [of surveillance capitalism like Spotify] whose operation differ from the individualization carried out by pastoral power, which is exercised on ‘real’ individuals.”<sup>91</sup> This framework is appropriate for analysis of both consumers and producers of music. In rendering their “individualized” expressions (of production or consumption) into useable data, choices are disassociated from their human origins and converted into quantifiable data points. Both users and producers are then treated statistically, as dividuals, as opposed to individually.

Zuboff calls surveillance capitalism something “brand-new,”<sup>92</sup> while Lazzarato sees capitalism’s infiltration of new territories as a continuation of its core logic of overcoming ever-expanding limits. Though Zuboff and Lazzarato have substantial philosophical and political differences, I insert the individual/dividual binary into Zuboff’s framework of surveillance capitalism in order to illustrate the ways it treats users and producers as both subjects and objects, encouraging and inviting their expression of self in order to reflect a reassembled version of it back to them.

Zuboff calls on “indignant elected officials and policy makers who understand that their authority originates in the foundational values of democratic communities” to provide institutional solutions to reign in the power of surveillance firms.<sup>93</sup> However,

---

91. Lazzarato, 37.

92. Zuboff, *Surveillance Capitalism*, 521.

93. Zuboff, 522.

Lazzarato views the government as a component part of the same apparatus of control that perpetuates contemporary capitalism. He, by contrast, sees refusal as the only path to restructure the capitalist systems of subjectivity, calling for “a subjective refusal that aims at the dominant power relation in capitalism: wage labour.”<sup>94</sup> Despite the disparity between the two scholars, I find a richness in the overlapping observations depicted through both Lazzarato’s militant critique and Zuboff’s reform orientation. That they both ring many of the same alarm bells about the current state of capitalism and its techniques and tactics to condition subjectivity adds substantial value to my work here, more so than any philosophical or political conflict between the two.

#### 1.4.1.4 *Spotify Teardown: Inside the Black Box of Streaming Music*

Finally, *Spotify Teardown: Inside the Black Box of Streaming*, is the most current, in-depth scholarship directly relevant to my work. Eriksson et al. present an examination of the company’s corporate, financial, and technological pasts and present “to disassemble the way Spotify’s product is commonly conceptualized.”<sup>95</sup> The authors work to demystify the “black box” of the platform through detailed analysis, interviews, and “autoethnographic and self-reflexive forms of fieldwork” that poke and prod at Spotify’s network of infrastructures.<sup>96</sup> In doing so, *Spotify Teardown* provides historical, economic, ideological, corporate, and technological context of Spotify’s inner workings and illuminates its impact on the music industry, music listeners, and music makers. While

---

94. Maurizio Lazzarato, *Governing by Debt*, trans. Joshua David Jordan (South Pasadena, CA: Semiotext(e), 2015), 247.

95. Eriksson et al., *Spotify Teardown*, 9.

96. Eriksson et al., 7.



providing a thorough background of the company, the authors simultaneously illustrate the ways in which Spotify weaves its practices and aims deep into its users' everyday lives. I use *Spotify Teardown* to historicize and contextualize my research and to provide contemporary scholarly grounding for the more abstract components of my theoretical framework.

## 1.4.2 Chapter specific literature

### 1.4.2.1 Believe

In chapter two, my research centres around Spotify's "Wrapped" promotion—a yearly campaign that invites users and producers to share their data as a personalized expression of themselves or of their success. I discuss "Wrapped" in terms of Zuboff's notion of "habituation,"<sup>97</sup> the process by which companies normalize the presence of surveillance and techniques of data collection. I look at user reactions to "Wrapped" and discuss tactics through which they adjust or hide their listening habits to alter/improve their results, mirroring social media practices such as "self-surveillance" and "social surveillance" illustrated in the scholarly work of David Lyon, Alice Marwick and danah boyd, Brooke Duffy and Ngai Chan.<sup>98</sup>

I conduct case studies of three producers, Zola Jesus, Neanderthal, and Nina Nesbitt, to illustrate different phases of habituation to "Wrapped" and Spotify's data. I analyze each producer's Twitter reactions, where they perform varying degrees of belief

---

97. Zuboff, *Surveillance Capitalism*, 140.

98. David Lyon, "Surveillance Culture: Engagement, Exposure, and Ethics in Digital Modernity," *International Journal of Communication* 11 (2017); Alice E. Marwick and danah boyd, "I Tweet Honestly, I Tweet Passionately: Twitter Users, Context Collapse, and the Imagined Audience," *New Media & Society* 13, no. 1 (July 2010) <https://doi.org/10.1177/1461444810365313>; Brooke Erin Duffy and Ngai Keung Chan, "'You Never Really Know Who's Looking': Imagined Surveillance across Social Media Platforms," *New Media & Society* 21, no. 1 (July 2018) <https://doi.org/10.1177/1461444818791318>.

and disbelief in “Wrapped,” while I make connections to their Spotify data and their career trajectories within the platform and outside of it. I discuss how producers must negotiate a version of what Taina Boucher, in *If...Then: Algorithmic Power and Politics*, calls the “threat of invisibility” as represented by the millions of unheard songs on the platform.<sup>99</sup> I buttress my analysis with evidence of Spotify’s claims for the validity of its data from its own marketing materials as well as journalistic and trades publication coverage of “Wrapped” from a variety of sources including David Turner’s “Penny Fractions” music streaming newsletter, *The Atlantic*, and *Ad Age*.

#### 1.4.2.2 Forget

In chapter three, I introduce *How Emotions Are Made*, the work of psychologist and neuro-scientist Lisa Feldman Barrett into an analysis of mood-based playlists. I argue that Spotify’s mood-based music sorting perpetuates the notion of what Barrett calls emotional “essentialism.”<sup>100</sup> She reveals the falsity of standard social and scientific beliefs that humans are born with a set of identifiable emotions that can be observed and measured across societies and cultures, showing instead that emotions are culturally and historically produced by means of prediction based on “emotion concepts” derived from past experience, affect, and physiology.<sup>101</sup>

Surveillance capitalism operates as if the standard social beliefs of inborn, transhistorical, unchanging emotions reflect reality, and Spotify’s mood-based playlists

---

99. Taina Boucher, *If...Then: Algorithmic Power and Politics* (New York: Oxford University Press, 2018), 83.

100. Lisa Feldman Barrett, *How Emotions Are Made: The Secret Life of the Brain* (New York: Mariner Books, 2017), 152.

101. Barrett, 30.

neatly bundle music into broad emotional categories like “Life Sucks” or “Happy Hits” that capitalize on its users’ predisposition to essentialization. Mood-based playlists form an aspect of what Zuboff calls a “choice architecture,” the ways Spotify’s “space” is designed to encourage users to make choices that serve the interest of the machine.<sup>102</sup>

I show how Spotify’s mood-based sorting functions to facilitate its advertising business, using interviews with executives in trades publications like *Ad Age* and through the company’s Spotify for Brands website, where it pitches services to advertisers. I also use the contemporary musical scholarship of Paul Allen Anderson’s “Neo-Muzak and the Business of Mood,” in which he looks at mood-based sorting as a “New Muzak successor” that act “as personal care products for affect management and mood elevation.”<sup>103</sup> I engage with Jonathan Sterne’s notions of musical territorialization from “Sounds like the Mall of America: Programmed Music and the Architectronics of Commercial Space,”<sup>104</sup> as well as the journalistic perspectives of Liz Pelly in her Spotify-related pieces “The Problem with Muzak,” “Streambait Pop,” and “Big Mood Machine” from *The Baffler*.<sup>105</sup>

---

102. Zuboff, *Surveillance Capitalism*, 294.

103. Paul Allen Anderson, “Neo-Muzak and the Business of Mood,” *Critical Inquiry* 41, no. 4 (2015): 811, <https://doi.org/10.1086/681787>.

104. Jonathan Sterne, “Sounds like the Mall of America: Programmed Music and the Architectronics of Commercial Space,” *Ethnomusicology* 41 no. 1 (Winter 1997), <https://jstor.org/stable/852577>.

105. Liz Pelly, “Big Mood Machine,” *The Baffler*, June 10, 2019, <https://thebaffler.com/downstream/big-mood-machine-pelly>; “The Problem with Muzak,” *The Baffler*, December 7, 2017, <https://thebaffler.com/salvos/the-problem-with-muzak-pelly>; “Streambait Pop,” *The Baffler*, December 20, 2018, <https://thebaffler.com/downstream/streambait-pop-pelly>.

### 1.4.2.3 Silence

Zuboff writes that the “relationship of technology addiction was...pioneered, tested, and perfected with outstanding success in the gaming industry.”<sup>106</sup> In chapter four I use Natasha Dow Schüll’s *Addiction By Design* to argue that Chill music, a prominent mood-based category on the platform, emulates many of the tactics used in the machine gambling industry to immerse users in a state of perpetual consumption. I show how Spotify’s Chill playlists encourage a state that mirrors Schüll’s notion of “the machine-zone” where, as one addicted gambler describes “you’re with the machine and that’s all you’re with.”<sup>107</sup> I argue that Chill playlists cultivate the desired collusion between user and technology that maximizes data extraction with music just engaging enough to never turn off. I briefly use Nolan Gertz’s *Nihilism and Technology* as well as Nietzsche’s *On The Genealogy of Morality* to fuse the “nothingness” offered by the “machine zone” to Zuboff’s description of surveillance capitalism dismantling the individual’s “will to will.”<sup>108</sup> Again, I engage with the writing of Liz Pelly and also incorporate the popular music scholarship of Robin James and Patrick Åker to complement my own musical analysis and show how Chill music illustrates a collusion between producers and the

---

106. Zuboff, *Surveillance Capitalism*, 449.

107. Natasha Dow Schüll, *Addiction by Design: Machine Gambling in Las Vegas* (Princeton: Princeton University Press, 2014), 2.

108. Nolen Gertz, *Nihilism and Technology* (London: Rowman & Littlefield, 2018), Apple Books; Friedrich Wilhelm Nietzsche, *On the Genealogy of Morality and Other Writings*, ed. Keith Ansell-Pearson, trans. Carol Diethe (Cambridge, United Kingdom: Cambridge University Press, [1887] 2017).

machine, where they adapt their work to fit the risk-averse consumption the playlists require.<sup>109</sup>

### 1.4.3 The algorithm

Though discussion of Spotify's purely algorithmic music recommendation features is outside the scope of this project, "the algorithm" is a prominent component of the machine. In this regard, my project adapts the methodological impetus of Taina Boucher's *If...Then: Algorithmic Power and Politics*. I follow Boucher's suggestion of "a shift from the question of what algorithms are to what they do."<sup>110</sup> Marcus O'Dair and Andrew Fry agree that "[i]n considering the algorithms utilized by music streaming services...we need to do more than imagine what might be hidden within the black boxes."<sup>111</sup> As Boucher points out, in Spotify's music recommendation algorithms, such as Discover Weekly, "the main ingredient is other people and their curated playlists."<sup>112</sup> Because so much of Spotify's machinic music sorting and suggestion is based on the inputs of other users as well as human curators, "[i]t is not that agency is with the designers, the users, or the algorithm."<sup>113</sup> Throughout this work I attempt to balance and explore the intersection of all three. I utilize *Spotify Teardown* and *Age of Surveillance*

---

109. Robin James, "Pop's Chill Thrills Aren't So Cheap," *Sounding Out!*, August 1, 2016, <https://soundstudiesblog.com/2016/08/01/pops-chill-thrills-arent-so-cheap/>.

110. Boucher, *If... Then*, 42.

111. Marcus O'Dair and Andrew Fry, "Beyond the Black Box in Music Streaming: the Impact of Recommendation Systems upon Artists," *Popular Communication* 18, no. 1 (October 2019): 5, <https://doi.org/10.1080/15405702.2019.1627548>.

112. Boucher, *If... Then*, 54.

113. Boucher, 54.

*Capitalism* to investigate the designers of the machine, *Noise* and *Signs and Machines* to analyse how users and producers are treated as both subject and object, and *How Emotions are Made* and *Addiction by Design* to discuss the implications of the interactions between them. I am, as Boucher suggests “more concerned with the algorithm as an *adjective*, understood as the social phenomena that are driven by and committed to algorithmic systems,”<sup>114</sup> and treat the algorithm not as a separate technological entity, but as another component part of the Spotify machine.

## 1.5 Methodology

### 1.5.1 Data collection

To supplement the above theoretical framework, I incorporate analysis of “Spotifyfied” music data into my study of mood-based sorting in chapters three and four. The Echo Nest’s machine listening apparatus extracts data from each song in a variety of categories called “Audio Features.”<sup>115</sup> Using the aggregating application Spot on Track, I compiled “Audio Features” data including tempo (measured in beats per minute), key (indicated by musical letters), mode (major or minor key), “danceability,” “valence,” “energy,” “acousticness,” “instrumentalness,” “liveness,” and “speechiness” (each measured as a percentage) for 2132 songs from six mood-based playlists. The playlists include: “Happy Hits” and “Mood Booster” (representations of happy); “Chill Hits” and “Chill Vibes” (representations of chill); “Down in the Dumps” and “Life Sucks” (representations of sad). I logged the “Audio Features” for every song from each playlist

---

114. Boucher, 29.

115. See Appendix A, page 176, for detailed descriptions and definitions of these categories.

in six-month intervals between August 2017 and August 2019. I analyzed the trends apparent in each iteration of the playlist and then compiled them into larger representations of each mood. Using release date and record label information from Spot on Track, I was also able to calculate average “song age” for each playlist mood as well as the percentage of major label and self-released songs in each particular set. While this data offers a relatively small sample size, it provides valuable insight and raises many intriguing possibilities for future research. In addition to the Echo Nest’s terminology I employ two additional data-derived terms: *optimal differentiation* and *playlist suitability*.

**Optimal differentiation:** I apply “optimal differentiation” to a particular playlist or a mood. My version of “optimal differentiation” represents a simplified application of Noah Askin and Michael Mauskapf’s methodology from “What Makes Popular Culture Popular,” in which they devise “optimal differentiation” based on Echo Nest “Audio Features” and release data. They contend that on the Billboard charts “the path to success requires some degree of both conventionality and novelty” and I adapt this logic to the curation of mood-based playlists.<sup>116</sup> I argue that in order to successfully maintain the playlist’s mood, each song must offer some resemblance to what preceded it, while introducing something novel to maintain user interest and each mood appears to have its own logic. To calculate “optimal differentiation” for each playlist, I began by finding the playlist’s average rating in each of the “Audio Features” categories listed above. Then I calculated each song’s difference from the average in each category and added them together to get each song’s “total variance.” The average total variance for the entire

---

116. Askin and Mauskapf, “What Makes Popular,” 915. Their technique is more complex than mine in that it incorporates factors such as an artist’s past successes and their label associations into account. While those factors are also important in *why* a song is included on a playlist, they are not relevant to my analysis of a song’s contribution to a mood.

playlist is the set's "optimal differentiation" level. I refer to "optimal differentiation" throughout the thesis as the ideal balance of difference and sameness required to maintain both the mood of a playlist and the listeners' interest.

**Playlist suitability:** I used the calculation of "optimal differentiation" to create my own measurement that I call "playlist suitability." This measurement is an individual song's proximity to the playlist or mood's "optimal differentiation." For example, if a playlist has an "optimal differentiation" of 121 and an individual song has a "total variance" of 116, its playlist suitability score would be 5. A low score indicates the "Audio Features" of the song are close to the ideal balance of "sameness" and difference for that particular playlist. A high "playlist suitability" score could indicate a song being too similar to the average song, or too different. See appendix A for a more detailed description of these terms and of my data collection methodology.

Within the scope of this project, "optimal differentiation" and "playlist suitability" are used primarily in a supplementary capacity. In my limited use, they appear to help in identifying ideal types within a playlist and appear to support aspects of my musical analysis. Further adaptation of Askin and Mauskapf's methodology to mood-based playlist data analysis would require more rigorous testing across subsets and use of more controls but offers compelling possibilities for future research. Determining any correlation between "playlist suitability" and "success" on Spotify is beyond the scope of this work but is also worthy of further investigation. Data analysis is not at the core of my interest here, but what I have compiled offers valuable support to my theoretical and musical analysis, while raising questions for future research regarding the entanglement between Spotify's machinic listening, algorithmic organization, and mood-based sorting.



### 1.5.2 Case study selection

The case studies I undertake throughout the thesis offer what Bent Flyvbjerg, in *Making Social Science Matter*, calls “paradigmatic cases.” I use them, as Flyvbjerg suggests, to “develop a metaphor or establish a school for the domain which the case concerns.”<sup>117</sup> For instance, in chapter two, artists like Zola Jesus, Neanderthal, and Nina Nesbitt appear to be following distinctive paths that illustrate Zuboff’s stages of habituation: outrage, helplessness, resignation, and acceptance.<sup>118</sup> Of course, there are millions of producers engaging with Spotify in different ways, and I don’t necessarily claim for these cases to be “representative” of a bigger group, but I offer them as examples that help illustrate reactions that align with Zuboff’s model. Flyvbjerg writes that use of paradigmatic case studies generally serves to “highlight the more general characteristics of the societies in question.”<sup>119</sup> These producer case studies represent “ideal types” as examples to illustrate the general characteristics of Spotify’s subjectivization of music producers.

Flyvbjerg asks Hubert Dreyfus how to identify a paradigmatic case and he explains: “You just have to be intuitive.”<sup>120</sup> Each of my producer case studies started with instances of intrigue that developed over the course of my research into illustrative, interconnected, and comparative cases. I have followed my intuition about these cases

---

117. Bent Flyvbjerg, *Making Social Science Matter: Why Social Inquiry Fails and How It Can Succeed Again*, trans. Steven Sampson (Oxford, UK: Cambridge University Press, 2001), 79.

118. Zuboff, *Surveillance Capitalism*, 171.

119. Flyvbjerg, *Making Social Science Matter*, 80.

120. Flyvbjerg, 80.

and other aspects of Spotify, like Chill (the paradigmatic case I engage with in chapter four), since long before I was conducting academic research and it led me to making many of the theoretical and practical connections that follow.

### 1.5.3 Musical analysis

The musical analysis in this work is based on my own subjective listening, academic training, and professional experience. Again, I chose paradigmatic and often extreme musical examples that most clearly illustrate each point for a non-musically trained reader. My academic background in music composition as well as extensive experience as a pop songwriter, producer, and recording artist give me the tools to analyse and dissect the composition, arrangement, production, instrumentation and recording techniques I discuss throughout. Of course, much of this analysis is subjective, so I have done my best to supplement my analysis with data whenever possible and introduce supporting evidence from journalists such as Marc Hogan and Liz Pelly and Popular Music scholar Robin James.<sup>121</sup>

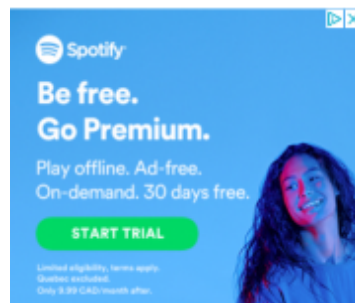
---

121. Marc Hogan, “Uncovering How Streaming Is Changing the Sound of Pop,” *Pitchfork*, September 25, 2017, <https://pitchfork.com/features/article/uncovering-how-streaming-is-changing-the-sound-of-pop/>.

## 2 Believe: “Be free”

*“You’ll keep on seeing what you’ve been seeing. The training is all there, on a nonrational level. Impressed on your systems.”*<sup>1</sup>

Spotify’s surveillance capitalism machine works in a myriad of ways to condition the affective responses and behaviours of its users and of those who produce the music it requires to operate. Outwardly, Spotify’s marketing language offers “freedom” in the form of “infinite” musical choice and portability (*see fig. 2.1*).



**Figure 2.1:** *Spotify Advertisement screen captured by the author, March 2019*

Yet Spotify’s Chief Marketing Officer Seth Farberman assures potential advertising clients that it provides “a controlled environment.”<sup>2</sup> Spotify’s platform, as Srnicek writes, “governs interaction possibilities” between both sides, production and consumption, contributing to the platform’s interwoven flows of music, data, and money.<sup>3</sup> An important aspect in maximizing the effectiveness of its “governance” is working to establish belief, from both users and producers, in the version of freedom it claims to offer.

“Wrapped,” a marketing campaign promoted by Spotify each December since 2016, provides evidence of this work. The campaign invites both users and producers to view and then share, via social media, the data-fied details of their year on the platform.

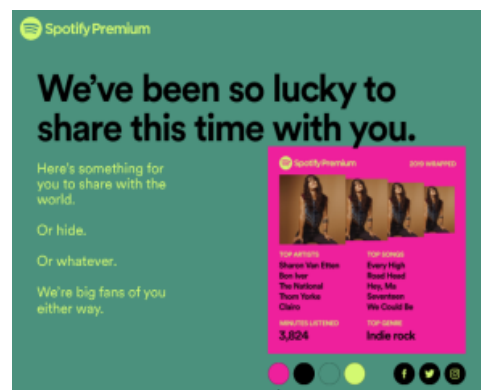
---

1. Philip K. Dick, *Time Out of Joint* (London: Gollancz, [1959] 2003), 199.

2. Bruell, “Spotify Has Big Ambitions for Ad Business.”

3. Srnicek, *Platform Capitalism*, 48.

Users are encouraged to share a representation of their music-identities through the songs and artists they listened to most and how much time they spent listening. Producers are encouraged to share a representation of their successes on the platform, measured in number of streams, number of fans, and the number of countries in



**Figure 2.2:** *The author's 2019 "Wrapped" user data, photo retrieved Dec. 2019*

which their music was listened to. In this chapter I focus my argument around the “Wrapped” promotion to illustrate one of the ways in which Spotify controls its environment using a system of self-referential and decontextualized data, exhorting users and producers to perform belief in its values and interests. I argue that Spotify’s investment in data-driven rationality and its promotional efforts to justify and celebrate this rationality works to enclose users’ and producers’ subjective experiences of music and legitimate broader ideological claims about the hegemony of technology and contemporary capitalism.

In Zuboff’s model, surveillance capitalism works to achieve an (unattainable) goal in which behaviour can be predicted with certainty, because known behaviour can more easily be targeted, regulated, and manipulated. With “Wrapped,” Spotify enacts an instance of what Zuboff calls “tuning.” Tuning, she explains, “may involve subliminal cues designed to subtly shape the flow of behaviour.”<sup>4</sup> I argue that “Wrapped” shapes the behaviour of both users and producers, inviting them to act as though they believe in its

---

4. Zuboff, *Surveillance Capitalism*, 293.

data so the machine can achieve “maximally efficient influence” over their consumption and production of music.<sup>5</sup>

In part one of this chapter, “Wrapping Belief,” I argue that Spotify aspires to create a closed system, though its enclosure relies on belief and conformity rather than physical and structural containment. I introduce Ragle Gumm from Philip K. Dick’s novel *Time Out of Joint* as an individual enclosed in a system where his work unwittingly fuels a machine with interests that do not align with his own. He is “tuned” to believe in an entire world that exists exclusively to extract value from his labour. Gumm’s fictional experience helps to dramatize Spotify’s dynamic logic of enclosure. I follow with a case study of independent recording artist Zola Jesus, a music producer who rejects the terms the closed system dictates, even as she participates. I suggest that Spotify tunes producers to its environment using a version of what Taina Boucher calls the “threat of invisibility” and show some of the ways the threat materializes for those, like Zola Jesus, who refuse to perform belief in Spotify and its data.<sup>6</sup> Both Ragle Gumm and Zola Jesus are subjected to working within controlled environments that require collaboration of those within and impose consequences or restrictions for those who refuse to participate on its terms.

In part two, “Using Belief,” I use Zuboff’s notion of “habituation” to show the process by which Spotify has worked to normalize and even celebrate its data collection. I show how “Wrapped” is a part of Spotify’s ongoing campaign of habituation designed not just to normalize the presence of its two-way listening machine, but to invite users and producers to believe they can express themselves through music and subsequently

---

5. Zuboff, 293.

6. Boucher, *If... Then*, 83.

through Spotify's music-derived data. I briefly introduce the user side of "Wrapped" and situate it within broader scholarly discussions involving self-presentation, self-surveillance, and social media.

In part three, "Producing Belief," I illustrate the habituating effects of "Wrapped" on music producers. I discuss the ways in which they appear to perform belief in Spotify's decontextualized data as representations of success. In order to succeed by the self-referential standards Spotify provides, they must "tune" their outlook and their music to placate the machine and pretend or act as though there is nothing outside the confines of the platform.

Zuboff argues that a successful habituation process moves through stages characterized by agreement, helplessness, and resignation.<sup>7</sup> I illustrate producers at different stages of their careers, moving through different phases of habituation. I present two more case studies, of independent producer Neanderthal and Spotify "darling" Nina Nesbitt, and I look at the ways in which they appear to tune their music and attitudes, contextualize the rewards they are given for "good behaviour," and ask if Spotify's frames of success are worth believing in at all.

Ultimately, I argue that because of Spotify's market share and industry influence, even the many artists who do not perform belief in the company or its data are compelled to distribute their music via Spotify. For all participants in the controlled environment, as Lazzarato argues, it no longer matters what they believe, it only matters what they do,<sup>8</sup> and in some form or another they all put their songs into service of the machine.

---

7. Zuboff, *Surveillance Capitalism*, 171.

8. Lazzarato, *Governing by Debt*, 150.

## 2.1 Wrapping Belief

### 2.1.1 Ragle Gumm is wrapped

In Philip K. Dick's 1959 novel *Time Out of Joint*, protagonist Ragle Gumm earns his modest living from the prize money for a daily newspaper puzzle and lives with his sister and her family. Gumm's work involves systematically unlocking patterns, following his intuition, and plugging numbers into a grid to solve each day's iteration of "Where Will The Little Green Man Be Next?" Aside from his involvement in what he believes is a national competition, Gumm's existence is entirely confined to the limits of the small town in which he resides. He is known to everyone in the community, he believes, as a result of his success tracking "The Little Green Man." The town appears to be much like a typical American suburb, though small differences in its version of 1959 and the reader's own are slowly revealed. For instance, Marilyn Monroe is not a household name or even a familiar face and AM/FM radios are scarce. As Gumm wrestles with conflicted feelings of isolation and obligation to the contest and his family, a series of seemingly innocuous but increasingly unnerving events call into question his perception of the world around him. He finds a *Life* magazine depicting Monroe as a star, yet neither he nor anyone around him recognizes her face or name. His nephew builds a homemade radio and they pick up frequencies where the topic of conversation seems to be Gumm himself. At first, he attempts to rationalize the radio chatter as being related to the contest, but slowly he begins to feel as though he is somehow the central figure in an elaborate conspiracy. His paranoia grows as he feels the limits of the town close in around him, both psychologically and physically. After a daring escape he comes to realize everything he knows—his work, town, family, and time—is out of joint; he discovers a broader hidden context. Once outside the town's limits, the world Gumm

thinks he knew evaporates and he finds himself in another time and place entirely. It is actually 1998, the world is at war with colonists on the moon, it is revealed that his work solving the newspaper contest is, in actuality, the United States military's harnessing of his ability to predict the locations of bomb strikes coming from the "Lunatics." All along, his work on the contest has been in the service of a war machine, furthering a cause in which he no longer believes.

Much like "Old Town," the system staged around Gumm, Spotify goes to great lengths to create a controlled environment around music producers, obscuring the uses and value of their attachments to music. The military machine requires only one Ragle Gumm, but Spotify requires the inputs of millions of music producers. It cannot physically contain them, but it constructs a system where music producers are offered decontextualized rewards designed to keep them engaged and invested while they produce for a machine whose true aim, data harvesting, is obscured from them. Spotify CEO Daniel Ek maintains that the company likes "to work with [artists] as partners,"<sup>9</sup> but the partnership is radically out of balance. Spotify pays those who produce the content it requires fractions of pennies per stream, while Ek, Spotify's executives, and their major record label partners make billions. Just as Gumm is absorbed in the challenge of his daily contest in exchange for small cash prizes and his photo in the newspaper each day, music producers are invited to compete for approval of the machine and follow the numbers it generates up a ladder of success that may leave them feeling elevated within the context of the platform, but no better off in terms of money, notoriety, or recognition beyond the controlled environment. The platform provides the context, data, and

---

9. Quoted in Dubner and Frassica, "How Spotify Saved the Music Industry."



analytical tools designed to help producers solve the puzzle of “Spotify success” which, first and foremost, satisfies the machine.<sup>10</sup> Just as Ragle Gumm’s contest is fuel for the war machine and not a game, the Spotify-subjected music producer no longer just produces music to sell, but also creates cogs in a surveillance machine. As Zuboff writes: “In this new context [of surveillance capitalism], goods and services are merely surveillance-bound supply routes.”<sup>11</sup> Spotify works to reorient the production of music by rewarding songs that offer the most frictionless supply routes with increased exposure and by simply ignoring those that do not adapt to its logic. The 20% of songs on Spotify that have never been streamed act as a silent threat and a constant reminder of what is at stake for producers who choose to work on their own terms and ignore the feedback of the machine.

With promotions like “Wrapped,” Spotify provides producers with data they can use to help tune their songs to become more efficient supply routes. As a result, collections of sound, songs, created with aspirations of eliciting listeners’ emotional response are deployed as tools of extraction that worm their way into users’ private spaces and capture everything they can. Music producers who provide the best solutions for “In Which Playlist Will The Good Little Song Fit Best?” can accumulate millions of streams in the isolation of the closed system but this may be of little value to them outside of it. Their work, like Gumm’s, only matters insofar as it serves a power that does not show itself.

---

10. And, just like Ragle Gumm is given special treatment by the contest’s proprietors because of his previous successes, artists with major labels or previous Spotify “successes” are always given a leg up.

11. Zuboff, *Surveillance Capitalism*, 132.

### 2.1.2 Producer case study #1: Zola Jesus – recontextualizing “Wrapped”

American recording artist Zola Jesus offers an example of a music producer who rejects the rationality of “Wrapped” data and the closed system it perpetuates, but her refusal to perform belief limits the level of exposure her music receives on Spotify. As long as Ragle Gumm keeps his work and life in the context that the extractive apparatus provides, he is rewarded. He keeps finding “The Little Green Man,” receives his nominal prize money, and the war efforts proceed. As he discovers the clues that start to contextualize his surroundings, the boundaries of the enclosure begin to tighten around him. It is only when he starts to disrupt the flow of the system that he discovers he is not free. Similarly, the limits imposed by Spotify’s enclosure are most evident to those producers whose music and ideology conflict with the machine’s logic. Spotify’s subjectivization operates such that music producers who successfully produce songs to operate as frictionless supply routes can be rewarded with increased exposure via Spotify branded playlists. However, not all are invested in playing Spotify’s data-driven streaming game. Those, like Zola Jesus, who refuse to “tune” their music or behaviour are denied “rewards,” like playlist adds that can lead to streams, while the machine redirects its energies to more complicit producers.

Zola Jesus has been vocal about her refusal to perform belief in Spotify’s data. In a since deleted Twitter reaction to “Wrapped” from December 7, 2018, she writes:

not gonna post spotify year end stats because that company has done jack shit for me and other independent artists...

they won't even give me a complimentary subscription.  
i've given them more money than they've given me [sic].<sup>12</sup>

Spotify's machine cannot operate without music, but it requires those who provide the platform with content in exchange for meagre royalties to pay full price, like any other user.<sup>13</sup> Zola Jesus openly rejects the power imbalance of the "partnership" with her refusal to perform belief in the value of the company's year-end statistics— "Wrapped." She seeks to reframe Spotify's internalized data within a broader context; that is, *how can producers continue to make music to put into Spotify's machine if they aren't even paid enough to cover the cost of a monthly subscription?*

Songwriter Justin Tranter states: "With out [sic] songs these tech companies have nothing to stream/sell."<sup>14</sup> Yet, just to cover the monthly cost of a \$9.99 subscription an independent music producer must accumulate in excess of 2500 streams per month: a high threshold for most to cross after 93.6% of the available streams are accumulated by just one percent of songs (500,000 out of 50 million).<sup>15</sup> Still, Spotify's market share and influence leave producers limited choice beyond participating on the terms it dictates. Even critical and outspoken producers, like Zola Jesus, distribute their music on Spotify while they continue to pay full price for their subscriptions.

---

12. Zola Jesus (@zolajesus), "not gonna post spotify," Twitter post, December 7, 2018, <https://twitter.com/zolajesus/status/1071124589604937728?s=12>, [since deleted].

13. Spotify introduced a discounted student subscription rate of \$4.99 per month in 2019, but still no artist rate.

14. Justin Tranter (@tranterjustin), "Without songs," Instagram photo, March 7, 2019, <https://www.instagram.com/p/Buu6JEXlleB/>.

15. "Buzz Angle Music 2017 U.S. Report," BuzzAngle Music. 2500 streams would pay \$9.99 calculated at the rate of \$.004 per stream, which does not include distributor fees (often 10-15%) or any split of royalties with record labels, managers, etc.

While Zola Jesus questions the rationality of the promotion and the terms of the “partnership” in general, “Wrapped” offers producers the opportunity to measure themselves against their peers, perhaps attract new fans, and to perform belief in Spotify’s measures of success.<sup>16</sup> Yet these data are anything but raw. First, Spotify only shares a tiny portion of the data it collects, keeping the more valuable analytics—like financial information or its algorithmic evaluation of a song’s “performance” on a playlist—to itself. Secondly, the data provided is decontextualized, meaning it coaxes producers to see themselves and/or their success (or failure) through a lens made of what the company chooses to share. The data is disassociated from producers’ existence outside the platform, but “Wrapped” still attempts to connect it to previously realized frames of success by using terms like “fans” that already operate within a broader context.<sup>17</sup> As far as “Wrapped” is concerned, a “fan” or “listener” is someone who streamed a producer’s song one time, not someone who would necessarily buy their music, merchandise, a ticket to a performance, or even know who they are listening to.

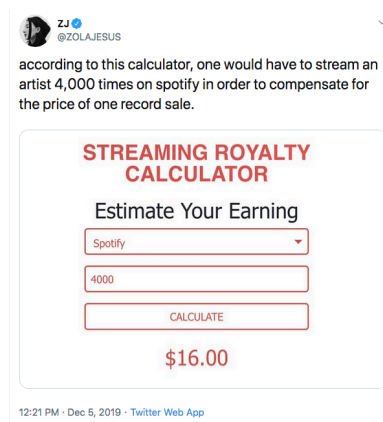
As Spotify unveils the campaign each December, many of Zola Jesus’ peers take to social media to present the details of their year on Spotify as measured in “number of streams,” “fans” and “minutes listened.” While “fans” and “minutes listened” don’t directly correspond to income, “streams” does, and Zola Jesus wishes to make the details

---

16. It can also be situated in the broader discussion of work and “the quantified self” as studied by Phoebe Moore and others. See Phoebe V. Moore, *The Quantified Self in Precarity: Work, Technology and What Counts* (New York: Routledge, 2019).

17. The music industry has a long history of decontextualized and opaque measures of success. For instance, I thought it would be a big deal to have a Top 40 song on the radio. Then I had one, and I found out it was from just forty “spins” on two stations and it made no difference in any other aspect of our career. Or when I first started putting music online, we all measured ourselves and each other by “Daily Plays” on Myspace, so Spotify’s self-referential data is not a new phenomenon.

of this correlation clear. She re-contextualizes Spotify’s “Wrapped” data in a Twitter post from December 5, 2019 (*see fig. 2.3*). Utilizing an online “streaming royalty calculator,” she illustrates that four thousand streams on Spotify equals the revenue from selling one \$16 album.<sup>18</sup> She compares income produced by “streams” with “one record sale,” a familiar (at least to some) transaction, in an attempt to provide context for “Wrapped” data that ignores this or any other financial equivalency. “Wrapped” illustrates Spotify’s preference that artists ignore their royalty earnings and the role their work plays in the company’s data harvesting and instead measure their success through self-referential metrics detached or at least distanced from income.



**Figure 2.3:** Zola Jesus re-contextualizes streaming by comparing it to album sales. Retrieved by the author December 5, 2019.

In her attempts to re-contextualize “Wrapped,” Zola Jesus bucks a trend in which music producers increasingly share data and thank the company for various “successes.” It has become an industry expectation for producers to thank Spotify on their social media platforms for a playlist “add.”<sup>19</sup> Producers may feel compelled to perform belief in Spotify and its data because of what Taina Boucher calls the “threat of invisibility.”<sup>20</sup> Though her analysis of the Facebook news feed as “a form of government” applies to

---

18. Zola Jesus (@zolajesus), “according to this calculator,” Twitter post, December 5, 2019, <https://twitter.com/zolajesus/>, [since deleted].

19. “Add” is another term adopted from radio language. A “thank you” does little for the artist (other than make their “belief” known) because, in all likelihood, their social media followers are already listening to their music, and all it does is drive their own audience to consume on Spotify’s terms, through its playlists.

20. Boucher, *If... Then*, 83.

individuals acting on social media,<sup>21</sup> music producers face a similar threat within Spotify. Boucher writes that “[i]n order to appear, to become visible, one needs to follow a certain platform logic.”<sup>22</sup> Spotify’s data, like “Wrapped,” provides producers with clear indicators of how well they are following the platform’s logic by telling them exactly how visible and audible they have been on the platform. It also offers a chance to both appear and appear to be successful on social media where their followers may have even less context for the data they share.

Spotify’s ability to directly influence a song’s visibility or audibility with its branded playlists keeps many producers wary of “biting the hand that feeds.” Laura Snapes writes in *The Guardian*:

If I compiled the off-record remarks from my interviews over the past decade, the majority would concern Spotify—namely how much artists hate it. “Please don’t put that in,” they panic after slugging it off. “I really need it to support my new album.” And they do: Spotify is a kingmaker.<sup>23</sup>

“This is why [platform] spaces are designed in such a way as to make individuals interchangeable,” writes Boucher.<sup>24</sup> Producers know that if they refuse to “tune” their behaviour and music to perform to the Spotify machine’s liking, there will be 40,000 more new songs added to the platform the next day, each looking for their chance to be seen and heard.

---

21. Boucher, 92.

22. Boucher, 84.

23. Beaumont-Thomas and Snapes, “Has 10 Years of Spotify Ruined Music?”

24. Boucher, *If...Then*, 83.

As producers internalize the threat of inaudibility and become habituated to Spotify data through promotions such as “Wrapped,” the machine’s power continues to overcome the album-sale rationality Zola Jesus invokes against Spotify. Bent Flyvbjerg writes: “while power produces rationality and rationality produces power, their relationship is asymmetrical. Power has a clear tendency to dominate rationality in the dynamic and overlapping relationship between the two.”<sup>25</sup> Zola Jesus’ rationality struggles against Spotify’s, but Spotify’s power rationalizes its data as producers are habituated to perform belief in it as truth or risk inaudibility. Meanwhile the size of Spotify’s user base, its “kingmaking” ability, and the dominating rationality of its data—quantifiable, trackable, measurable means of defining music’s success/failure in terms registered as fractions of pennies—fuel the company’s power over the way music is produced. Paraphrasing French philosopher Blaise Pascal, Flyvbjerg argues that “power has a rationality that rationality does not know. Rationality, on the other hand, does not have a power that power does not know.”<sup>26</sup> In Spotify’s controlled environment Zola Jesus *only* has rationality and no power. As Spotify’s internal measures become a dominant rationality of success, producers may eventually do whatever it takes to internalize this rationality and tune their music to fight the “threat of inaudibility.” “Participatory subjectivity,” Boucher writes, “is not constituted through the imposed threat of an all-seeing vision machine [or, in this case, a two-way listening machine] but,

---

25. Flyvbjerg, *Making Social Science Matter*, 154.

26. Flyvbjerg, 154.

rather, by the constant possibility of disappearing and becoming obsolete.”<sup>27</sup> Spotify’s control over music producers is not exerted physically, but through the “threat of invisibility” (and the inaudibility that accompanies it), as 10 million songs that have never been played hang over each producer’s head as a constant reminder of the potential consequence of refusing to perform belief in Spotify and its data.

Zola Jesus has built a marginally successful career outside of Spotify, but, whether as a result of her outspoken defiance on Twitter or because of her refusal to tune her music to fit into the machine, she has not been supported by Spotify’s internal playlist logic, thus denied access to significant streaming audiences.<sup>28</sup> Her most streamed song on Spotify, “Skin” has nearly 6 million plays since being released in 2011, but has never been included on a Spotify branded playlist.<sup>29</sup> In addition to the millions of unheard songs, there are millions more on Spotify with very few streams that have been ignored by playlist curators, but it is more of an anomaly to find a song with such a substantial number of streams accumulated without the boost provided by branded playlists.<sup>30</sup> Her Spotify listenership appears to consist of those who have actively sought out her music, not “fans” relying on the playlist machine to make suggestions for them. The lack of

---

27. Boucher, *If...Then*, 92.

28. As of March 2020, ZJ had 615 monthly supporters on the crowdsourcing site Patreon. Even if all of them subscribed at the lowest \$1 tier, this would, by all indications, provide substantially more income than her monthly Spotify streams.

29. “Zola Jesus,” Spotify, accessed March 5, 2020, <https://open.spotify.com/artist/78OKNrjc3BvniYTqvpOp6P?si=tl3nGQscTZS2GXofgUmU4g>; “Zola Jesus - Skin,” Spot on Track, accessed November 5, 2019, <https://www.spotontrack.com/tracks/791089>.

30. This song alone has, using the same stream calculator math as she does above, generated more than enough money to pay for ZJ’s Spotify subscription for a few years, but perhaps they accumulated long ago and no longer generate income or she does not have a favourable recording contract.



Spotify support is not because her music strays too far from the mainstream or does not meet the quality standards of its branded playlists— “Skin” was “mainstream enough” to be featured on the ABC medical drama *Grey’s Anatomy* in 2011.

Zola Jesus’ second most streamed song, “Exhumed” has 1.3 million streams on Spotify.<sup>31</sup> The song garnered critical accolades including *Pitchfork*’s “Best New Music,” KEXP’s “Song of the Day,” and a feature on the popular NPR series “All Songs Considered.”<sup>32</sup> Contrary to what could have been expected in the obsolete world of “record sale” rationality, acknowledgement from these external taste making sources did not lead to any increase in playlist exposure in the closed system, as the song was added to just one Spotify branded playlist: “Novedades Viernes España,” a Spanish editorial playlist with 38,349 followers at the time.<sup>33</sup> Zola Jesus has been neglected by the playlist machine and the “algotorial” logic that fuels its decision making.<sup>34</sup> She articulates her awareness of the “tuning” process required to thrive in the streaming realm in a 2019 blog post:

we are entering an age where it is increasingly impossible to become a professional musician without making music that panders to the tech startups [sic] and algorithms they create. It doesn’t seem like a good deal for us. It seems like a great deal for these streaming services. Now they hold all

---

31. “Zola Jesus,” Spotify.

32. Jamieson Cox, “Zola Jesus – ‘Exhumed,’” *Pitchfork*, June 7, 2017, <https://pitchfork.com/reviews/tracks/19173-zola-jesus-exhumed/>; Janice Headley, “Song of the Day: Zola Jesus – ‘Exhumed,’” *KEXP*, July 11, 2017, <https://www.kexp.org/read/2017/7/11/song-of-the-day-zola-jesus-exhumed/>.

33. “Zola Jesus - Exhumed,” Spot on Track, accessed November 5, 2019, <https://www.spotontrack.com/tracks/664723>.

34. Bonini and Gandini, “First Week Is Editorial,” 6.

the power and profit, just as the labels once did. Artists again, fucked.<sup>35</sup>

Zola Jesus continues to illustrate “outrage,” a stage Zuboff acknowledges as a precursor to habituation, or the normalization of surveillance.<sup>36</sup> In January 2020, Zola Jesus makes her outrage clear, writing “streaming services \*are\* extortion,” on Twitter.<sup>37</sup> When Ragle Gumm acts on outrage and escapes the confines of the closed system, it nearly costs him his life. Though not an immediate matter of life and death, the risk of repercussions from acting outraged toward Spotify, a “Spotify death” among the “invisible” songs is too great for most producers. The producers of the ninety-nine percent of songs that accumulate 6% of the streams are resigned to grapple with the decontextualized figures of “Wrapped,” rationalizing hopes of scraping together enough fractions of pennies to eke out a part of their living or at least cover the cost of another recording; many continuing to pay their monthly \$9.99 fee to the machine that enslaves both them and the products of their labour.

## 2.2 Using Belief

### 2.2.1 Habituation

“Wrapped” has been praised by Spotify users and producers on social media, by trades publications like *Ad Age* and *Tech Times*, and by marketing professionals. It

---

35. Zola Jesus, “On AI and Silicon Fascist Privilege,” Patreon post, November 24, 2019, <https://www.patreon.com/posts/31828469>.

36. Zuboff, *Surveillance Capitalism*, 141.

37. Zola Jesus (@zolajesus), “streaming services are extortion,” Twitter post, January 29, 2020, <https://twitter.com/ZOLAJESUS/status/1222572662318301185>.

received “Webby Awards” for “Best Visual Design” (2019) and “Best User Experience” (2018),<sup>38</sup> and generates substantial attention for the company each December. While social media platforms like Twitter have long invited users to share the data of their activity on the platform—number of “retweets,” “likes,” etc.—few have generated the excitement and accolades that accompany “Wrapped.” Though Spotify thinly veils the campaign as a “gift” for both producers and users, both its motivation and success as a marketing campaign are clear. David Turner points out that “[t]he two biggest spikes in searches for Spotify over the last few years correlate to Spotify’s early December Wrapped campaigns.”<sup>39</sup> While Lisa Segarra writes in *Fortune*: “With the marketing blitz surrounding Wrapped, Spotify [its app] is suddenly being downloaded at a remarkable clip.”<sup>40</sup> The popularity of the campaign appears to illustrate that many have accepted the terms—not just contractual, but Spotify’s definition of music, the self, and their success—of the machine’s data collection.

The process Zuboff calls “habituation” in her discussion of Google, is useful for illuminating Spotify’s production of subjectivity by normalizing surveillance. Habituation, in her words, is the process required for Google’s “simple robbery of [users’] decision rights to shade into normalcy and even to be reckoned as ‘convenient,’

---

38. “Your 2017 Wrapped,” The Webby Awards, accessed March 8, 2020, <https://www.webbyawards.com/winners/2018/advertising-media-pr/craft/best-user-experience/your-2017-wrapped/>. The “Webby Awards” have given out awards for “the best of the internet” for the past 24 years and are, according to the New York Times, “the internet’s highest honor.”

39. David Turner, “How Musicians Fought, and Won, Against Big Business,” *Penny Fractions Newsletter*, December 11, 2019.

40. Lisa Marie Segarra, “Spotify Wrapped Isn’t Just a Personalized Playlist. It’s an App Download Blitz,” *Fortune*, December 11, 2019, <https://fortune.com/2019/12/11/spotify-wrapped-playlist-app-download/>.

‘useful,’ or ‘marvelous.’”<sup>41</sup> “Wrapped” illustrates Spotify’s latest and most visible success at shading its surveillance toward “fun.” Haley Weiss writes in *The Atlantic*:

In a year when other tech giants were taken to task by the government, the market, and the public for their privacy practices, it’s hard to imagine anyone would respond with such enthusiasm if Facebook, Twitter, or Google started sending out annual summaries of everything they’ve got on us.<sup>42</sup>

However, Spotify did not achieve this level of acceptance of its surveillance without facing some user outrage—a reaction Zuboff identifies as a precursor to habituation. Following a 2015 privacy policy update in which Spotify’s application requested access to location services and other personal data on its users’ devices, *Business Insider* reported: “Users have taken to social media platforms like Twitter to threaten to cancel their subscriptions if the new policy is not pared back, with some declaring that they’ve already pulled the trigger.”<sup>43</sup> Spotify CEO Daniel Ek issued a blog post in the aftermath titled “SORRY.” He wrote: “Let me be crystal clear here: If you don’t want to share this kind of information, you don’t have to,”<sup>44</sup> and the controversial policy was scaled back. After the outrage subsided, Spotify began a new approach to

---

41. Zuboff, *Surveillance Capitalism*, 148.

42. Haley Weiss, “Why People Love Spotify’s Annual Wrap-Ups,” *The Atlantic*, December 13, 2018, <https://www.theatlantic.com/technology/archive/2018/12/spotify-wrapped-and-data-collection/577930/>.

43. Nathan McAlone, “People Are Quitting Spotify over Its New Privacy Policy,” *Business Insider*, August 21, 2015, <https://www.businessinsider.com/people-are-quitting-spotify-over-new-privacy-policy-2015-8>.

44. Quoted in Tim Ingham, “Daniel Ek Says Sorry after Spotify Privacy Backlash,” *Music Business Worldwide*, August 24, 2015, <https://www.musicbusinessworldwide.com/daniel-ek-says-sorry-after-spotify-privacy-backlash/>.

habituation in order to rehabilitate its public data broker image. Zuboff explains that as the habituation process becomes successful, “[t]he sense of astonishment and outrage dissipates. The incursion itself, once unthinkable, slowly worms its way into the ordinary.”<sup>45</sup> Spotify works to maximize the effectiveness and efficiency of its machine by gradually eliciting users’ compliance to constant data extraction, making it a part of the ordinary experience of consuming music and even presenting its data as something extraordinary, a gift, with “Wrapped.”

Spotify began its post-outrage rehabilitation in late 2016, just before the first “Wrapped” campaign. Its aggressive data-habituation tactics were put on display with a series of billboard advertisements that appeared in major cities, “jokingly showcasing aggregate data sets.”<sup>46</sup> The ads featured text such as: “Dear person who made a playlist called: 'One Night Stand with Jeb Bush Like He's a Bond Girl in a European Casino.' We have so many questions” (see fig. 2.4). *Tech Times*, says this campaign “shows the fun side of user data,”<sup>47</sup> but I argue it is another thinly veiled ploy to habituate users to Spotify’s surveillance.



**Figure 2.4:** Billboard showcasing the “fun side” of data. Photo retrieved from *TechTimes.com*, November 2019.

---

45. Zuboff, *Surveillance Capitalism*, 140.

46. Eriksson et al., *Spotify Teardown*, 4.

47. Aaron Mamiit, “Spotify Says Thanks To Weird 2016 In New Ad Campaign That Shows The Fun Side Of User Data,” *Tech Times*, November 30, 2016, <https://www.techtimes.com/articles/187415/20161130/spotify-says-thanks-to-weird-2016-in-new-ad-campaign-that-shows-the-fun-side-of-user-data.htm>.

While public awareness grows of the data extracted from our every digital move, surveillance firms like Facebook and Google face increased scrutiny over what information they collect, how it is gathered, and whom they share it with. As Zuboff details, these firms quietly assembled their pervasive surveillance networks, only ever slowing down to ask for forgiveness after instances of public “outrage” when it was discovered they’d gone too far. For instance, Facebook scrambled to reassure users of their commitment to a “privacy-focused future” after scandals such as 2017’s Cambridge Analytica breach.<sup>48</sup> Meanwhile, Spotify has taken a different approach, proudly flaunting its collection of user data on billboards and with “Wrapped.” The company publicly portrays its surveillance as light-hearted and innocuous through marketing tactics designed to normalize and even promote its prowess as “not only a music provider but also as a private data broker.”<sup>49</sup> Media scholar Robert Prey tells *The Atlantic* that listening to music is “fun, and so people don’t take [Spotify’s data collection] as seriously.”<sup>50</sup> As a result, Spotify has since been able to distance itself from the more sinister face of surveillance capitalism often associated with Facebook and Google. For instance, Spotify came out virtually unscathed from a December 2018 *New York Times* story (coinciding with “Wrapped”) claiming that Facebook gave “Spotify the ability to

---

48. Julia Carrie Wong, “The Cambridge Analytica Scandal Changed the World – but It Didn’t Change Facebook,” *The Guardian*, March 18, 2019, <https://www.theguardian.com/technology/2019/mar/17/the-cambridge-analytica-scandal-changed-the-world-but-it-didnt-change-facebook>.

49. Eriksson et al., *Spotify Teardown*, 4.

50. Quoted in Weiss, “Why do people like.”

read Facebook users' private messages.”<sup>51</sup> Even though it's clearly listening to more than what its users are listening to, Spotify implies that its machine is non-controversial and maintains its image as “outwardly tame,”<sup>52</sup> while it habituates users and producers to the “fun side” of the idea that they are constantly monitored.

## 2.2.2 User wrap

The user side of “Wrapped” invites individuals to access the details of their listening data through a “micro site” and publish a personalized statement accounting their listening for the year, via their social media pages.

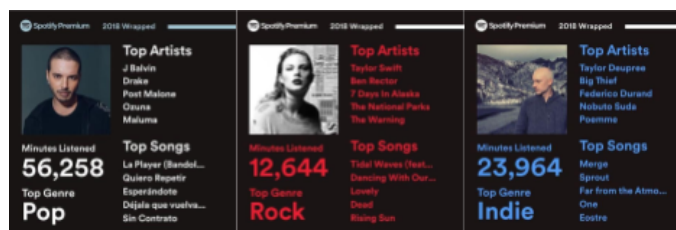


Figure 2.5: Anonymous user “Wrapped” data collected by the author December 2018.

Users are encouraged to publicize the statistical breakdowns of their minutes listened, top genre, top five artists, and top five songs for the year. The sharing of “Wrapped” data reflects what Alice Marwick and danah boyd describe as a process by which social media users “construct elaborate taste performances, primarily to convey prestige, uniqueness, or aesthetic preference.”<sup>53</sup> In this case, they do so on Spotify’s terms. Extolling the virtues of the campaign, Alexandra Jardine elaborates in *Ad Age* that “Wrapped:”

51. Gabriel J. Dance, Michael Laforgia, and Nicholas Confessore, “As Facebook Raised a Privacy Wall, It Carved an Opening for Tech Giants,” *The New York Times*, December 19, 2018, <https://www.nytimes.com/2018/12/18/technology/facebook-privacy.html>.

52. Weiss, “Why do people like.”

53. Marwick and boyd, “I tweet honestly, I tweet passionately,” 116.

lets Spotify users learn more about the most streamed artists, albums, genres and more this year. Features include an interactive quiz testing users about their own listening habits...to see if they are truly in tune with what they listened to most.<sup>54</sup>

Including a quiz provides the opportunity for users to reconcile, or tune, their sense of music-identified self with the “truth” “Wrapped” data provides. Thus, Spotify’s power is rationalized as users continue to be tuned to believe in what their listening data says about them and perpetuates the notion that, as Walt Hickey writes in *FiveThirtyEight*, “Spotify knows me better than I know myself.”<sup>55</sup>

Spotify positions itself as a platform where users are free to express a version of who they are or who they want to be through music and through its music-derived data. Attali writes: “That is the trap. The trap of false liberation through the distribution to each individual of the instruments of his own alienation, tools for self-sacrifice, both monitoring and being monitored.”<sup>56</sup> With “Wrapped” Spotify’s promise of freedom melds surveillance into a performance of self-actualization and habituates users to the notion that they are free to express themselves on *its* terms, using *its* data.

I conducted searches of public Twitter posts using the key words “Spotify” and “Wrapped,” limiting the date range between October 1 and December 31 of 2018 and 2019. In addition to many users participating in the campaign and posting their data,

---

54. Alexandra Jardine, “Spotify Announces the World's Most-Streamed Music on Its End-of-Year Microsite,” *Ad Age*, December 5, 2017, <https://adage.com/creativity/work/2017-wrapped/53359>. The quiz was specific to 2018’s iteration of “Wrapped.”

55. Walt Hickey, “Spotify Knows Me Better Than I Know Myself,” *FiveThirtyEight*, September 16, 2014, <https://fivethirtyeight.com/features/spotify-knows-me-better-than-i-know-myself/>.

56. Attali, *Noise*, 141.



numerous parody posts, and some skepticism and hostility to the campaign, I noticed several other interesting attitudes. My analysis of users' social media reactions to "Wrapped" suggests Spotify's habituation has been so effective in some cases that not only are users willing participants, but they often explicitly adjust their behaviour to display a more desirable version of the self, using already normalized social media dynamics as explored by media scholars including David Lyon, Alice Marwick and dannah boyd. As Lyon writes: "A key aspect of today's nascent surveillance culture is the imperative to share."<sup>57</sup> However, beyond simply sharing their data, Spotify users further demonstrate the success of "Wrapped" and its habituation by practicing forms of what Brooke Duffy and Ngai Chan call "self-surveillance," and adjusting their behaviour in order to alter their presentation of musical-identity.<sup>58</sup> Some Spotify users suggest utilizing "burner" accounts— "disposable" profiles separate from their main account—to prevent "Wrapped" from uncovering their "true" taste or "true" self. Duffy and Chan discuss various techniques in which social media users make "conscious efforts to sever the ties between one's 'real' identity and their digital personae" through similar techniques, such as "Finsta" (F-ake Insta-gram) accounts.<sup>59</sup> "Finsta" accounts, they find, are used "as a way to project a more 'realistic' version of their [subjects'] daily lives," offering a break from the pressure of self-surveillance on their "real accounts."<sup>60</sup> Spotify "burner"

---

57. Lyon, "Surveillance Culture," 830.

58. Duffy and Chan, "You Never Really Know," 121.

59. Duffy and Chan, 132.

60. Duffy and Chan, 131.

accounts are a different technique of “self-surveillance” that works to *hide* the users’ musical selections from the eavesdropping apparatus of “Wrapped” or guard against repercussions from what Marwick calls “social surveillance” by their online community. Marwick writes that social media technologies are “designed for users to continually investigate digital traces left by the people they are connected to through social media.”<sup>61</sup> By using a “burner account,” any dalliance with less valued songs will not be attributed to their “real” Spotify profile and they can listen outside the surveillance of “Wrapped” *and* that of their social media circle.<sup>62</sup> In these instances, Spotify’s influence over users’ music consumption behavior becomes clear and warrants more methodical research and further investigation. However, in this work I continue to illustrate Spotify’s process of habituation through deeper analysis of the producer side of “Wrapped.”

## 2.3 Producing Belief

### 2.3.1 Internalizing “Wrapped”

Spotify’s producer version of “Wrapped” claims to provide “a destination specifically for artists to discover how their music connected with fans across the world.”<sup>63</sup> It includes a summary accounting the number of streams, number of fans (changed to “listeners” in 2019), the number of hours these fans listened, and the number

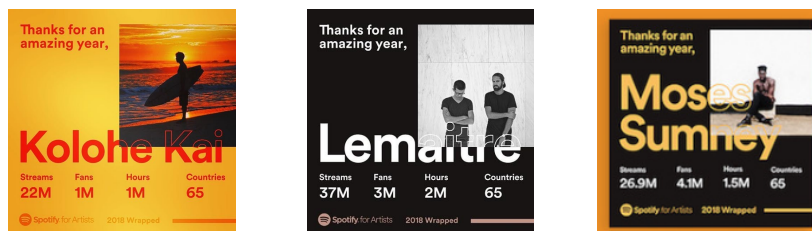
---

61. Alice Marwick, “The Public Domain: Surveillance in Everyday Life,” *Surveillance & Society* 9, no. 4 (2012): 378, <https://doi.org/10.24908/ss.v9i4.4342>.

62. This practice also raises questions about Spotify’s “monthly active user” numbers, as there could be millions of “burner accounts” inflating their numbers.

63. “Spotify Wrapped 2019 Reveals Your Streaming Trends, from 2010 to Now,” Spotify Newsroom, December 5, 2019, <https://newsroom.spotify.com/2019-12-05/spotify-wrapped-2019-reveals-your-streaming-trends-from-2010-to-now/>.

of countries in which the streams took place (*see fig. 2.6*). The 2019 edition included additional decontextualized metrics such as “how far your music traveled” or the “speed of your sound” delivered with distinct accompanying imagery.<sup>64</sup>



**Figure 2.6:** *Producer "Wrapped" posts, retrieved by the author December 2018.*

Here I return to Spotify’s dethroning of “album-sale rationality” and its efforts to decouple “success” and income. With “Wrapped,” Spotify encourages producers to distance themselves from their precarious financial reality and “tune” their songs to become more efficient supply routes for Spotify’s data.

“Wrapped” invites producers to: “See your standout moments, how your music traveled, and even how you redefined the speed of your sound,” and then: “Thank your fans by showing the love.”<sup>65</sup> In 2018, “Wrapped” claimed every artist had “an amazing year,” no matter what their numbers say, so there was plenty of “love” to show. Yet while “streams” can potentially translate into a living wage, few artists reach the kind of numbers that can even cover the cost of recording their next album.<sup>66</sup> Much like the user

---

64. “Your 2019 Wrapped,” Spotify for Artists, accessed December 10, 2019, webpage no longer available.

65. “Your 2019 Wrapped,” Spotify for Artists.

66. It would require 368,000 Spotify streams per month (at \$.004 per stream) to earn the average US minimum wage of \$1472, without distribution fees. For another perspective, it would take more than 5 million streams to equal a very modest \$20,000 recording budget and another 5 million to reach an equally modest marketing/promotion budget. That’s all calculated before splits with distributors, managers, labels,

who acts as though they believe they can present a desirable version of the “self” through “Wrapped” data, producers are exhorted by Spotify’s power in the music industry to perform believe in its data and to see their songs, their careers, and themselves through the lens of its rationality.

### 2.3.2 A human touch: unpacking the promise of data

Spotify acknowledges that “Wrapped” is an attempt to re-contextualize frames of success for producers. However, the company rationalizes its self-referential metrics as a “human way” for producers to look at the progress of their careers. Spotify’s Vice President of Product, Charlie Hellman, tells *Billboard* that with “Wrapped”:

[We] wanted to bring these numerical achievements to life in a really human way, so when we talk about the total amount of people that listen to you, we actually frame that in terms of a venue size. So if you’re a superstar artist we tell you you could fill Wembley Stadium [a soccer stadium in London, England] 100 nights in a row with your fanbase, but for a smaller artist it might be like you could sell out the Mercury Lounge [a well-known New York City venue with a capacity of 250] two nights in a row.<sup>67</sup>

David Turner, in his weekly music streaming newsletter “Penny Fractions,” counters that “it’s hard to square the idea that an artist could play to hundreds of thousands of people with the reality that they still only make [at most] about \$0.006 per stream. The contradiction between artists’ supposed popularity and their material reality

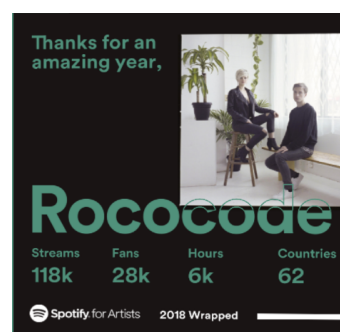
---

etc. Streams are even more decontextualized as a measure of success because many third-party companies offer streams for sale. Upyourbeats.com, for instance, offers 100,000 streams for \$299.99. I do not know how many producers use these services, but it would be another interesting research project. As I introduce in the conclusion, Spotify has also recently instituted its own system of “pay for plays,” reminiscent of the days of “payola,” where record labels paid radio DJs to play records they were promoting.

67. Quoted in Colin Stutz, “Spotify Gifts Artists With ‘2017 Wrapped’ Year-End Data,” *Billboard*, December 13, 2017, <https://www.billboard.com/articles/business/8070349/spotify-artists-2017-wrapped-year-end-data>.

is in fact heightened by this particular campaign.”<sup>68</sup> He, like Zola Jesus, recognizes the powerful imposition of a new rationality for professional recording artistry that echoes trends in many other precarious industries. In *The Quantified Self in Precarity: Work, Technology and What Counts*, Phoebe Moore writes: “Data is treated as a neutral arbiter and judge, and is being prioritised over qualitative judgements in key performance indicator management systems and digitalised client-based relationships.”<sup>69</sup> Because Spotify has historically provided producers with much more data than other streaming platforms, its internalized metrics have become a key external performance indicators for many music producers, record labels, and even concert promoters, yet it is far from neutral. Number of “fans,” as explained above, indicates unique users. A user who heard a song on a playlist one time counts as a fan as much as one who listened to the producer’s songs thousands of times and bought concert tickets and merchandise. “Wrapped” attaches numbers to a framework that remains disconnected from external institutions, part of the ongoing process of habituating artists to see their success through Spotify’s own metrics and ignore the financial reality of its royalty payouts and its usage of music for data extraction.

To put “Wrapped” data in a more concretely “human way” than Hellman probably wishes to, I offer firsthand context from my own experience as a music



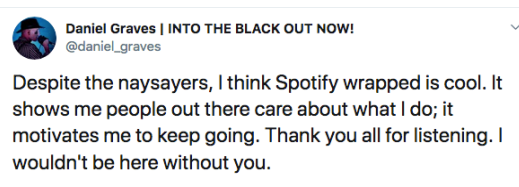
**Figure 2.7:** The author's Artist "Wrapped" data from 2018. Retrieved December 2018

68. David Turner, “Spotify’s Perfectly Calculated ‘Wrapped’ Campaigns,” *Penny Fractions Newsletter*, November 20, 2019.

69. Phoebe V. Moore, *The Quantified Self in Precarity: Work, Technology and What Counts*, (New York: Routledge, 2019), 3.

producer. The 28,000 fans from my now-defunct band Rococode’s 2018 “Wrapped” data (*see fig. 2.7*) could fill The Mercury Lounge 112 times, by Hellman’s logic. In reality, the band played The Mercury Lounge in 2016 for approximately twelve fans. Two years later, at the height of our “amazing year” on Spotify, we drew about the same number of fans to a much smaller New York City club, Piano’s. Similarly, 118,000 streams sounds like a large number without any context, but calculated at \$.004 per stream,<sup>70</sup> amounts to just \$472: the equivalent of selling thirty albums at \$16 (not unheard of at one busy live show); or an average guaranteed fee for a single club performance; or just enough for two years of Spotify subscriptions for my bandmate and me.<sup>71</sup>

Despite the apparent gap between “supposed popularity” and “material reality,” many producers use “Wrapped” to publicize the breadth, scope, and diversity of their Spotify-identified fan base. For instance, synth-pop artist Daniel Graves finds value in the insights it provides (*see fig. 2.8*). “It shows me people out there care about what I do,” he writes.<sup>72</sup> Producer reactions to



**Figure 2.8:** Daniel Graves performs believe in the value of “Wrapped” data. Retrieved by the author, November 28, 2018.

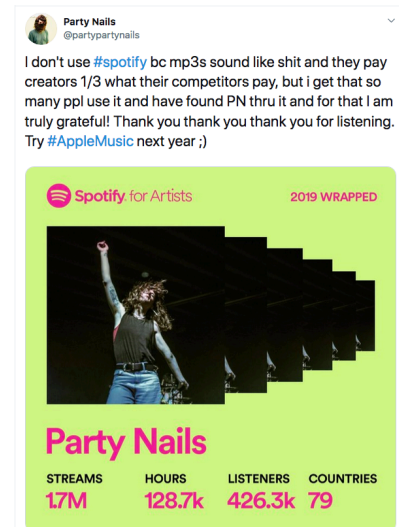
---

70. As previously stated, royalty rates vary from roughly \$.004 to \$.006, hence the discrepancy between my rate calculations and Turner’s.

71. We never received a dollar from the 2018 Spotify streams “Wrapped” wanted us to share. The sum was put toward the record label’s marketing budget, which, as is standard in record contracts, needed to be recouped before even making a dent into the cost of recording the album in the first place, which was paid for by the band.

72. Daniel Graves (@daniel\_graves), “Despite the naysayers,” Twitter post, December 10, 2018, [https://twitter.com/daniel\\_graves/status/1072170184960557057](https://twitter.com/daniel_graves/status/1072170184960557057).

“Wrapped” seem to show, as Zuboff predicts, “some combination of agreement, helplessness, and resignation.”<sup>73</sup> Many, like Graves, enact their belief in Spotify’s “Wrapped” data as a measure of how much users “care about what they do” and they may use it as motivation to work harder and make music better suited to Spotify—a demonstration of agreement. Others, such as Los Angeles-based artist Party Nails (see fig. 2.9), attempt to distance themselves from Spotify’s business practices, but still participate in the promotion, perhaps demonstrating attitudes of helplessness and/or resignation.<sup>74</sup>



**Figure 2.9:** Party Nails writes that she doesn't use Spotify or agree with their treatment of artists, but still posts "Wrapped." In a conversation she told me, "it's confusing."

### 2.3.3 Producer case study #2: Neanderthal – accepting the terms

Independent San Diego-based electronic artist Neanderthal diachronically demonstrates a case of a producer who appears to show acceptance of and adaptation to Spotify’s internal logic, especially after he is given a taste of the rewards it offers.

Producers that did not have an “amazing year,” like Neanderthal in 2018, may feel defined or defeated by their lack of numbers to share. In the Twitter post below, he indicates that not having enough streams makes him feel “depressed.” He conveys



**Figure 2.10:** Neanderthal did not have an "amazing year" on Spotify in 2018. Retrieved by the author, November 2019.

73. Zuboff, *Surveillance Capitalism*, 140.

74. Party Nails (@partypartynails), "I don't use Spotify," Twitter post, December 5, 2019, <https://twitter.com/partypartynails/status/1202676408662683648>.

feeling more than a “*threat* of invisibility,” he seems to feel the weight of it. He even devalues the “Wrapped” posts of those with more impressive data to share as “spam.”<sup>75</sup>

On June 1, 2018, six months prior to his “Wrapped” related “depression,” Neanderthal shared a video on his Twitter page with the caption “me putting my music on Spotify.”<sup>76</sup> The video offers a tongue and cheek re-creation of the process of embedding a song with meta data in order to upload it to Spotify via a third-party distributor. In response to the interface asking “how would you describe your music” (where, in reality, there would be a list of musical genre categories from which a producer could choose), he selects boxes that complete the phrase “please put my music on your playlists I’ve been a very good boy.” The video implies that the Spotify-curated playlist is his primary target audience; that he has tuned his music in accordance with what he thinks the machine wants. This video remains Neanderthal’s “pinned Tweet,” which means it stays at the top of his Twitter feed and is the first post seen by a visitor to his page. For many Twitter users, a “pinned Tweet” acts as a kind of mission statement for their personal or corporate “identity.” The video and its prominence on Neanderthal’s page convey how deeply he feels compelled to act as though he *believes* in Spotify’s playlist power and how willing he is to tune his music to the machine’s logic.

In July of 2019, Neanderthal received acknowledgement from the playlist machine. His song “White Lies” was added to a Spotify branded playlist— “Chill Vibes”

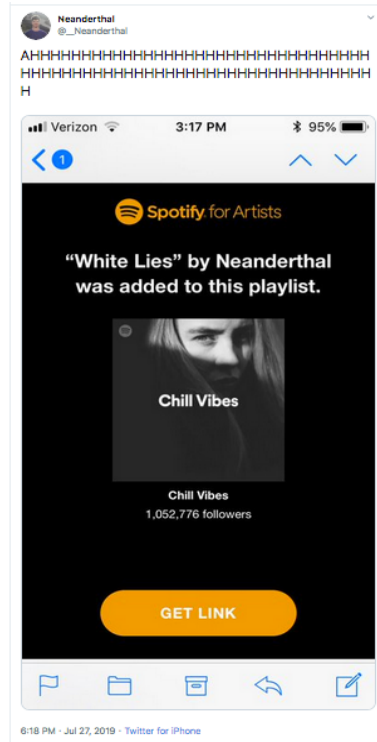
---

75. Neanderthal (@\_\_Neanderthal), “I can’t wait,” Twitter post, December 7, 2018, [https://twitter.com/\\_\\_Neanderthal/status/1071158754270302208](https://twitter.com/__Neanderthal/status/1071158754270302208).

76. Neanderthal (@\_\_Neanderthal), “Me putting my music,” Twitter post, June 1, 2019, [https://twitter.com/\\_\\_Neanderthal/status/1134902034065268736](https://twitter.com/__Neanderthal/status/1134902034065268736).



(1,085,680 followers at the time).<sup>77</sup> In my aural analysis, the song’s sonic characteristics fit impeccably with the flow of “Chill Vibes” containing many of the prototypical features of the playlist: sparse instrumentation; breathy, detached vocals; minimal harmonic motion.<sup>78</sup> According to my data analysis (*see appendix A*), “White Lies” scores 5.71 in “playlist suitability”—indicating its Echo Nest derived “Audio Features” contain a nearly ideal level of “optimal differentiation” (sameness and difference) for “Chill Vibes.” It fits smoothly into the playlist by both my subjective (listening) and objective (data) measures. No longer “depressed” about a lack of streams, Neanderthal had no qualms about sharing, as he shamelessly “spammed” the timelines of his followers with excitement over his new found Spotify success (*see fig. 2.11*).<sup>79</sup> As of March 2020, the song remains on “Chill Vibes” and has amassed over 1.1 million streams, which, for an unestablished independent producer, is a feat rarely achieved without assistance from the branded



**Figure 2.11:** Neanderthal’s Twitter reaction to being added to “Chill Vibes.” Retrieved by the author November 28, 2019.

77. Historic playlist follower data retrieved from Spot on Track.

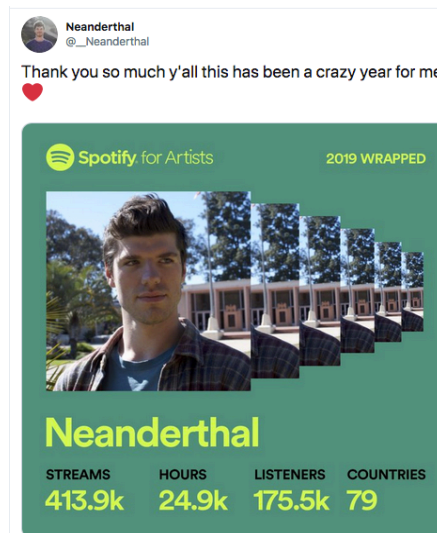
78. Neanderthal featuring Satyrn and Keepitinside, “White Lies,” 2019. See chapter 4 for detailed analysis of musical features of “Chill Vibes.”

79. Neanderthal, (@\_Neanderthal), “AHHHHH,” Twitter post, July 27, 2019, [https://twitter.com/\\_Neanderthal/status/1155241057845596160](https://twitter.com/_Neanderthal/status/1155241057845596160).

playlist. For comparison, his next most streamed song has just 60,000 plays and his third most streamed has 40,000. Neither has been added to a branded playlist.<sup>80</sup>

Neanderthal, like many other producers clamouring for attention from Spotify and its playlist architecture, appears to tune his music and behaviour to Spotify’s internalized frames of success and “Wrapped” gives him a chance to see exactly how his “amazing year” measured up against everyone else’s. A year after calling the promotion “spam,” when he had “like 3 plays,” Neanderthal proudly shared his 2019 “Wrapped” with a different attitude altogether, thanking

Spotify and his listeners for the “crazy year.”<sup>81</sup> He was rewarded for being “a very good boy,” though it remains to be seen if Neanderthal’s Spotify success is a “one-off” or if it translates into other facets of the music industry; another indication of Spotify’s desire to create a sealed-off self-referential system where producers measure their value in success on its platform and on its terms—out of context and out of joint with material reality.



**Figure 2.12:** Neanderthal is thankful for a “crazy year.” Retrieved by the author, January 2020.

80. “Neanderthal” Spotify, accessed March 5, 2020, [https://open.spotify.com/artist/7AV66Eu1XevhHitr3MEama?si=XQ5H\\_LzeRHafBQkhfX6ZHW](https://open.spotify.com/artist/7AV66Eu1XevhHitr3MEama?si=XQ5H_LzeRHafBQkhfX6ZHW).

81. Neanderthal, (@\_Neanderthal), “Thank you,” Twitter post, December 6, 2019, [https://twitter.com/\\_Neanderthal/status/1202858421076156417](https://twitter.com/_Neanderthal/status/1202858421076156417).

### 2.3.4 Producer case study #3: Nina Nesbitt – the feeling’s mutual

Scottish pop singer/songwriter Nina Nesbitt offers an example of how different a producer’s Spotify experience can be when the “belief” is reciprocal, but still offers more evidence of a gap between “supposed popularity” and “material reality.” Liz Pelly, in “Streambait Pop,” discusses Nesbitt among a trio of similar artists participating in a “Spotify Session” (a recording session sponsored and hosted by Spotify) who “are not household pop names, but on Spotify they have each racked up tens of millions of streams and prime playlist placements.”<sup>82</sup> They represent producers that appear to thrive within the platform’s internalized frames of success by tuning their behavior and music to the playlist landscape, and, in return, Spotify promotes them heavily. Pelly’s anonymous songwriter informant calls the collaboration “so Spotify.... Made in Spotify studios, for Spotify, by three top Spotify-core girls.”<sup>83</sup>

Nina Nesbitt has been a part of “Spotify Sessions,” recorded “Spotify Singles,” performed at Spotify events, had her songs added to dozens of branded playlists, accumulated millions of streams, had her photo used as the cover image for branded playlists, and had her face on a Spotify billboard in Times Square. Spotify performs “belief” in her and she, at least publicly, reciprocates. Half of her “2018 Highlights” from a December 31, 2018 Twitter post are Spotify-related: a performance at the unveiling of

---

82. Pelly, “Streambait Pop.”

83. Pelly, “Streambait Pop.”

“Wrapped” in New York City and achieving a milestone in “Monthly Listeners” (*see fig. 2.13*).<sup>84</sup>

Tracking Nesbitt’s song “The Best You Had” through its Spotify playlist history illustrates the extent of the exposure her music receives from the platform. I used data from the application Spot on Track that measures the size of a potential



Figure 2.13: *Half of Nina Nesbitt's "2018 Highlights" are "Spotify" moments. Retrieved by the author March 2020.*

audience based on “playlist followers”—an aggregation of the number of followers for all the playlists to which a song is added—to follow “The Best You Had” through a progression of playlists that exposed it to a large Spotify audience and helped it to eventually accumulate more than eighty-four million streams (as of March 2020). “Playlist followers” do not directly correlate to streams, but they represent the potential size of an audience that a song is exposed to outside of the producer’s existing fanbase and when they come from branded playlists, they can indicate Spotify’s level of support for a song or artist. “The Best You Had” was released on September 8, 2017 on London-based independent label Cooking Vinyl and received an initial spike of 1,184,707

84. Nina Nesbitt (@ninalesbitt), “2018 Highlights,” Twitter post, December 31, 2018, <https://twitter.com/ninalesbitt/status/1079690790891413512>. Monthly listeners are Spotify’s most widely valued decontextualized measures of success. They’re tabulated the year in “Wrapped” but are displayed prominently on an artist’s page at all times. Many, like David Turner in “Penny Fractions” question the validity of the measure. It is calculated based on the number of “unique” listeners in a given month, so they have no real connection to how many dedicated fans an artist may have. An artist, like Nesbitt, who is included in many playlists with millions of followers, is much more likely to get a high number of “monthly listeners” when many of them might not even know who she is or what they are listening to as her music floats by on a mood-based playlist, for instance.

“playlist followers” when it was immediately added to thirteen nationalized/regionalized “New Music Friday” playlists.<sup>85</sup> By the song’s second day on Spotify, “The Best You Had” already had 5,291,478 playlist followers after being added to the global “New Music Friday,” and “Fresh and Chill.” Just six days after its release, when it was added to “Chill Hits” (2,479,089 followers at the time) the song hit a peak of 10,603,774 playlist followers. It lost a significant number of followers upon its removal from “New Music Friday” playlists, as these are restocked weekly. However, it quickly made up for the lost playlist followers when it was added to “Pop Chillout” (1,291,692 followers at the time) and “Soft Pop Hits” (1,727,812 followers at the time) on October 11, 2017. “The Best You Had” maintained around 9.5 million “playlist followers” until June of 2018 where the count fell off considerably. However, in March 2020, two and a half years after the song’s release, it still had 5,963,779 playlist followers. It remains on popular mood playlists like “Life Sucks” (2.5 million followers) as well as “Women of Pop” (1.8 million followers).

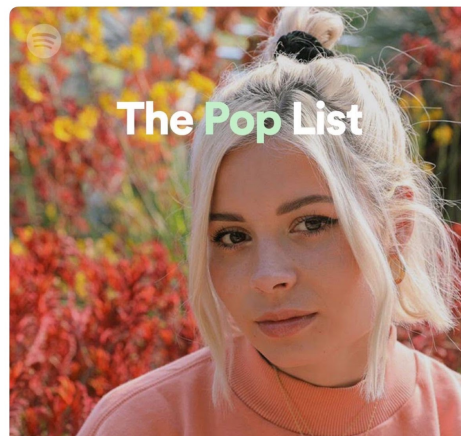
Eighty-four million streams is still a small number when compared to a worldwide sensation such as Drake’s “Nice for What,” which has nearly 800 million, but, as Pelly writes, “Spotify seems to have made a point to champion not just the most popular superstars of the day, but to develop their own.”<sup>86</sup> Nesbitt reciprocates Spotify’s “belief” in her by consistently reiterating her belief in the machine. She acknowledges the

---

85. “The Best You Had - Nina Nesbitt,” Spot on Track, accessed December 6, 2019. <https://www.spotontrack.com/tracks/1283977>. “New Music Friday” is a series of Spotify branded playlists that are localized and are restocked with new releases from across the genre spectrum every week. They mostly privilege major label releases, but also reserve space for up and comers and the Spotify privileged, like Nesbitt. \*All “playlist follower” data from Spot on Track.

86. Pelly, “Streambait Pop.”

role Spotify played in the success of her song “Black & Blue” in the Twitter post from September 24, 2019 (*see fig. 2.14*). Not only was she rewarded with an “add” to “The Pop List” (649,614 followers), her face was used as the playlist’s cover image. She thanks Spotify for putting her on the cover and credits the machine for the “success” of her song saying: “thank you for getting black & blue to 1,000,000 streams already.”<sup>87</sup> The song



**Figure 2.14:** Nina Nesbitt thanks Spotify for getting her song “Black & Blue” to a million streams in a week.

was released just eleven days prior to this Tweet and its playlist follower audience peaked at 16,489,206 in the first week of its release.<sup>88</sup> Nesbitt’s songs have proven their ability to thrive in the playlist hierarchy and now they are given the kind of preferential treatment usually reserved for major label artists.

As she points out in figure 2.15, Nina Nesbitt began the decade intrigued by the possibility of “unlimited music” and finished it as the face on Spotify’s



**Figure 2.15:** Nina Nesbitt on a Spotify billboard in Times Square in New York City

87. Nina Nesbitt (@ninanesbitt), “thank you,” Twitter post, September 24, 2019, <https://twitter.com/ninanesbitt/status/1176516876215734272>.

88. “Black & Blue - Nina Nesbitt,” Spot on Track, accessed December 6, <https://www.spotontrack.com/tracks/43637564>.

Times Square billboard.<sup>89</sup> Nesbitt’s ascendance through the Spotify playlist ranks offers an illustration of how Spotify rewards a producer in whom *it* performs belief. The arrangement is mutually beneficial. For Spotify there is seemingly little risk of Nesbitt’s music disrupting playlist flow across a broad selection of “mood” and genre, and Nesbitt disseminates the message that the company is “artist friendly” and is capable of “breaking” new music. Nesbitt is rewarded with streams, Spotify “sessions,” and playlist covers while Spotify is rewarded with easily playlist-able music and “proof” that it can establish artists on its own.

Ragle Gumm’s “sister,” Margo, in response to household confusion over Marilyn Monroe, decides it “is all just a big bunch of hot air. They’re trying to build up some trivial starlet, pretend everybody’s heard of her, so when people hear about her for the first time they’ll say, Oh yes, that famous actress.”<sup>90</sup> Despite Nina Nesbitt’s 28.5 million Spotify listeners in 2019 (*see fig. 2.16*) and having her face on a billboard in the busiest section of the busiest city in North America, her fame amounts to a situation much the same as the one described by Margo Gumm.<sup>91</sup> Her most



**Figure 2.16:** *Nina Nesbitt's 2019 "Wrapped."* Retrieved by the author February 2020.

89. Nina Nesbitt (@ninanestbitt), “start of the decade,” Twitter post, December 27, 2019, <https://twitter.com/ninanestbitt/status/1210678259979038724>.

90. Dick, *Time Out of Joint*, 55.

91. Nesbitt seems to be so streaming friendly that Apple Music and Spotify put her on billboards at the same time in Times Square. However, based on her social media feed, she’s clearly “Team Spotify,” she doesn’t seem to acknowledge Apple Music as often or even at all.

recent appearance in New York City was at a 700 capacity club—Le Poisson Rouge.<sup>92</sup> Using Hellman’s “human” rationale, Nina Nesbitt, with her 28.5 million “listeners” might be playing Madison Square Garden (20,789 capacity) or at least Terminal 5 (3000 capacity) in New York City, but the reality is that her North American live audience is nowhere *near* the size of her Spotify audience. Nesbitt appears to have had some success outside of Spotify, on Australian radio for instance, but there still seems to be a sizable gap between the “supposed popularity” presented in her Wrapped data and Spotify publicity and the “material reality” of those willing to pay money to see her in concert. Spotify’s frames of success do not easily transfer outside the closed system, no matter how much Spotify and the producer act like they believe.

### 2.3.5 Out of joint: outrage

Like Spotify’s billboard campaign that, according to *Ad Age*, used “quirky, amusing, hyper-localized facts,”<sup>93</sup> “Wrapped” puts a light-hearted spin on the company’s collection of music-derived data in order to “habituate” producers to the idea that their contribution to the data bank has meaning and value. The company works tirelessly to reify and valorize its data for producers. In fact, as I write this, I received an email from Spotify for Artists offering “instant gratification in the form of real-time stats.”<sup>94</sup> The process of habituating artists to the constant flow of data and the latest specialized

---

92. Nina Nesbitt (@ninanebitt), “It’s been a great year,” Twitter post, December 5, 2019, <https://twitter.com/ninanebitt/status/1202665774248267778>; Evelin Mercedes, “Concert Review: Nina Nesbitt Le Poisson Rouge – New York,” *CelebMix*, March 11, 2019, <https://celebmix.com/concert-review-nina-nesbitt-le-poisson-rouge-new-york/>.

93. Alexandra Jardine, “‘Thanks 2016, It’s Been Weird,’ Says Spotify in Biggest-Ever Global Campaign,” *Ad Age*, November 28, 2016, <https://adage.com/creativity/work/thanks-2016/50063>.

94. Spotify for Artists Email, Personal communication, November 21, 2019.



metrics decontextualizes, redefines, and re-rationalizes producers' frames of success. By drawing attention to its own measurements through "Wrapped" data, Spotify distracts producers from the fact that it has built up massive value as a company on the labour products of producers receiving next to nothing for its usage of their music and their contribution to its surveillance efforts. Producers are absorbed into a black hole of listener data including demographics, play counts, and trending songs intended to advise them how to tune their musical output to provide the most frictionless supply routes for Spotify's extraction of data. Spotify even offers tutorials on "how to read your data," to make sure producers interpret the numbers according to the machine's wishes, tuning them to get better at Spotify, not honing their craft as musicians or cultivating a fanbase that will follow them outside the controlled environment.<sup>95</sup>

As I have shown, artists at various stages of their careers post "Wrapped" data, reflecting performance of belief and varying degrees of agreement, resignation, obligation, or helplessness. However, many, like Zola Jesus, remain in the "outrage" phase of "habituation." She and others who are able to hold on to their rationality, remain skeptical of the validity of Spotify's data-driven frames of success and are vocal about their disillusionment and distrust of Big Data's infiltration of music consumption. In March 2020, she continues to display outrage in reference to artists, like Nina Nesbitt, who perform belief. She writes:



thanking spotify because they put your face on the cover of a popular playlist which is inherently designed to kill off independent musicians and exploit your art is nothing short of a ouroboric consolation prize

9:13 AM · 2020-03-01 · Twitter Web App

**Figure 2.17:** *Zola Jesus recognizes the self-referential frames of success that Spotify provides.*

<sup>95</sup>. "How to Read Your Data," Spotify for Artists, accessed March 12, 2020, <https://artists.spotify.com/videos/the-game-plan/how-to-read-your-data>.

“thanking spotify [sic] because they put your face on the cover of a popular playlist which is inherently designed to kill off independent musicians and exploit your art is nothing short of a ouroboric consolation prize.”<sup>96</sup>

Spotify habituates producers to gauge their success in a decontextualized measure like “potential number of Wembley Stadiums,” when, in reality, it would be much more valuable for them to know if/how they are going to pay for their next recording or their next meal. Canadian band Stars shares the results of its “amazing year” without Spotify’s branding and with one crucial added detail: 9 million streams but not enough money to pay one band member’s modest salary (*see fig. 2.18*).<sup>97</sup> They and Zola Jesus insist on their own rationality and recontextualize Spotify’s data within their own frames of success or, perhaps more accurately, their frames of survival. The “cute graphics” of “Wrapped” do not seduce all producers, but even the rational and outraged have no power in their “partnership” with Spotify.



**Figure 2.18:** Stars re-contextualize “Wrapped” data.

Independent music producers such as Zola Jesus and Stars have floundered financially in this model and see the danger of the growing imbalance of power infecting the system of digital music consumption. Yet they still are not willing to keep their music from Spotify’s 270 million users. Zola Jesus, again, contributes to the conversation on

---

96. Zola Jesus (@zolajesus), “thanking spotify,” Twitter post, March 1, 2020, <https://twitter.com/ZOLAJESUS/status/1234164991261126662>.

97. Stars (@youarestars), “here’s our spotify wrap,” Twitter post, December 6, 2019, <https://twitter.com/youarestars/status/1202993367887400961>.

“Wrapped,” day 2019 (*see fig. 2.19*). She assures her fans that she is “grateful” and “honoured” to be included in their “Wrapped” data (despite the lack of support from Spotify’s playlists), but reminds them that “spotify [sic] is not artist-friendly at all.”<sup>98</sup>

Acknowledging the inevitability of working inside the machine, Zola Jesus provides her fans with context and encourages more direct means of financial support.



**Figure 2.19:** Zola Jesus encourages more direct lines of support.

## 2.4 Conclusions

As users and producers continue to act as though they *believe* in “Wrapped” data as an expression of themselves as individuals or as measures of their success, Spotify’s valuation of this data grows. Its ability to “promote its massive collection of contextual data as a service to marketers” who also act as if they believe,<sup>99</sup> becomes more viable and more profitable as the habituation process takes hold. Spotify’s billboard campaigns and “Wrapped” promotions help shape the “social subjugation” of individual expression while, at the same time, work to acclimatize and “habituate” its users and producers to their “machinic enslavement,” their role as dividualized cogs in the machine—slowly grinding down their outrage into the ordinary within a system that inevitably requires only their participation and *not* their belief. Zola Jesus, in March 2020 writes that she is

---

98. Zola Jesus (@zolajesus), “very grateful + honored,” Twitter post, December 6, 2019, [since deleted.]

99. Eriksson et al., *Spotify Teardown*, 4.

“a millimeter away from taking all [her] music off Spotify,”<sup>100</sup> but her outrage doesn’t stop the machine and her music is still fueling it.

Ragle Gumm had been brainwashed into belief in the constructed world of his 1959 Old Town, USA and his daily puzzle solving duties. Bill Black, his “nosey neighbour” who turns out to be his military handler, articulates the power wielded by the closed system over those who inhabit it. “You’ll keep on seeing what you’ve been seeing,” he explains. “The training is all there, on a nonrational level. Impressed upon your systems.”<sup>101</sup> Spotify’s interest is in creating value for the data it extracts from music and music listening. Its power over producers mobilizes its data as “truth” using the “threat of inaudibility,” as it holds the key to unlocking music streaming success in the world it currently dominates. Like Ragle Gumm unwittingly enslaved to the machine, figuring out “Where Will The Little Green Man Be Next,” music producers are exhorted into refining their creative process and tuning their output to suit the Spotify game, guided by decontextualized data. Meanwhile, the machine habituates users to see themselves as expressions of the data it extracts. Producers and users act and interact in a world of Spotify’s design, as the machine operates both sides of the exchange, putting music at the centre, requiring users and producers to behave as though they believe in its data and in the power of the closed system in which they are promised an opportunity to “be free.”

---

100. Zola Jesus (@zolajesus), “I’m a millimeter away,” Twitter post, March 1, 2020, <https://twitter.com/ZOLAJESUS/status/1234123852902522880>.

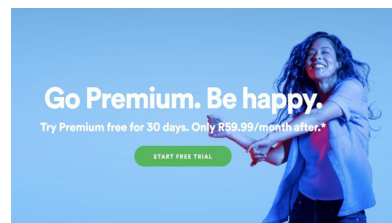
101. Dick, *Time Out of Joint*, 199.

### 3 Forget: “Be happy”

“‘Is it because you feel that everything you might need is available here? A big store, a supermarket, is a complete world in itself?’

‘I guess so,’ he admitted.

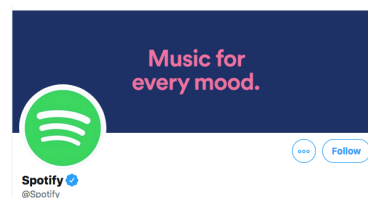
‘So there’s nothing to fear,’ the woman said. ‘No need to feel anxiety. You can relax. Find peace, here.’”<sup>1</sup>



**Figure 3.1:** Spotify advertisement. Retrieved by the author September 2019.

In chapter two, I used the example of “Wrapped” to show how Spotify tunes its users to act as though they believe in its capacity to express their individuality and tunes producers to act as though they believe in its internal data as measures of success, constructing a “controlled environment.” In this chapter I look at how Spotify organizes the space *within* its controlled environment. By categorizing music into playlists, Spotify creates smaller, more distinct “spaces” of consumption where it can establish more control over the resulting flows of music, data, and money.

“Today’s Top Hits” (almost 26 million followers) and “Rap Caviar” (approximately 12.5 million followers) remain the most popular playlists on the platform and are categorized into genre groupings reminiscent of radio formats. However, Eriksson et al. write, “music consumption is increasingly understood as situational and functional for certain activities,”<sup>2</sup> and Spotify’s marketing reflects the shift, offering “music for every mood.”<sup>3</sup>



**Figure 3.2:** Spotify Twitter page. Retrieved by the author March 2020.

1. Dick, *Time Out of Joint*, 206.

2. Eriksson et al., *Spotify Teardown*, 123.

3. Spotify (@spotify), Twitter. Accessed March 10, 2020, <https://twitter.com/Spotify>.

Throughout this chapter, I continue to draw on Zuboff's model for the "code" of surveillance capitalism. Spotify's sorting of music into playlists creates what she calls a "choice architecture" that "herds" users through a course of decision making that best serves the interests of Spotify's machine. For Zuboff, "choice architecture refers to the ways in which situations are already structured to channel attention and shape action."<sup>4</sup> I argue that Spotify "herds" users' musical choices toward mood-based playlists because they create "unique" data that propels the company's advertising division, more so than the consumption of albums or genre-driven playlists. Spotify's former VP of Marketing for North America Brian Benedik calls mood-based sorting "a strategic evolution of the Spotify ads business."<sup>5</sup> Mood-based categories are specifically designed to facilitate data extraction and turn music consumers into dividualized targets. Benedik explains that the company's mood-driven data are "one of the reasons that some of these big multinational brands like the Samsungs and the Heinekens and the Microsofts and Procter and Gambles of the world are working with us a lot closer than they ever have...they don't see that or get that from any other platform out there."<sup>6</sup> Employing techniques described to Zuboff by a software engineer, I argue that mood-based playlists "engineer the context around a particular behaviour" in order to "tie together your emotions, your cognitive functions."<sup>7</sup>

---

4. Zuboff, *Surveillance Capitalism*, 294.

5. Tim Peterson, "Spotify to Use Playlists as Proxy for Targeting Ads to Activities, Moods," *Ad Age*, April 16, 2015, <https://adage.com/article/digital/spotify-playlists-gauge-moods-ad-targeting/298066>.

6. Quoted in Pelly, "Big Mood Machine," *The Baffler*; Rebecca Stewart, "Spotify Hits 140 Million Monthly Users as It Notes 'Explosive' Growth of Automated Audio Ads," *The Drum*, June 15, 2017, <https://www.thedrum.com/news/2017/06/15/spotify-hits-140-million-monthly-users-it-notes-explosive-growth-automated-audio-ads>.

7. Zuboff, *Surveillance Capitalism*, 295.

In this case, Spotify uses a choice architecture of mood-based music categorization to provide context for extraction and rendering of emotion-based data.

In part one of this chapter, “The Essentials,” I describe Spotify’s playlist organization as an act of territorialization, creating distinct “spaces” of consumption. In order to help users choose the “right” playlist to match their mood and maximize the efficiency of its “choice architecture,” Spotify utilizes what psychologist and neuroscientist Lisa Feldman Barrett calls “emotional essentialism” in its sorting and packaging of music. The theory of essentialized emotions that Barrett critiques purports that instances of emotion are shared, universal, and cross-cultural experiences. I argue that Spotify organizes music into essentialized mood-based categories and show how it uses visual and textual prompts to guide emotional and affective responses before users even enter the “space” of the mood-based playlist or hear the music it offers.

Mood-based playlists, Paul Allen Anderson writes, “are tools for building permeable microclimates or microspheres [territories] of mood within which individual users attempt to manage their diverse portfolios of resilience, hope, optimism, and self-efficacy.”<sup>8</sup> The Spotify machine does not make the music framed by its mood-based architecture, but it decides what gets in and what stays out, controlling the sound of the “spaces” in which users are invited to match their emotions with music. In part two of the chapter, “Constructed,” I argue that, while promoting emotional essentialism, Spotify simultaneously uses the principles at the heart of Barrett’s alternative; her “theory of constructed emotions” that proposes we create our own emotional experiences. After framing music into recognizable and nameable categories, Spotify defines musical-

---

8. Anderson, “Neo Muzak and the Business of Mood,” 815.

emotion territories by populating each playlist with songs that share repetitive features. As the provider of “music for every mood” Spotify invites users to forget their own associations and match their emotions to its musical representations, positioning itself to better predict their emotional behavior; using Barrett’s constructed theory to reify the essentialist understanding of its mood-based choice architecture.

In part three of the chapter, “Happy Hits, Happy Subjects,” I examine the musical features that Spotify employs to materialize mood-based playlists. First, I compare the Echo Nest “Audio Features” of six playlists from across the mood spectrum; two playlists each from Spotifyed representations of happy, chill, and sad. Next, I conduct a detailed musical analysis of the repetitive composition practices, vocal techniques, instrumentation, lyrics, form, and recording techniques prevalent in “Happy Hits.” By combining data-fied representations, my own aural observations, and the musical analysis of others, I enable a comparison between the system’s framework of algorithmic musical analysis and my own to articulate a useful presentation of the “Spotifyed” version of musical happiness.

## 3.1 The Essentials

### 3.1.1 Playlist territorialization

Spotify’s mood-based playlists territorialize, or render discrete, coherent “spaces” of consumption and organize the songs they contain around a definitive function or situation. Territorialization, Deleuze and Guattari explain, helps “draw a circle around that uncertain and fragile center, to organize a limited space.”<sup>9</sup> Jonathan Sterne argues

---

9. Deleuze and Guattari, *A Thousand Plateaus*, 311.



that not only does musical territorialization materialize and “enclose” space, it “manages the transitions from one location to another; it not only divides space, but also coordinatates the relations among subdivisions.”<sup>10</sup> While Sterne describes musical territorialization that occurs within the brick-and-mortar spaces of stores in a shopping mall, Spotify’s system of organization works to similar effect. Playlists enclose collections of individual songs and coordinate the subdivisions (songs) to depict the desired mood. Spotify’s mood-based playlists provide practical contexts for the extraction and rendering of emotion-based data that the company claims can measure users’ emotional behaviour inside the controlled environment and predict their behaviour outside of it.

In *Time Out of Joint*, the U.S. military machine territorializes the closed environment around Ragle Gumm. As Deleuze and Guattari write: “The forces of chaos are kept outside as much as possible, and the interior space protects the germinal forces of a task to fulfill or a deed to do.”<sup>11</sup> Gumm’s environment is not (initially) physically enclosed, but the people and places installed around him provide Gumm with a semblance of normalcy and purpose while concealing the chaos of the warzone outside. The environment provides him with a situation in which he has a “task to fulfill.” He comes to know what to expect and lives comfortably, while the framework provided quietly governs his service to the war machine. It is all, as his military “handler” and

---

10. Sterne, “Sounds Like the Mall,” 31.

11. Deleuze and Guattari, *A Thousand Plateaus*, 311.

neighbour Bill Black explains, “arranged on a practical basis.”<sup>12</sup> The environment around Gumm is territorialized in such a way that while he has a choice of who or what he may interact with on a daily basis, every choice he makes is enabled through a structure that serves the sole purpose of facilitating his work for the machine. Similarly, Spotify’s territorialization of its platform, achieved by sorting music into playlists, is designed to create situational and functional context for every user choice and for every song introduced by a producer, facilitating each component’s clearly defined role, its task to fulfill, in service of the surveillance machine.

### 3.1.2 Darwinian data: building musical essentialism

Spotify’s Chief Marketing Officer Seth Farbman tells *Ad Age*: “For us, data inspires and gives an insight into the emotion that people are expressing.”<sup>13</sup> Spotify’s mood-based music sorting and the “insight” it provides depend on clear delineations between what might otherwise be blurry or subjective emotional responses to songs or collections of songs. To territorialize definitive categories whose components work together to render clearly defined mood-based data, Spotify embraces what Lisa Feldman Barrett calls an “essentialist,” or “classical” view of emotions. In *How Emotions Are Made*, she unravels the long-standing scientific, essentialist position that “our emotions...are artifacts of evolution, having long ago been advantageous for survival, and are now a fixed component of our biological nature.”<sup>14</sup> Barrett works to disprove the notion that all human beings have the same basic experiences and expressions of emotion

---

12. Dick, *Time Out of Joint*, 200.

13. Quoted in Jardine, “Thanks 2016, It’s Been Weird.”

14. Barrett, *How Emotions Are Made*, xi.

regardless of context or culture. Emotional essentialism assumes specific parts of the brain, like the “fear centre,” are connected to specific feelings and triggered by universal affective responses that lead to recognizable cross-cultural reactions. The same instance of emotion will universally initiate a smile when someone is happy or a scowl when upset, and the latter reveals the former.

Barrett traces the origins of the essentialized “classical view” of emotions to Charles Darwin’s *The Expression of the Emotions in Man and Animals*, first published in 1872. In this work, Darwin’s theory “presupposes that certain categories [of emotion]...each have a true reality or nature” and that every emotion category “share[s] a deep underlying property.”<sup>15</sup> In the playlist machine, Spotify’s mood-based sorting follows this logic, rationalizing its version of each emotional category of music as “true,” while its data rendering imagines each user sharing a universal response. For instance, it assumes its version of “happy” music universally and cross-culturally matches its users’ conception of “happy” music; and its surveillance machine equates listening to its version of “happy” songs to *being* happy.

Though scientists from different fields have taken various approaches to emotion research, essentialism has persisted, Barrett argues, because it “encourages people to believe that their senses reveal objective boundaries in nature.”<sup>16</sup> She writes: “To be sure, hundreds of experiments offer some evidence for the classical view. But hundreds more cast that evidence into doubt. The only reasonable scientific conclusion, in my opinion, is

---

15. Barrett, 157.

16. Barrett, 158.

that emotions are not typically what we think they are.”<sup>17</sup> Up to this point, Barrett argues, essentialist emotion-science has preferred to perpetuate a universal, context-independent truth that emotions in the brain are like organs in the body: discrete, evolved, universal. However, her data and analysis suggest that essentialism is at least misguided and at most a dangerous oversimplification.<sup>18</sup> Barrett’s own “theory of constructed emotions” dethrones essentialism, suggesting rather that: “In every waking moment, your brain uses past experience, organized as concepts, to guide your actions and give your sensations meaning. When the concepts involved are emotion concepts, your brain constructs instances of emotion.”<sup>19</sup> Barrett provides evidence that suggests emotions are not universal and rigid, but culturally distinct and “granular”—capable of greater differentiation than “sad,” “happy,” or “angry.”

However, Barrett argues that the essentialized Darwinian approach to emotion “remains compelling despite the evidence against it, precisely because it’s intuitive.”<sup>20</sup> Due to its intuitive nature, essentialism slots neatly in line with the logic of data collection and surveillance firms like Spotify, as the essentialized categories are more easily computed by algorithms that render user action into measurable data and more

---

17. Barrett, xii.

18. Providing an extreme example, Barrett claims: “The Gulf War in Iraq was launched, in part, because Saddam Hussein’s half-brother thought he could read the emotions of the American negotiators and informed Saddam that the United States wasn’t serious about attacking” (xiv). Of course, there were many factors in the conflict aside from a misreading of emotions, but the extreme example offers a case for the dangers of making assumptions about universal, essentialized emotions.

19. Barrett, 31.

20. Barrett, xiii.

easily “sold” to advertisers. Zuboff notes that “machines are only as smart as the volume of their diet allows,”<sup>21</sup> and Spotify’s machine cannot account for much granularity in its mood-based playlists, nor can it extract data from or target advertising toward more subtle affective responses. Benedik offers *Ad Age* a simple and essentialized example: “Mood categories like happy, chill, and sad will let a brand like Coca-Cola play on its ‘Open Happiness’ campaign when people are listening to mood-boosting music.”<sup>22</sup> Maintaining a controlled environment allows Spotify to territorialize a space of consumption for each of its algorithmically refined, essentialized musical-emotional categories where it invites users and advertisers to match its representations of mood.

### 3.1.3 Architects of choice: the interface and framing meaning

While, as Eriksson et. al write, “[a]ffective responses to and connotations of music are...highly subjective,”<sup>23</sup> Spotify builds its mood-based playlists out of essentialized and objective categories in order to simplify the process of rendering “traceable inputs” into quantified measures of feeling and emotion. Its operation, like essentialist emotion science, relies on agreement upon universal “truths” implying users associate the same sounds with the same feelings. Barrett writes: “People are almost always unaware that they essentialize; they fail to see their own hands in motion as they carve the dividing lines in the natural world.”<sup>24</sup> Spotify’s mood-based sorting capitalizes

---

21. Zuboff, *Surveillance Capitalism*, 102.

22. Peterson, “Spotify to Use Playlists as Proxy.”

23. Eriksson et al., *Spotify Teardown*, 125.

24. Barrett, *How Emotions Are Made*, 158.

on the unthinking tendency to essentialize as it packages songs within territories that provide clearly stated emotional functions.

Spotify's playlist-based organization and territorialization of its "space" acts as what Zuboff calls a "choice architecture" and is designed to "encourage choices that accrue to the architect, not to the individual."<sup>25</sup> Spotify urges users to create a "personal and curated experience" but encourages them to stay within the parameters of the musical categories it provides.<sup>26</sup> Though the "choice architecture" of Spotify's "Home" screen is constantly morphing and making algorithmically personalized music suggestions, the "Browse" tab offers a more concrete object of analysis. At the top of the "Browse" page, Spotify presents traditional music-genre options such as "Pop," "Hip-Hop," "Country," and many more. Each of these options contain their own "environment" of playlist choices.

The platform's music sorting starts to operate more surreptitiously within the "Mood" menu. This aspect of the platform, Eamonn Forde writes, "marks a switch from hard genre categorization into a more nebulous mood-based categorization,"<sup>27</sup> where Spotify has more control over the architecture because it is unencumbered by previously established genre conventions. Åker observes that Spotify's "arranging [of] playlists corresponds to how music is described by users as ubiquitous and important for

---

25. Zuboff, *Surveillance Capitalism*, 295.

26. "The New Golden Age of Audio," Spotify for Brands, <https://www.spotifyforbrands.com/en-CA/insights/the-new-golden-age-of-audio/>.

27. Eamonn Forde, "'They Could Destroy the Album': How Spotify's Playlists Have Changed Music for Ever," *The Guardian* (August 17, 2017), <https://www.theguardian.com/music/2017/aug/17/they-could-destroy-the-album-how-spotify-playlists-have-changed-music-for-ever>.

structuring the everyday.”<sup>28</sup> Specifically, the mood-based aspect of its choice architecture lies central to Spotify’s claim to be able to provide structure and context for users’ emotional connections to music and works to legitimize its claims of representing these connections in its data.

However, Eriksson et al. write, “[t]he same songs can be included in differently themed playlists, and the same playlists are also found in different musical categories.”<sup>29</sup> Thus territorialization of Spotify’s “choice architecture” begins with what Eriksson et al. call “the universalizing and homogenizing aspects of its packaging,”<sup>30</sup> beginning with playlist titles and descriptions.

Spotify uses our predisposition to essentialism to its advantage. Its “Mood” environment consists of functional and situational playlists with names like “Happy Hits!” “Mood Booster,” “Down in the Dumps,” and “Life Sucks.” Playlist titles are short, memorable, and descriptive of the function or situation they are intended to serve. Titles like “Songs to Sing in the Shower” or “Walk Like a Badass,” are less direct in their emotional connotation, but rely on cultural understandings that assume a universal shared emotional experience connected to a particular situation. Each playlist is tagged with a description to render the set’s intended function concrete. For instance, “Mood Booster” invites users to: “Get happy with this pick-me-up playlist full of current feel-good

---

28. Åker, “Spotify as the soundtrack,” 93.

29. Eriksson et al., *Spotify Teardown*, 125.

30. Eriksson et al., 125.

songs!”<sup>31</sup> While “Down in the Dumps” claims it contains: “The latest pop songs that are totally cry worthy.”<sup>32</sup> Barrett critiques the idea that emotions are “hardwired into us, reflexively deployed, shared with all our fellow humans,”<sup>33</sup> but the plausibility of Spotify’s mood-based music sorting depends upon it. The “choice architecture” requires that users who want to match their mood must select from one of its essentialized categories which, in turn, become targets for advertisers; like “Happy Hits” and its provision of an idealized target for Coke’s “open happiness” campaign.

### 3.1.4 Visualizing mood

Spotify for Brands claims: “At Spotify we have a personal relationship with...people who show us their true colours with zero filter.”<sup>34</sup> In making this claim, Spotify neglects to acknowledge that by labeling, describing, and annotating each mood with a cover image it provides essentialized categorical filters that, in fact, prompt the desired response. Instead the company highlights the “personal relationship” established through a user’s supposed expression of self through musical taste, revealing their “true colors,” through the filters of Spotify’s prefabricated categories.

Spotify’s visual presentation of mood-based playlists reprises many features of a landmark in essentialist emotion research. Barrett criticizes the work of psychologists

---

31. “Mood Booster, a Playlist by Spotify,” Spotify, accessed March 8, 2020, [https://open.spotify.com/playlist/37i9dQZF1DX3rxVfibe1L0?si=msDQsgkZQ0esa1wv\\_D-Ibg](https://open.spotify.com/playlist/37i9dQZF1DX3rxVfibe1L0?si=msDQsgkZQ0esa1wv_D-Ibg).

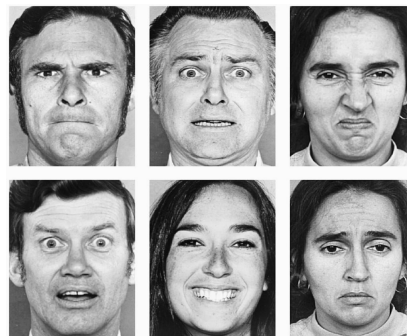
32. “Down in the Dumps, a Playlist by Spotify,” Spotify, accessed March 8, 2020, <https://open.spotify.com/playlist/37i9dQZF1DWSqBruwoIXkA?si=9P5zNeeCTB2k1v1gFZThNw>.

33. Barrett, *How Emotions Are Made*, ix.

34. Pelly, “Big Mood Machine.”



Silvan S. Tomkins, Carroll E. Izard, and Paul Ekman who, in the 1960s, devised a set of “meticulously posed photographs” (fig. 3.3) that were designed to depict the essential features of six universal emotions: “anger, fear, disgust, surprise, sadness and happiness.”<sup>35</sup> These photographs were used extensively in experiments around the world



**Figure 3.3:** “Meticulously posed photographs” used by researchers to depict essentialist emotion concepts. From Barrett, *How Emotions Are Made*, page 5.

and the data collected seemed to support the cross-cultural identification of universal emotion categories. However, in Barrett’s critique of the classical view of emotions, she finds that test subjects are only able to consistently identify the emotions expressed on a set of faces when framed in the researchers’ “choice architecture” and given the prompt of a small set of options. The realization of the importance of “Western-centric” scholarship plays a major role in furthering Barrett’s own theory. She argues that researchers implicitly taught non-Westerners to succeed on the test in order to support theories of universal emotion concepts. Barrett’s reconstruction of these old experiments with new controls concludes that emotions “*appear to be universal under certain conditions*—when you give people a tiny bit of information about Western emotion concepts, intentionally or not.”<sup>36</sup> When territorialized by Western-centric scholarship, the test becomes, as Deleuze and Guattari write, “a task to fulfill or a deed to do.”<sup>37</sup>

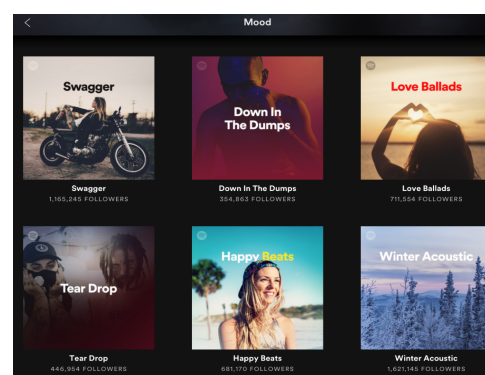
---

35. Barrett, *How Emotions Are Made*, 5.

36. Barrett, 54.

37. Deleuze and Guattari, *A Thousand Plateaus*, 311.

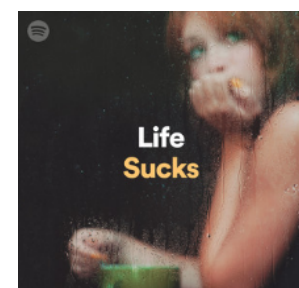
Spotify's mood-based playlists provide similar conditions to perpetuate essentialization, using titles and images as prompts to help users easily identify the function of category. The "Mood" page of Spotify playlists is filled with ready-made music collections for ready-made emotional concepts (*see fig. 3.4*). Like Tomkins, Izard, and Eckman's "meticulously posed photographs" of emotional expressions, the playlist cover images are carefully composed in order to solidify this aspect of the choice architecture. Cover images are important to Spotify's territorialization of mood-based spaces of consumption and their prompts work to influence the subjective nature of users' affective response to music. They guide the user's conception of the emotion they are matching and congeal the collection of individual songs into a unified depiction of the mood.



**Figure 3.4:** A selection of Spotify's essentialized mood-based categories. Retrieved by the author December 2018.

Unlike the playlist covers in Spotify's traditional genre playlists, which change regularly and are offered as rewards for artists, mood-based playlist covers feature anonymous models and have rarely changed over the course of my two years of research. They are an integral part of the territorialization, the brand, the mood, and the representation of an essentialized, Spotifyed emotion.

For example, the playlist cover image for "Life Sucks" (approximately 2.5 million followers) consists of a blurry photograph of a white, millennial woman, drinking a steaming beverage while gazing through a rain-speckled



**Figure 3.5:** Playlist cover for "Life Sucks." Retrieved by the author December 2018.

window.<sup>38</sup> Its dark colour palette reinforces the dreary mood it wishes to convey. No clothing is visible, but the model's eyes match her mug and her nail polish corresponds to the font of the word "sucks." Spotify's description of the playlist reads: "Feeling like everything just plain sucks? We've all been there. These songs will probably make you feel worse, but at least they'll let you know you're not alone."<sup>39</sup> In December 2018 the playlist contained song titles like "God I Hope This Year Is Better Than The Last," "Only You," "Homesick," and "Blood and Bones." The playlist's title, cover image, description, and the song titles elicit pangs of generic Western, "sadness" before the user hears what the music for the mood sounds like, offering "priming effects" similar to those of Tomkins et al. and appealing to Spotify's essentialized concept of an emotion.

Exploiting users' predisposition to essentialized emotion categories, Spotify's mood-based playlists, like "Life Sucks" invite them to "forget" their more complex, contextual emotions, their social subjection, and "feel" music (and the world around them) through the frames of Spotify's dividualized categories. A user can click on any essentialized mood category and initiate the soundtrack to that emotion or alternatively, as Anderson suggests, the soundtrack can initiate the emotion itself.<sup>40</sup> Spotify provides prompts to guide users' to "[make] sure that the mood, the moment and the music are all

---

38. "Life Sucks, a Playlist by Spotify," Spotify, accessed March 8, 2020, <https://open.spotify.com/playlist/37i9dQZF1DX3YSRoSdA634?si=ppIk9sPKSoGErTTOBGYPVg>. Though outside of the scope of this research, it is noteworthy that all the mood-based playlist covers I discuss in this work have pictures of women on their covers. Eriksson et al. provide an analysis of gendering of playlists and of other gender-related issues on the platform in *Spotify Teardown* (126-7).

39. Eriksson et al., *Spotify Teardown*, 125.

40. Anderson, "Neo Muzak and the Business of Mood," 813.

in sync,”<sup>41</sup> so it can simplify the rendering of their inputs into data within what Anderson calls a “sonic architecture of expertly calibrated and monetized moods.”<sup>42</sup> But like the “meticulously posed photos” of essentialist emotion researchers, Spotify’s carefully calibrated emotional boxes do not read emotion, they attempt to teach it.

## 3.2 Constructed

### 3.2.1 Repetition: how emotions are played

A key component in tuning users to the sounds of Spotify’s essentialized emotion categories is musical repetition. Though, as mentioned above, the same song can be put to use in different playlist contexts, the individual components of each collection must share common musical features in order to work smoothly together. Spotify uses musical repetition in various forms to define and then engrain its essentialized emotional categories into the consumption habits of users because, as NM Mashurov writes: “Repetition shapes reality.”<sup>43</sup>

Spotify’s use of repetition essentializes the subjective nature of affective responses to music by capitalizing on the “predictive brain” at the centre of Barrett’s revised “theory of constructed emotions.” Barrett explains: “Everything you feel is based on prediction from your knowledge and past experience.”<sup>44</sup> A purely reactive brain, she

---

41. “Understanding People Through Music: Millennial Edition,” Spotify for Brands, May 2018.

42. Anderson, “Neo Muzak and the Business of Mood,” 818.

43. NM Mashurov, “Double Trouble,” *Real Life*, November 14, 2019, <https://reallifemag.com/double-trouble/>.

44. Barrett, *How Emotions Are Made*, 78.

continues, would not be able to process constant sensory input fast enough and would be too inefficient to operate, like the lag we experience when trying to stream a video on an overloaded wireless connection. Thus, in order to function efficiently the brain relies on prediction to make sense of the world around us while our past affective and physiological experiences “tune” the accuracy of our predictions and help us construct what Barrett calls “emotion concepts” to frame each instance of emotion. “Your concepts,” she explains, “are a primary tool for your brain to guess the meaning of incoming sensory inputs. For example, concepts give meaning to changes in sound pressure so you hear them as words or music instead of random noise.”<sup>45</sup> Likewise, Spotify’s playlists give emotional meaning to collections of songs so users hear them as a functional and situational group rather than as independent entities. Barrett explains that her theory of “[c]onstruction treats the world like a sheet of pastry, and your concepts are cookie cutters that carve boundaries, not because the boundaries are natural, but because they’re useful or desirable.”<sup>46</sup> Thus, in Barrett’s theory of construction, emotions “are not triggered; you create them” based on concepts constructed from past experience.<sup>47</sup>

By territorializing its space with mood-based playlists, Spotify creates its own useful and desirable representations of musical “emotion concepts.” When framed by the platform’s visual and verbal presentation, mood-based playlists tune users to associate a particular set of musical features with the provided essentialized emotion category.

---

45. Barrett, 28.

46. Barrett, 28.

47. Barrett, xii.

Barrett explains that the brain's predictions are formulated "with only past experiences as a guide" and become "your brain's best guesses of what's going on in the world around you."<sup>48</sup> By controlling the "choice architecture" that invites users to match their emotions, Spotify attempts to coax certain predictions and interpretations from its users' in order to predict and guide their future behaviour based on its reconstruction of mood from individualized elements of their past experience.

### 3.2.2 What it sounds like when "Life Sucks"

Repetition of musical characteristics helps to tune users' predictive behaviour to the emotional essences Spotify provides, shaping users' experience by herding them through the categories it provides and defines. For example, "Life Sucks" uses repetitive harmonic patterns and instrumentation to construct Spotify's essentialized concept of sadness. In one sampling (taken December 2018), thirty-eight of the playlist's fifty-two songs (73%) featured piano as the main accompanying instrument, while another three featured closely related electric piano sounds. All but one of the remaining songs featured an acoustic guitar as the prevalent instrument. The songs in "Life Sucks" generally move slowly through consonant chord progressions, almost exclusively at a rate of one chord per bar, maintaining a slow pace that allows space for solitary vocal performances to convey their personal messages of sadness. Repeated use of acoustic instruments supported by spacious electronic textures provides the essence of the pallet of "sad" sounds in "Life Sucks" and continually reminds users that this is what the Western ideal of sadness sounds like. It's "authentic" and "real," featuring timeless or classic instrumentation that allows for a steady flow between this particular playlist's mix of

---

48. Barrett, 59.

older and newer music. Individual songs differ but within the context of the playlist they are coupled to one another by repetitive musical features. The initial efforts of territorialization—presentation of visual imagery, textual description—help “smooth transitions” to clearly distinguish “Life Sucks” from other moods while they “coordinate relations” between the playlist’s individual songs to present a functional and situational sonic territory.<sup>49</sup>

### 3.2.3 Temporal diversion

While the data from its “Audio Features” illustrates that “Life Sucks” has the highest “optimal differentiation” (107.22) of my mood set, meaning it allows for the most variation between individual songs (*see fig. 3.6, page 107 below*), songs remain on the playlist for long periods of time. Repeated visits to the playlist will provide many of the same songs, constructing the “past experience” on which the user is invited to build the connection between music and the emotional concept. “Happy Hits,” on the other hand, has a much higher turnover rate, but the songs themselves are more alike, as illustrated by its lower “optimal differentiation” rate of 74.34.

Attali writes that “the music of repetition becomes both a relation and a way of filling the absence of meaning in the world. It creates a system of apolitical, nonconflictual, idealized values.”<sup>50</sup> The varying manifestations of repetition within Spotify’s “Mood” playlists create precisely the essentialized homogeneous musical and emotional environments Attali warns of. While “Life Sucks” has songs from many different genres and time periods, they are congealed into a unified concept that is

---

49. Sterne, “Sounds like the Mall,” 30.

50. Attali, *Noise*, 110.

connected by each song's "nonconflictual" contribution to maintaining the ideals of the mood. Repetitive instrumentation and lyrical sentiment, solitary vocal performances, and familiar musical forms, when framed with Spotify's presentation of the category, construct a cohesion between individual songs and solidify the associations between users' essentialized emotion concepts and the songs in the playlist. Mood-based playlists aim to provide a space where users can "fill the absence of meaning" with Spotify's algorithmically refined representations of musical feeling.<sup>51</sup> "Believing is feeling,"<sup>52</sup> Barrett writes, and if users begin to believe in the soundtrack Spotify constructs for a mood, following Barrett's findings, they may eventually feel it for themselves.

### 3.2.4 Taking data offline

As Spotify works to shape what will become users' "past experience" with its essentialized reconstructions of musical-emotional concepts, the company claims that it can measure and predict users' future behaviour with greater confidence. Brian Benedik tells *Ad Age* in 2015: "We've been able to aggregate this idea of launching playlists as a proxy for the activity or mood you're in."<sup>53</sup> Classical research shows "proxy" has active influence in subjects. To rationalize the power of its mood-based data, Spotify must objectify the information it collects and render it as "personal" and "intimate" details of its users that are poignant enough to eventually predict their behaviour. In "The Song is You," a 2016 article linking personality and musical preference, David M. Greenberg, Michael Kosinski, David J. Stillwell, Brian L. Monteiro, Daniel J. Levitan, and Peter J.

---

51. Attali, 110.

52. Barrett, *How Emotions Are Made*, 78.

53. Quoted in Peterson, "Spotify to use playlists as proxy."



Rentfrow explain that through streaming music platforms “it is possible to link people’s daily music listening with their physiological and affective reactions on a very large scale.”<sup>54</sup> Spotify claims its users’ “traceable inputs” “tell a story” and within mood-based playlists, the story is about their emotional state, playlists provide the setting or context, and its 270 million users offer a large scale.<sup>55</sup>

Unlike the decoding necessary with genre-based or artists-based sorting of music, mood-based data can be most easily rendered, accurately or not, simply from the user’s consumption of mood-based playlists without requiring any “traceable inputs” beyond the initial selection to match their mood. Spotify For Brands claims the company’s “real-time, personal insights...reveal our audience’s moods, mindsets, tastes and behaviors.”<sup>56</sup> The machine equates “listening to” a mood with “being in” a mood, so a user provides data on their sentiment just by pressing play. Songs that match and maintain the mood of the playlist thrive in this environment, where the goal is to keep users on-device, “expressing” their “Spotifyfied” emotion and providing a clear target for advertisers. Spotify assumes the users’ physiological and affective responses match with its musical framing and presents this data as “truth” to its advertising and data clients. The company operationalizes fortuitous, clever mixing of classical and constructed views of emotions, whether they could explain the technique or not.

---

54. Greenberg et al., “The Song Is You: Preferences for Musical Attribute Dimensions Reflect Personality,” *Social Psychological and Personality Science* 7, no. 6 (2016): 602. <http://doi.org/10.1177/1948550616641473>.

55. “Audiences,” Spotify for Brands.

56. “Audiences,” Spotify for Brands.

Spotify’s pitch to advertisers claims: “new research is starting to reveal the streaming generation’s offline behaviors through their streaming habits.”<sup>57</sup> By claiming that users’ streaming habits provide insight into their offline behavior, Spotify reifies and valorizes its mood-based data in the eyes of the advertisers and marketing firms. Spotify works to “map and shape the lives of streaming users” with a choice architecture that encourages them to match their mood to its essentialized categories.<sup>58</sup> In *Spotify Teardown*, Eriksson et al. explain that Spotify’s systems “work prescriptively; they attempt to predict user preferences and therefore also tend to shape user practices.”<sup>59</sup> If Spotify can first measure and then predict how people feel when they listen to music, the hope is—according to Zuboff’s model of surveillance capitalism—that they will eventually be able to influence and/or modify the emotional behavior of those who use its platform.

Describing one of its case studies, “Understanding People Through Music,” a document released by Spotify for Brands in May 2018 claims: “Spotify playlists are Kate’s mood ring, mirroring what she’s feeling at any given moment.”<sup>60</sup> To this notion, Anderson adds: “Along with sometimes mirroring whatever particular mood the listener is already in, a mood-tagged playlist...operates like a sitcom’s mechanized or canned

---

57. “Audiences,” Spotify for Brands.

58. “Audiences,” Spotify for Brands.

59. Eriksson, et al., *Spotify Teardown*, 128.

60. “Understanding People,” Spotify for Brands.

laughter to externalize and manage mood.”<sup>61</sup> The ultimate goal of the surveillance machine, as Zuboff writes, is to predict behavior with “total certainty.”<sup>62</sup> By constructing the essentialized categories that maximize the efficiency of its data extraction and controlling the presentation and contents of mood-based playlists, Spotify seeks to predict and guide the emotional behaviour of its users, working to close its system around them, to match their moods to *its* “ring,” and to reframe and recontextualize their affective responses to music in order to maximize the efficiency of its data extraction apparatus.

### 3.3 Happy Hits, Happy Subjects

#### 3.3.1 Musical targets

In addition to providing targets for users and advertisers, mood-based playlists provide targets for producers. Songwriter Elizabeth Mencil tells Mark Hogan in *Pitchfork*, “Spotify tells you what your job is.”<sup>63</sup> An anonymous songwriter tells Liz Pelly, “you give yourself a target.”<sup>64</sup> Playlists influence producers because, Eamonn Forde writes, “if you’re not on them, you might as well not exist.”<sup>65</sup> Producers are encouraged to “tune” their output in accordance with Spotify’s endless data, like *Wrapped*, and pressured to adapt by the threat of inaudibility. Pelly asks:

---

61. Anderson, “Neo Muzak and the Business of Mood,” 813.

62. Zuboff, *Surveillance Capitalism*, viii.

63. Quoted in Hogan, “How Streaming.”

64. Quoted in Pelly, “Streambait Pop.”

65. Forde, “They could destroy the album.”

What is considered useful to streaming services? Music that *streams well*. This is all part of what independent artists are up against today: a supposedly neutral platform that manipulates them into creating value on its own terms...one that cares more about playlist streams than creating a sustainable situation for artists.<sup>66</sup>

Spotify's mood-based playlist architecture wants music that provides smooth supply routes for data extraction and producers acknowledge the value of tuning their output to meet the demands of the machine.

### 3.3.2 Big mood data

I begin my analysis of the musical targets within Spotify's mood-based data extraction apparatus by looking at playlists on the terms of the machine itself. Below, I compare the "Audio Features" extracted by The Echo Nest's algorithmic "listening" analysis across a spectrum of Spotify's essentialized emotions (from happy, to chill, to sad). Following the methodology outlined in Appendix A, my data set was compiled from the data-aggregating application Spot on Track and considers the "Audio Features" of 2132 songs included on six different mood-based playlists.<sup>67</sup> I compared the "Audio Features" of "Mood Booster" and "Happy Hits" (happy playlists), "Chill Vibes" and "Chill Hits" (chill playlists), and "Life Sucks" and "Down in The Dumps" (sad playlists). Figure 3.6 below illustrates the averages of what Spotify identifies as its mood-based measurements: tempo (number of beats per minute), "danceability" (suitability for dancing), "valence" (level of "musical happiness"), and "energy" (level of

---

66. Pelly, "Streambait Pop."

67. The data set *does* include repeated songs if they appeared on the playlist in more than one instance. By spacing my samples six months apart, I hoped to minimize repeated songs, but this was not always possible. I determined that keeping repeated songs provided a better look at the overall mood than removing them, as I'm more concerned with the overall function of a set than with the details of the individual components. I treat the songs as individualized cogs, like Spotify does.

intensity/activity).<sup>68</sup> I included additional measures of interest including each playlist's percentage of songs in a major mode, "acousticness," (a quantified measure of instrumentation) and "optimal differentiation" (each playlist's ideal balance of sameness and difference between songs).<sup>69</sup> The averages are compiled from five iterations of each playlist, collected in six month intervals between August 2017 and August 2019. I chose playlists that represent the two most popular for each emotion category. "Chill Hits" has the most followers, over 5 million, while "Down in the Dumps" has the fewest with 500,000. Each of the remaining playlists has between 1 and 4 million followers.

Average tempos, measured in beats per minute (bpm), remain similar across the mood spectrum. Though the variance is minimal, "Life Sucks" has the lowest average number of beats per minute at 113.48. However, slow does not seem to correlate to "sad" because "Down in the Dumps" has the highest bpm at 122.17. In these instances, tempo appears to have little correlation to mood.

Intriguingly, "Life Sucks" contains the highest percentage of songs in a major mode (key) at 76.45%. In this case, Spotify's version of sadness conflicts with the musical trope that major keys sound happy and a minor keys sound sad. Perhaps this is part of what Eriksson et al. call the "corrective to the happiness imperative" that playlists like "Life Sucks" provide.<sup>70</sup> While the playlist description says the songs "will probably

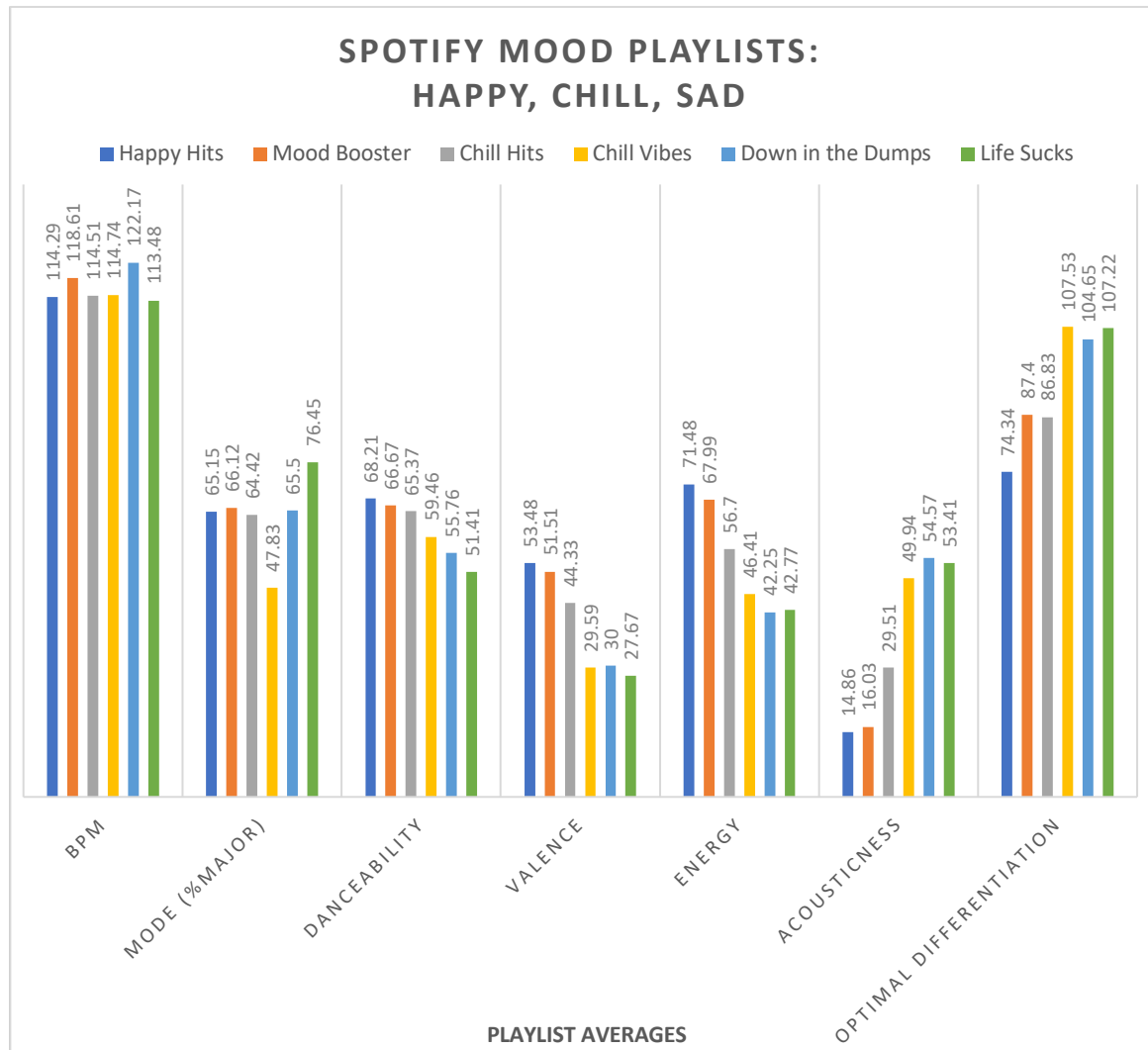
---

68. "Discover Spotify's Features," Spotify for Developers, Accessed March 3, 2020, <https://developer.spotify.com/discover/>. See Appendix A, page 176 for detailed descriptions of these categories.

69. I left out less compelling "Audio Feature" measurements like "liveness," "instrumentalness," and "speechiness." Nearly all of the songs in these playlists are not recorded live, not instrumental, and not "speech-y," so the data provided little value.

70. Eriksson et al., *Spotify Teardown*, 125.

only make you feel worse,” Spotify still wants users to remain hopeful enough to stay engaged and a high concentration of major modes might regulate “sadness” and keep listeners engaged. Spotify recognizes that people who feel like their “life sucks” aren’t likely to keep consuming music that actually makes them feel worse. In this data set, mode does not appear to have a strong classical correlation to mood.



**Figure 3.6:** Mood-based playlist “Echo Nest” data comparison. Collected by the author, see Appendix A for detailed methodology and explanation of categories.

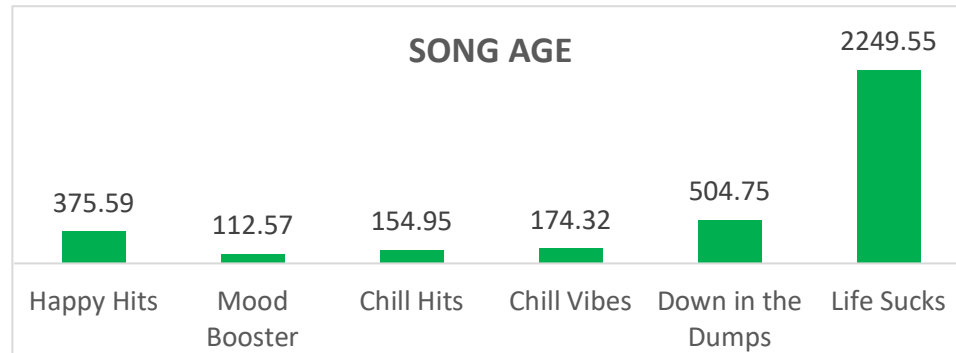
“Life Sucks” has the lowest average ratings of “danceability” and “valence,” while only “Down in the Dumps” has a (slightly) lower average “energy.” “Happy Hits”

has the highest average in each of what Spotify calls its mood-based measurements, while “Chill” occupies the middle ground. Appropriately, each of these categories shows a distinct “downslope” as the playlist mood shifts from “happy” to “chill” to “sad.” The ratings in mood-based categories seem to show strong correlation to mood and offer a good visualization of a connection between the Echo Nest’s “Audio Features” and Spotify’s mood-based sorting.

“Life Sucks” has the highest average rate of “acousticness” at 53.41, which mirrors my observation of its songs often featuring piano and acoustic guitar. “Happy Hits” features mostly electronic instruments and, accordingly, has the lowest average score for “acousticness” at 14.86. Spotify’s essentialized version of “Life Sucks” makes a clear correlation between the more “natural” and perhaps “old fashioned” or nostalgic sounds of acoustic instruments while “Happy Hits” prefers a more synthesized “modern” sound. “Chill,” again, remains in the middle, preferring a mix of acoustic and electronic instruments. In these instances, “acousticness” aligns with my musicological and aural analyses of each mood.

“Life Sucks” (107.22) and “Chill Vibes” (107.53) have the highest “optimal differentiation” scores in this data set, meaning they have the most allowance for musical variation between songs. “Happy Hits” has the lowest “optimal differentiation” rating of 74.34, meaning the “Audio Features” have the least amount of variation from song to song. The high “optimal differentiation” rate of “Life Sucks” can be attributed, in part, to its combination of both older and newer songs. “Life Sucks” contains significantly older songs than “Happy Hits” or “Mood Booster.” The average “song age” (which I measured from release date until the date of each version of the playlist, as per Spot on Track)

within “Life Sucks” is 2249.55 days compared with 375.59 days for “Happy Hits” and just 112.57 in “Mood Booster.”



**Figure 3.7:** “Song Age” across the mood spectrum. Collected by the author from Spot on Track and measured from the song’s release date up to the date of the sample playlist.

On the whole, Spotify playlists (and music streaming platforms in general) favour “new” music. In fact, Buzz Angle data from 2018 claims that “music which is less than three years old gets more plays on interactive audio streaming services in the United States than all music which is over three years old.”<sup>71</sup> “Life Sucks” bucks this trend. It could be argued that familiarity is an important contributor to Spotify’s construction of essentialized/regulated sadness, aligning with the set’s preference for acoustic instruments and its slow turnover. For example, songs such as “Dreams take 2”—an alternate Fender Rhodes-only version of the song from Fleetwood Mac’s famed *Rumours* album—lend familiarity and help provide historical context for this version of sadness.<sup>72</sup> Perhaps Spotify’s data suggests that those who choose “Life Sucks” are not as receptive

71. Tim Ingham, “Why Spend \$4.1bn on A&R? Because New Artists Are Accelerating Streaming’s Growth,” *Music Business Worldwide*, June 7, 2019, <https://www.musicbusinessworldwide.com/why-spend-4-1bn-on-ar-new-artists-are-accelerating-streamings-growth/>.

72. Fleetwood Mac, “Dreams take 2.” From *Rumours (Deluxe Edition)* Rhino, 2013. (13.34 “playlist suitability” for “Life Sucks,” an above average suitability level).



to the new music that fills most of their mood-based playlists because, as Mark Fisher suggests in *Capitalist Realism*, it should not be “surprising if profound social and economic instability [probable cause for sadness] resulted in a craving for familiar cultural forms.”<sup>73</sup> The old familiar feeling that “Life Sucks” needs a familiar, comforting soundtrack while Spotify fills playlists like “Mood Booster” with more new songs, that all appear to follow a similar repetitive “nonconflictual” and “idealized” path to musical happiness.

Overall, the “Audio Features” of the songs in these six playlists seem to make several strong correlations to my musicological and aural distinctions between the moods.

### 3.3.3 Playlist case study: “Happy Hits”

In order to illustrate some of the techniques of repetition that are used to construct an essentialized playlist mood I examined the musical features of “Happy Hits,” a Spotify branded playlist with 4.6 million followers. Though I have made data-based comparisons across the mood spectrum above, an essentialized version of “happiness” is central to Spotify’s mood-based sorting. There are many more options in the “happy” realm than in the “sad.” Eriksson et al. argue: “The branded musical experience delivered by Spotify does not seem to involve much playing around with different moods. Instead, it evokes fantasies of one specific state of mind and the moral values that come with it: happiness.”<sup>74</sup> Spotify’s music categorization privileges a neoliberal vision of happiness promoting “entrepreneurial subjectivity” where “users are repeatedly called upon to

---

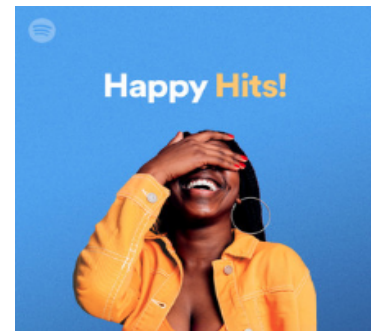
73. Mark Fisher, *Capitalist Realism: Is there no alternative?* (Winchester: Zero Books, 2010), chapter 7, Apple Books.

74. Eriksson et al., *Spotify Teardown*, 124.

cultivate their optimism by using music to manipulate or cure their thoughts and behaviors.”<sup>75</sup> “Happy Hits” appears emblematic of Spotify’s overall mood matching objectives and, thus, provides an apt playlist to analyze the process by which it works to subjectivize users through musical repetition and continue “soundtracking the lives of happy subjects.”<sup>76</sup>

### 3.3.3.1 Presentation:

Spotify visually presents “Happy Hits” with a cover photo that features a woman of colour cropped from the elbows up, throwing her head back with joyous laughter and covering her eyes, depicting an essentialized version of “happiness.” She has brightly coloured nails and is wearing bright colours and a



**Figure 3.8:** *Playlist cover for "Happy Hits." Retrieved by the author September 2019.*

low-cut shirt, surrounded by perfectly blue “skies.” The playlist’s description reads: “Hits to boost your mood and fill you with happiness!”<sup>77</sup> It contains songs with titles like “Good Vibes,” “Feels Good,” “Feel Good,” and “Why So Serious.” “Happy Hits” provides clear visual and textual cues that prompt the users’ “past experience,” using signs that set up their reception of its musical happiness to help bond the individual songs within to depict a unified emotional experience.

---

75. Eriksson et al., 124.

76. Eriksson et al., 121.

77. “Happy Hits, a playlist by Spotify,” Spotify, accessed March 8, 2020, <https://open.spotify.com/playlist/37i9dQZF1DXdPec7aLTm1C>.

### 3.3.3.2 Composition techniques:

In my analysis, the features that make a song “happy” in this iteration of Spotify’s sorting are not closely correlated to musicological elements like tempo, harmony, or key; they lean more heavily on repetitive composition models, active sonic/production choices, and higher vocal performance energy. Harmonic motion is minimal, even more stagnant than in “Life Sucks.” Variations of texture and density propel the song more so than harmonic progression. The average tempo of this sample set, 114.29 bpm, is only slightly higher than that of “Life Sucks” at 113.48. However, “Happy Hits” has the least variation in tempo among the sets I collected. The average variation from the median tempo in “Happy Hits” was 17.75 bpm while it was 26.31 bpm in “Life Sucks.” While tempos ebb and flow in “Life Sucks,” “Happy Hits” keep a more consistent pace—repetition along a more compressed vector. Despite the negligible difference between the two moods in average tempo, songs of “Happy Hits” are decidedly more “up-beat.” This is accomplished through busier percussive patterns, bright synthesized sounds, and faster and more syncopated harmonic rhythms.

### 3.3.3.3 Instrumentation:

The instrumental components throughout “Happy Hits” are varied, but the technology of the instrumentation itself is homogenous and repetitive—most songs are built around bright, shimmery synthesizers, loud synth bass, and heavy programmed drums. Acoustic instruments are rare, as reflected in its average “acousticness” score of 14.86. Electric guitars appear infrequently but are occasionally used as a complementary rhythmic texture, rather than a featured instrument. The “happiness” template features sparse instrumentation in verses—sampled kick drums and finger snaps are common—

followed by dense refrains with heavy, programmed percussion and thick layers of synthesizers.

### 3.3.3.4 Vocal technique:

Vocal performances are highly energetic and emotive, though they are subjected to rigorous digital processing including pitch correction, time correction, and digital compression. Double or triple (or more) tracking of vocals (layers of the same singer singing the same thing) is common in “Happy Hits,” providing a thick, confident, and full sound that makes vocals prominent and perhaps promotes the collective emotional experience of optimism, in opposition to the solitary (often single-tracked) vocals depicting the loneliness of feeling that “Life Sucks.”

### 3.3.3.5 Lyrics:

Lyrics are perhaps the most superficially repetitive feature of “Happy Hits.” “Dirty Sexy Money (featuring Charlie XCX and French Montana)” by David Guetta and Afrojack, the song with the best “playlist suitability” score in my “Happy Hits” sample set, features multiple levels of repetitive lyrical devices.<sup>78</sup> The verses include consecutive repeated three-word phrases. It begins:

*Woah, wooh*  
*I want you bad, want you bad, want you bad*  
*Saw you in the moonlight*  
*Think you lookin' fine, want you bad*  
*Got me good, never turn back (ooh)*  
*I make you mine, make you mine, make you mine*  
*Coming for the taking, promise you are wearing the crown*  
*Number one, spin your head around.*<sup>79</sup>

---

78. The song registered a “playlist suitability” score of .14, which means the “total variance” of its “Audio Features” is nearly exactly in line with the “optimal differentiation” of the entire set of 269 “Happy Hits.”

79. David Guetta, Afrojack, Charlie XCX, and French Montana, “Dirty, Sexy Money.” Parlophone France, 2017.

By the time it gets to the chorus, “Dirty Sexy Money” ups the repetitive ante and repeats single syllables, in addition to saying “pull up” eight times per chorus:

*If you wanna **pu-pu-pu-pu-put** it on me  
 You're not gonna **ge-ge-ge-ge-get** it for free  
 Come on spend that dirty sexy money **on me, on me, on me**  
 You got to **pull up, pull up, pull up, pull up**  
 If you wanna **do-do-do-do-do** it freaky  
 24/7, **no-no-no-no-no** sleep  
 Come on put that dirty sexy money **on me, on me, on me**  
 You got to **pull up, pull up, pull up, pull up***

This chorus repeats four times throughout the song and repetition continues in the bridge:

***Clap, clap, clap, clap**  
 Go on **move your body**  
**Clap, clap, clap, clap**  
 Baby **move your body**  
**Clap, clap, clap, clap**  
 You ain't gotta fight it  
**Clap, clap, clap, clap**  
 What you need, I got it*

The level of lyrical repetition in “Dirty Sexy Money” is extreme, but not out of the ordinary for songs in “Happy Hits.” The recurring messages in this mood-based playlist are direct and simple and lyrics use repetition to contribute key structural components to the territorialization of mood within “Happy Hits.”

### 3.3.3.6 Form/Recording techniques:

Formal design of many “Happy Hits,” facilitated by the digital equipment on which they are recorded, is another major contributor to the creation of repetition within songs and throughout the playlist. A popular form-related trend in “Happy Hits” is what I call the “decoy chorus” or “double chorus” that multiplies the instances of “pay off” and repetition on which popular songs thrive, while contributing to the lyrical repetition discussed above. In this song form, a short, concise verse is followed by what feels like an arrival at a chorus. Next, instead of regrouping for the second verse, the song’s energy

escalates into another, “bigger” chorus. After the second time through both choruses, songs often include an *even* bigger section often called the “post chorus,” which is usually repeated at the end of the song. Whereas older pop songs had one section that repeated several times, the chorus, these songs have three or, if there is a “pre-chorus,” four repeated sections. (*See the example “Never Really Over” on page 116.*)

In these repeated sections the lead vocal (as well as other musical elements) is often “flown,” meaning it is directly copied and pasted, from one repeated section to another. This results in precise repetition of the vocals throughout the recurring sections of the song. Listeners envision a complete “performance” of the song, but in reality, it consists of copy-pasted repetitions of the exact same three or four segments of audio throughout. “Flying” sections was common practice even in the age of analog tape but is much less labour intensive and more common with the ubiquity of digital recording technology. What used to be a laborious process of physically cutting and redubbing tape is now as simple as copy/pasting a paragraph in a word processor. Whether “flying” vocals is used as a tool to deliberately maximize repetition and memorability or a casualty of the economics of production time, the repetition of flown sections is a prominent feature of “Happy Hits.”

Composer and violinist Owen Pallett, in a musicological breakdown of Daft Punk’s 2013 song “Get Lucky” (a “Happy Hit” in April 2019), calls the flying of vocal sections an “egregious... punkish move, sending a clear message: ‘This Is Pop, Where Repetition Is King, And Our Time Is More Valuable Than Yours.’”<sup>80</sup> The process of

---

80. Owen Pallett, “Explaining the Genius of Daft Punk’s ‘Get Lucky’-Using Music Theory,” *Slate Magazine*, March 28, 2014, <https://slate.com/culture/2014/03/daft-punks-get-lucky-explained-using-music-theory.html>. In *Noise*, Attali writes: “Repetition constitutes an extraordinary mutation of the relation to

“flying” sections occurs in most modern popular music, but within “Happy Hits” it serves directly to “fill the absence of meaning” and crystallize an essential version of musical happiness.<sup>81</sup> *Exact* repetitions of entire sections help to “tune” the predictive activity of the user’s brain to Spotify’s version of the emotional experience.

Katy Perry’s 2019 song “Never Really Over,”<sup>82</sup> found on “Happy Hits” in October 2019, provides a paradigmatic example of the “double chorus” song form, “flying” sections, and repetition it enables. Perry repeats the word “over” upwards of 42 times, many of them copied and pasted. The precision of the song’s formal repetition can best be illustrated through the song’s lyrics and corresponding time stamps (*lyrical repetition in bold*).

<b>VERSE 1:</b> (00:00 - 00:18) (18 seconds)	<i>I'm losing my self-control Yeah, you're starting to trickle back in But I don't wanna fall down the rabbit hole Cross my heart, I won't do it again</i>
<b>PRE-CHORUS:</b> (00:19 - 00:29) (10 seconds)	<i>I tell myself, tell myself, tell myself, "Draw <b>the line</b>" And <b>I do, I do</b> But once in a while, I trip up, and I cross <b>the line</b> And I think of you</i>
<b>CHORUS:</b> (00:29 - 00:46) (17 seconds)	<i>Two years, and just like that My head still takes me back Thought it was done <b>But I guess it's never really over</b></i>

---

human production. It is a fundamental change in the relation between man and history because it makes the stockpiling of time possible” (101). The musical commodity, Attali argues, remains unique because consumers “must devote their time to producing the means to buy recordings of other people’s time” (101). In the digital age of music consumption, the exchange is more opaque, as Spotify users devote their time to produce the means to subscribe for access to an infinite stockpile of other people’s time; much of it representational due to copying and pasting. Perhaps pop’s notion that its time is more valuable than its listeners’ is now an illusion as Spotify puts pop’s commodities in competition for *users’* time, above any direct financial transaction. Spotify now holds an infinite stockpile of time and producers must devote their time to attracting as much of the listener’s finite time as possible.

81. Attali, *Noise*, 10.

82. Katy Perry, “Never Really Over.” Capitol Records, 2019. (3.75 in “playlist suitability” for “Happy Hits.”)

	<i>Oh, we were such a mess But wasn't it the best? Thought it was done But I guess it's never really over</i>
<b>CHORUS II:</b> (00:46 - 01:06) (20 seconds)	<i>Just because it's over doesn't mean it's really over And if I think it over, maybe you'll be comin' over again And I'll have to get over you all over again Just because it's over doesn't mean it's really over And if I think it over, maybe you'll be comin' over again And I'll have to get over you all over again</i>
<b>VERSE II:</b> (01:07 - 01:25) (18 seconds)	<i>I guess I could try hypnotherapy I gotta rewire this brain 'Cause I can't even go on the internet Without even checking your name</i>
<b>PRE-CHORUS:</b> (01:26 - 01:35) (9 seconds)	SAME AS ABOVE ( <b>vocal flow</b> )
<b>CHORUS:</b> (01:36 - 01:54) (18 seconds)	SAME AS ABOVE ( <b>vocal flow</b> )
<b>CHORUS II:</b> (01:55 - 02:14) (21 seconds)	SAME AS ABOVE ( <b>vocal flow</b> )
<b>POST-CHORUS:</b> (02:15 - 02:43) (28 seconds)	<i>Thought we kissed goodbye Thought we meant this time was the last But I guess it's <b>never really over</b> Thought we drew the line Right through you and I Can't keep going back I guess it's <b>never really over</b>, hey</i>
<b>CHORUS:</b> (02:44 - 02:52) (18 seconds)	SAME AS ABOVE (first half only) ( <b>vocal flow</b> )
<b>CHORUS II:</b> (02:53 - 03:13) (20 seconds)	SAME AS ABOVE ( <b>vocal flow</b> , ad libs added)
<b>POST-CHORUS:</b> (03:14 - 3:43) (29 seconds)	SAME AS ABOVE ( <b>vocal flow</b> , ad libs added)

Each of the song's sections are executed in precisely timed intervals.<sup>83</sup> The repeated sections contain "egregious and punky" copy and pasting of both the music and vocals; though an additional "ad-lib" lead vocal soars over top of the final choruses. To a

---

83. Since the music is all copied and pasted to a musical grid, it's likely that the sections are even more precisely timed than my crude "eyeballing" of the clock depicts.



trained ear, each repetition is exactly the same and there is no inflection offering evidence of a unique performance. The flying of sections is an extreme measure of repetition that is prevalent throughout “Happy Hits.”<sup>84</sup>

Attali writes: “The new aesthetic of performance excludes error, hesitation, noise.”<sup>85</sup> This playlist collection offers a representation of musical happiness that is without error, hesitation, or noise; for instance, the “ideal” vocal performance is repeated over and over. While none of the above outlined techniques are exclusive to “Happy Hits,” together they work to construct Spotify’s essentialization of mood. The songs contextualized by the territorialized “space,” offer supply routes for the mood-based data Spotify works to extract. Songs are put in service of the machine and used to sell products like Coke and its “open happiness” campaign to users and, at the same time, used to sell Spotify to Coke, and remain in service only as long as they seem to provide the desired function. Spotify’s mood playlists harness the power of repetition to territorialize its data-fication of emotional responses and play both classical and constructed theories of emotion against the middle.

### 3.4 Conclusions

Mood-based playlists provide an illustration of Spotify’s “choice architecture,” compartmentalizing and territorializing its internal space with musical categories

---

84. This assembly line-like precision certainly calls to mind Adorno and Horkheimer’s notion of interchangeable parts of popular music produced by The Culture Industry. The major difference here, in my opinion, is that much of the process by which Spotify smooths the flow of the music in its playlists is based on “traceable inputs” and Spotify data that provide feedback that makes it back to the production process.

85. Attali, *Noise*, 106.

designed to frame and rationalize data extraction and provide clear tasks to fulfill for users, producers, and advertising clients. Spotify draws the dividing lines within its closed system by presenting clear descriptions and imagery and then mobilizing musical repetition to create “nonconflictual” sets that define and objectify distinctive sonic architecture characterized by essentialized emotion concepts. Barrett writes: “Essentialism lays out not just a view of human nature but a worldview. It implies that your place in society is shaped by your genes.”<sup>86</sup> Putting emotions into clickable essentialized boxes implies that historical and social structures are penned in by rigid categorization to which, in the standard, classical view, our conformity is predetermined by evolution, and Spotify sorts music with the same disregard for granularity.

Alex Bodman, Spotify’s VP Global Executive Creative Director, told an audience at Cannes Film Festival in 2019: “When we use data, it’s to create magic, not to make users feel targeted or exposed.”<sup>87</sup> However, Spotify is one of many firms attempting to “drive surveillance capitalism far into the intimate reaches of our daily lives and deep into our personalities and our emotions,”<sup>88</sup> and it does so by territorializing musical targets. It uses music in an attempt to abstract users from complex and subjective musical-emotional concepts and invites them to experience feelings through its individualized reconstructions, even as it operationalizes, wittingly or not, Barrett’s constructed theory. Lazzarato writes: “Enslavement...employs modeling and modulating

---

86. Barrett, *How Emotions Are Made*, 288.

87. “Cannes Rewind: Our Top Moments from the South of France,” Spotify for Brands, accessed March 20, 2020, <https://www.spotifyforbrands.com/en-NZ/news/cannes-2019-recap>.

88. Zuboff, *Surveillance Capitalism*, 195.

techniques that bear on the ‘very spirit of life and human activity.’”<sup>89</sup> Spotify’s “machinic enslavement” employs music and emotions, two elements close to the “very spirit of life and human activity,” to territorialize spaces of consumption that invite the enslaved individual to match and thereby constrain their mood within the machine’s reconstructed, essentialized representations.

Ragle Gumm’s environment is territorialized to make him forget that many lives depend upon his work and forget the war machine of which he is an integral part. Attali’s second use of music by power is that it encourages people to “forget the fear of violence.”<sup>90</sup> Through its mood-based sorting, Spotify invites the “socially subjected” individual to forget they are under surveillance and forget the “violence” of being dissected and enslaved as dividualized cogs in the data capture machine. As Lazzarato writes: “Not only is the dividual *of a piece with* the machinic assemblage but he is also *torn to pieces* by it.”<sup>91</sup> Spotify territorializes a choice architecture that encourages users and producers to forget their active role in their own feelings, their economic precarity, their “social subjection,” and their “machinic enslavement.” Meanwhile the machine systematically extracts everything it can from music and the emotional attachments of those who listen to it, enclosing them in an environment where it wants to provide the soundtrack *and* the feeling, where they can forget the fear of violence and “be happy.”

---

89. Lazzarato, *Signs and Machines*, 38.

90. Attali, *Noise*, 19.

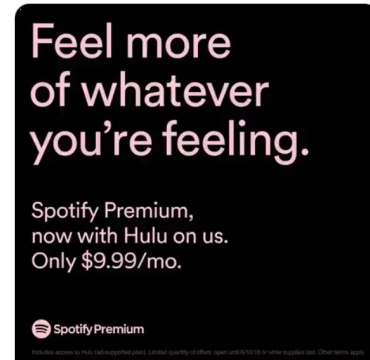
91. Lazzarato, *Signs and Machines*, 27.

## 4 Silence: “Feel more of whatever you’re feeling”

“*He withdrew into a fantasy of tranquility.*”<sup>1</sup>

In the preceding chapters I discussed ways in which Spotify works to condition affective responses to music to maximize the efficiency of its two-way listening machine. Following Attali’s uses of music by power, I have argued that Spotify constructs a controlled environment in which it invites users and producers to *believe* and that it territorializes that environment into distinct spaces of consumption designed to encourage them to *forget*. In this final chapter I take a closer look within the closed system, “zooming in” on one territory in which the machine seeks to construct a representation of *silence*: Chill.

Popular music scholar Robin James writes that “the preference for soft, gentle ease” of Chill might be considered “the decade’s dominant affect.”<sup>2</sup> Chill has become a cornerstone of Spotify’s playlist architecture and an archetype for the ways in which its algorithmic and mood-based sorting has impacted music consumption and production. An anonymous senior record label executive tells *The Guardian* in April 2019: “If you look at the music Spotify has broken [like Nina Nesbitt], it’s all chill-out stuff. That isn’t art, it’s wallpaper.” He continues, “people let playlists run on in the background when



**Figure 4.1:** *Spotify Advertisement* retrieved by the author March 2019.

---

1. Dick, *Time Out of Joint*, 200.

2. James, “Pop’s Chill Thrills.”

they serve inoffensive, bland music they can't be bothered to turn off."<sup>3</sup> An independent record label owner tells Liz Pelly: "The more vanilla the release, the better it works for Spotify. If it's challenging music? Nah."<sup>4</sup> While "Understanding People Through Music," a brochure for potential Spotify ad clients, claims "[u]sers are more leaned in and attentive during chill moments,"<sup>5</sup> I argue that perhaps they are more "tuned" in terms of Zuboff's use of the word. As a culmination of the previous two chapters, I aim to illustrate ways in which Spotify's version of Chill appeals to the risk-weary, dividualized music consumer's vulnerable sense of self, offering a representation of silence, as Attali writes, "by mass-producing a deafening, syncretic kind of music,"<sup>6</sup> and infiltrating their willingness to create meaning from music and from the world around them.

There are more than eighty different playlists within Spotify's Chill menu, ranging from "Lo Fi Beats" to "Peaceful Piano." While some Chill options are purely instrumental background music, I direct my focus here toward the playlists "Chill Vibes" and "Chill Hits," as representations of a "Spotifyfied" version of popular music that operates best somewhere between the foreground and the background. In my mood-based data set (*see fig. 3.6, page 107*), these examples of Chill playlists show a high level of "optimal differentiation" (meaning they allow for more variation between songs than other moods), yet they offer a space in which the dividualized user can match their mood

---

3. Iqbal, "Forget the Djs."

4. Pelly, "The Problem with Muzak."

5. "Understanding People," Spotify for Brands.

6. Attali, *Noise*, 19.

with minimal risk of it being disrupted. Spotify effectively territorializes Chill playlists so that the songs' collective commitment to maintaining playlist flow binds them in a nonconflictual set designed to "deafen" the listener to their surroundings and to the anxiety of the risk that lurks outside of their earbuds. Chill allows Spotify to utilize Zuboff's third technique for mobilizing "economies of action."<sup>7</sup> After "tuning" them to believe and "herding" them through a choice architecture designed to facilitate data extraction, Spotify's Chill becomes a site of "conditioning." Users are offered the reward of risk-free consumption, while producers who make Chill are rewarded with more streams when their music forestalls disruptions and provides "inoffensive" and "vanilla" musical "wallpaper."

In part one of this chapter, "Creating Chill Zones," I use Natasha Dow Schüll's study of the machine gambling industry, *Addiction by Design*, as an analytical frame. I argue that Spotify's Chill music mirrors the tactics of attention and data capture that Schüll finds in her analysis of the gambling business. I compare users' experience of Chill music to Schüll's notion of "the machine zone,"<sup>8</sup> a state that offers sanctuary for the deterritorialized and disenfranchised individual. She writes:

A zone in which time, space, and social identity are suspended in the mechanical rhythm of a repeating process may seem an unpromising object for cultural analysis. Yet such a zone, I argue, can offer a window onto the kinds of contingencies and anxieties that riddle contemporary American life, and the kinds of technological encounters

---

7. Zuboff, *Surveillance Capitalism*, 293.

8. Schüll, *Addiction by Design*, 2.

that individuals are likely to employ in the management of these contingencies and anxieties.<sup>9</sup>

For Schüll, machine gambling is a case, an example, of a broader phenomenon in which individuals seek a state of suspension from lives riddled with risk and, I argue, so is Spotify's Chill.

In part two, "Designed to Stream," I illustrate how Chill music inhabits what Deleuze and Guattari call "the in-between" by compressing musical highs and lows into its intriguing blend of "optimal differentiation." For Deleuze and Guattari, "the in-between" represents a space where chaos can become rhythm.<sup>10</sup> I adapt this term to argue that the rhythm of Chill's "in-between," its "optimal differentiation," comes from navigating the space between foreground and background by minimizing disruption to maximize flow. The "in-between" is the musical "space" where the chaos of everything outside the mood can be silenced by the rhythm of Chill.

Lastly, I conduct a case study of the Spotify branded playlist "Chill Vibes." Following a similar template to the previous chapter's analysis of "Happy Hits," I dissect the songs and sounds that Spotify uses to territorialize its Chill playlists through analysis of the "Audio Features" and musical attributes of "Chill Vibes." I look in detail at its presentation, as well as the repetitive composition, performance, and production techniques that "Chill Vibes" deploys to construct and maintain Spotify's musical version of the "machine zone."

---

9. Schüll, 13.

10. Deleuze and Guattari, *A Thousand Plateaus*, 313.

In this chapter I show how Spotify offers Chill as its “in-house” attachment for the decontextualized dividual that its system of subjectivation works to produce. For Lazzarato: “The dividual represents a deterritorialization of the individual” and Spotify’s Chill playlists illustrate this abstraction.<sup>11</sup> As the machine extracts and dissects the inputs of the dividual and feeds back the reconstituted version to the individual, they may become disassociated and distanced from their sense of self or their musical emotion concepts. Lazzarato continues: “Deterritorialization decomposes the individual into his constitutive elements (memory, perception, intelligence, feelings, etc.), just as science disaggregates material into its chemical and atomic elements, assigning them their specific functions and potentialities,”<sup>12</sup> in order to reterritorialize them in new and predictive “spaces.” In Chill, the decomposition of individual inputs become audible as they are reassembled into the “soft gentle ease” that perpetuates enslavement to the Spotify machine because the dividualized consumer “can’t be bothered to turn [it] off,”<sup>13</sup> while Chill reterritorializes its users’ “space” with the nothingness of “the in-between.”

Ragle Gumm finds a productive escape resembling the state of Chill in the newspaper contest. Gumm’s ability to carry on in service to the war machine depends on his ability to detach from the reality of his enslavement. Bill Black explains, “we found a system by which we could let him live in his stress-free world.”<sup>14</sup> Chill invites the

---

11. Lazzarato, *Governing by Debt*, 193.

12. Lazzarato, 194.

13. James, “Pop’s Chill Thrills;” Iqbal, “Forget the DJs,” *The Guardian*.

14. Dick, *Time Out of Joint*, 200.



dividualized consumer to dwell in a state where they can silence the pressures of time, space, and identity so they, like Gumm, might surrender their will entirely to that of the machine. Liz Pelly writes that Spotify Chill represents, “the purest distillation of its ambition to turn all music into emotional wallpaper.”<sup>15</sup> It is also, I argue, a distillation of Spotify’s ambition to turn music into a frictionless medium for data and provides an exemplary instance of how the platform’s data-fication of songs and playlist categorization have begun to reorient the production and consumption of music. Chill represents dividualized music packaged for, consumed by, and created by the “mechanically enslaved,” exploiting the same “contingencies and anxieties” that draw Schüll’s addicted gambler to the “machine zone.”<sup>16</sup> If, as Attali contends, “music is illustrative of the evolution of our entire society,”<sup>17</sup> then we can surely hear the hum of the Spotify machine and its surveillance refining and valorizing what might be “the decade’s dominant affect.”<sup>18</sup>

## 4.1 Creating Chill Zones

### 4.1.1 The machine zone

Schüll’s *Addiction by Design* centers around her notion of “the machine zone.” The addicted gamblers she profiles want nothing but “to keep playing—to stay in that

---

15. Pelly, “The Problem with Muzak.”

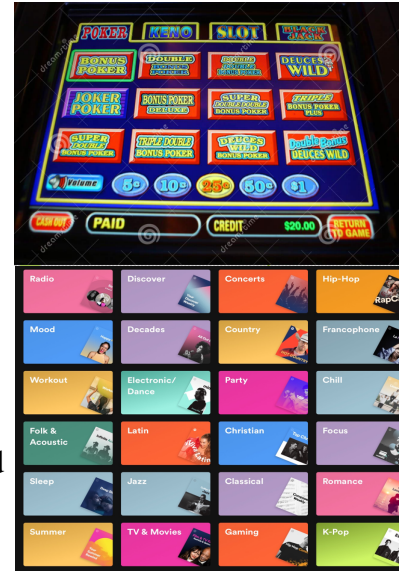
16. Schüll, *Addiction by Design*, 13.

17. Attali, *Noise*, 5.

18. James, “Pop’s Chill Thrills.”

machine zone where nothing else matters.”<sup>19</sup> They seek an escape and to be numbed to their surroundings and freed from existential pressures—like Ragle Gumm’s “fantasy of tranquillity,” or the Spotify user seeking Chill.<sup>20</sup>

In her investigation of those designing gambling machines, Schüll finds “an evolving repertoire of technological capabilities was facilitating [their] desire” to maximize gambler’s “time-on-device.”<sup>21</sup> She argues that video gambling machines are designed to captivate the attention of gamblers, addict and condition them to its balance of risk and reward, and annihilate any threat to the sanctity of their zone. The machines are designed to affirm and enable the gambler’s financial and spiritual “will to nothingness.”



**Figure 4.2:** Spotify's playlist "choice architecture" beside a machine gambling interface. Retrieved by the author May 2019.

Addicted gamblers know there is no “winning” but continue to play. Their “will to will,” what Zuboff describes as the “inward freedom to create meaning,”<sup>22</sup> is surrendered to the zone while the machine continues to extract their money and their data. Yet over not willing at all, argued Nietzsche, modernity’s sovereign individuals choose to “will

19. Schüll, *Addiction by Design*, 2.

20. Dick, *Time Out of Joint*, 200.

21. Schüll, *Addiction by Design*, 2.

22. Zuboff, *Surveillance Capitalism*, 291.

nothingness.”<sup>23</sup> Schüll’s addicted gamblers covet a perpetual state of comforting numbness where they see nothing beyond the machine and feel nothing beyond the zone, soiling themselves, abandoning their children and jobs, handing over their life savings. While the resulting circumstances are not as dire, Spotify creates its Chill playlists, much like the designers of gambling machines, with the capacity to claim a space left vulnerable by the user’s diminished and dividualized “will to will.”

In Chill, Spotify’s promises of self-identification and self-actualization through music are disassociated from their source, the user, by the data extraction machine before being reassembled and offered back to those who wish to ameliorate the burden of policing the threat of disruption themselves. Zuboff details the many ways in which surveillance capitalism “drains the will to will” and perpetuates the “forfeit of your voice in the first person in favor of others’ plans.”<sup>24</sup> While surveillance capitalism is built and justified on the social subjection of individualized choice and self-actualization, it breaks these promises down into dividualized traceable inputs flowing back up the wires to fuel its machine and advance its plans. Within the machine, Lazzarato writes: “the component parts of subjectivity (intelligence, affects, sensations, cognition, memory, and physical force)... no longer have an individuated subject as referent.”<sup>25</sup> With Chill, Spotify constructs a sonic “space” of consumption where individual voices, instruments, and sounds blend into a steady stream of mood that allows dividualized users to escape the

---

23. Nietzsche, *On the Genealogy of Morality*, 123.

24. Zuboff, *Surveillance Capitalism*, 488.

25. Lazzarato, *Signs and Machines*, 27.

constant pressures of self-actualization and choice that, under neoliberal responsabilization, permeate the rest of their lives. The “machine zone” of Chill provides the opportunity for the individual, as Nietzsche writes, “[t]o shut the doors and windows of consciousness for a while; not to be bothered by the noise and battle.”<sup>26</sup> Chill silences the “chaos” of the world outside and replaces it with the steady rhythm of “the in-between.” It invites users to lose themselves in the zone and, like the gambling machine, is designed to facilitate their desire for nothingness while conditioning them with the reward of suspension and leaving them vulnerable to the incursion of the will of the data gathering machine.

#### 4.1.2 Lost in space: designed for extraction

Schüll explains that “while the structural, decorative, and ambient environment of the casino is certainly geared to influence patrons’ conduct, its *modus operandi* is to coax rather than restrain, reward rather than punish, steer rather than transform.”<sup>27</sup> Spotify also coaxes, rewards, and steers users through a “choice architecture” that fuels its data collection. The platform’s user interface resembles casino design in that its aesthetic provides a welcoming environment and a “choice architecture” that subtly steers users toward the easiest points of extraction.

While the casino’s “choice architecture” remains static, at least between renovations, Spotify’s is continuously morphing and adapting to reflect its users’ preferences. However, Chill is always among the options given a more dominant position. As Pelly writes, Spotify’s prioritization of mood music like Chill is “tied to

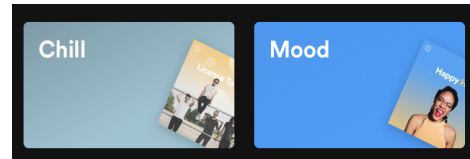
---

26. Nietzsche, *On the Genealogy of Morality*, 36.

27. Schüll, *Addiction by Design*, 50.

what its algorithm manipulates best: mood and affect.”<sup>28</sup> A user can enter a Chill playlist within a few clicks of opening the app, whereas it takes considerable effort to seek out a specific artist and even more digging to find a complete album. This appeal to affect and the dividualized consumer downplays longstanding genre categories and furthers Spotify’s self-identification as a provider of lifestyle and not music—the mood is far more important than artist or oeuvre. As Åker acknowledges, users who enter Spotify’s landscape knowing what they want will make the effort to seek out an artist or an album,<sup>29</sup> just like the old-fashioned high-stakes poker player will find the tables in the back room. However, those seeking to suspend their “will to will” for the “reward” of Chill are easily “herded” by their will to shirk decision making and desire for affective calm, like zone-seeking gamblers drawn to video poker.

In Spotify, Chill is a territory of its own, important enough to be categorized independent of Mood (*see fig. 4.3*). The space offers Chill playlists “tuned just for you”—



**Figure 4.3:** *Chill is an equivalent category to mood. Retrieved by the author February 2020.*

algorithmically assembled from dividualized data and repackaged to the individual—and users are easily steered by its suggestions and by the potential reward of relief from having to tune for themselves. Both the Spotify user and the gambler have agency to leave the “space” (the playlist or the game) whenever they want, but as long as the

---

28. Pelly, “The Problem with Muzak.”

29. Åker, “Spotify as the soundtrack,” 86.

machine keeps rewarding them with the “world-dissolving state of subjective suspension and affective calm” they find in “the machine zone,” there is never any reason to leave.<sup>30</sup>

#### 4.1.3 Keeping attention

Spotify endeavors to keep its users “inside” its controlled environment maximizing their “time on device.” “Keeping our attention,” Damon Krukowski writes in *Ways of Hearing*, “or at least keeping us engaged inside their program - is at the moment the goal of some of the most powerful corporations in the world.”<sup>31</sup> Machine gaming and Spotify are among the purveyors of the “attention economy” and both thrive on their ability to keep users lost in their respective “zones.” The former extracts money and proprietary information, the latter information it can later monetize. Like the casino, Chill “disorients the occupant in space and time. One loses track of where one is and when it is.”<sup>32</sup> As Spotify’s “Understanding People Through Music” claims: “Streaming is a continuous soundtrack to [users’] lives. Even when they engage with other media, it is always on.”<sup>33</sup> Portability, ubiquity, and the backflow of its traceable inputs give Spotify the advantage of *claiming* capture of its users’ attention, no matter how much of it they are actually giving.

Economist Herbert A. Simon’s 1971 explanation of the “attention economy” still resonates with the modern tactics of surveillance capitalism at work in Spotify’s machine:

---

30. Schüll, *Addiction by Design*, 19.

31. Damon Krukowski, *Ways of Hearing* (Cambridge, MA: The MIT Press, 2019), 105.

32. Schüll, *Addiction by Design*, 37.

33. “Understanding People,” Spotify for Brands.

in an information-rich world, the wealth of information means a dearth of something else: a scarcity of whatever it is that information consumes. What information consumes is rather obvious: it consumes the attention of its recipients. Hence a wealth of information creates a poverty of attention and a need to allocate that attention efficiently among the overabundance of information sources that might consume it.<sup>34</sup>

While the notion of the attention economy is not new, Spotify is one of many attention seeking platforms that have gained prominence as “ubiquitous high-speed mobile internet has sent the attention economy into hyperdrive.”<sup>35</sup> In this accelerated iteration, platforms like Spotify now only need to capture portions of users’ continually divided attention in order to claim the data they desire. The goal Spotify playlist curators is simply to keep users consuming but, unlike the designers of gambling machines, Spotify does not have to go to great lengths to coax users into its zone because it is always nearby. The company claims many users “stream via mobile and listen to music everywhere and throughout the day and night.”<sup>36</sup> Above all, Chill, as the record executive above observes, is designed to make sure there is no reason for users to exit the space of consumption by turning off the music.

#### 4.1.4 Losing time

The interior space of casinos is notoriously designed to erase or, at the very least minimize, temporal awareness. A gambler’s sense of time is disruptive to the zone as it

---

34. Herbert A. Simon, "Designing Organizations for an Information-rich World," in *Computers, Communications, and the Public Interest*, ed. M. Greenberger (Baltimore, MD: Jon Hopkins Press, 1971), 40-41.

35. Oliver Burkeman, “‘The Attention Economy Is in Hyperdrive’: How Tech Shaped the 2010s,” *The Guardian*, November 22, 2019, <https://www.theguardian.com/culture/2019/nov/22/attention-economy-in-hyperdrive-how-tech-shaped-2010s-oliver-burkeman>.

36. “Understanding People,” Spotify for Brands.

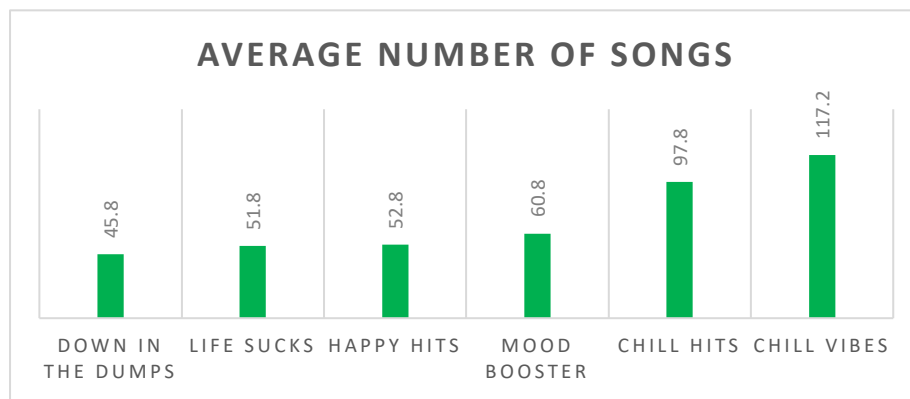
has the potential to reignite the “will to will.” While the gambler’s “machine zone” involves being completely engrossed in one thing, Chill’s version can also fade into the background where it becomes a part of *anything* a user might be doing. It replaces silence while continuing to take the user’s data and time. For Chill, time on device is not exclusive and attention can be fleeting. Still both “zones,” machine gambling and Chill playlists, work best when the potential for disruption is minimized.

With the ease of Chill as the soundtrack and its ability to advance and retreat between foreground and background, it ceases to matter when, or if, a Spotify session begins and ends because it never needs to stop. While individual songs maintain rigid temporal and formal structures, the “format” of Chill playlists melts together the beginnings and endings into a series of individualized cogs turning together. Each song begins slowly and somewhat tentatively, allowing a smooth transition from whatever preceded it and carefully avoiding any disruption; almost exhibiting an awareness of the precarity of its station. Chill songs tread lightly, as though the producers acknowledge they are just passing through a territory controlled by the machine. Smoothing the transitions between songs helps maintain flow and generate “passive streams.” Accumulation of “passive streams” in Chill offers evidence of the machine’s cogs running smoothly and of users surrendering to the flow of the playlist. Most importantly, “passive streams,” for Spotify’s data rendering, represent that users are indeed suspended *in* the mood, that they are in the context their musical selection indicates, and the music in the playlist is performing its desired function.

Extended length of playlists is a factor designed to lose users inside “the chill zone.” Playlists such as “Chill Hits” and “Chill Vibes,” while giving users a frisson of



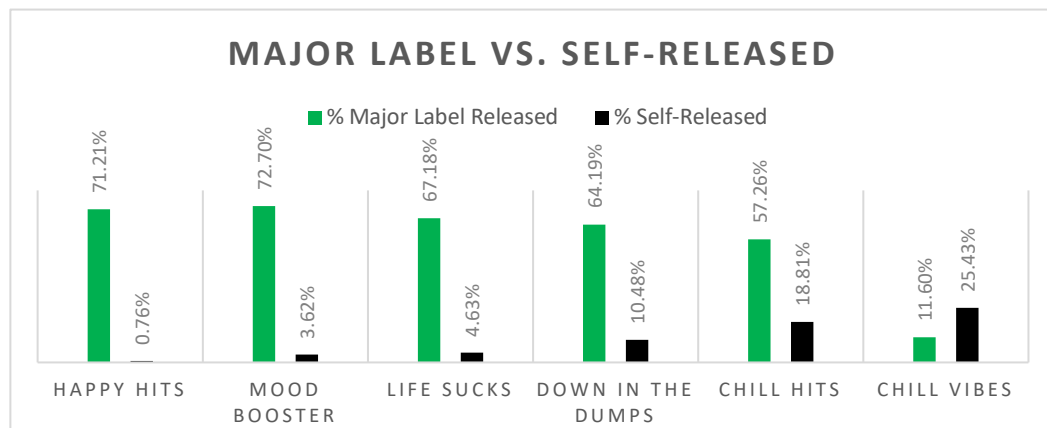
agency in matching their mood, seek to perpetuate users' time on device simply by providing longer collections of music. For instance, within my data set, "Happy Hits" and "Mood Booster" contain, on average, 50-60 individual songs (approximately 5 hours playing time), while the average iteration of "Chill Hits" or "Chill Vibes" contains from 80-120 songs (approximately 10+ hours) at any given time. The chart below (*fig. 4.4*) illustrates the disparity in "number of songs" between Chill playlists and the other Spotify moods discussed in chapter three. For Chill, the most basic way to prolong time on device is simply by including more songs, prolonging the time before users need to make another choice.



**Figure 4.4:** Average number of songs in each mood-based playlist at any given time. Data collected by the author from Spot on Track.

"Chill Vibes," a particularly paradigmatic representation of the mood, also works to keep listeners in its flow by favoring mostly unheard of, often semi-anonymous artists. If a user doesn't know who is singing and they can't readily call on or be called by narrative of intertextual material, it becomes much easier for the voices to blend into one another and become a unified, undisrupted mood. This makes "Chill Vibes," as opposed to many other areas of Spotify, more accessible to self-released artists and less privileged

toward those on major labels (*see fig. 4.5*).<sup>37</sup> “Chill Vibes” is the only playlist in my data set of six moods that featured more self-released songs (25.4%) than those released by a major label (11.6%). At the other end of the mood spectrum, 71.2% of the songs in “Happy Hits” were released by major labels and just .7% were self-released, counting on users’ prediction loops to activate a known emotional response, happiness, to known works and artists.



**Figure 4.5:** Songs from major label vs. self-released songs in each mood-based playlist. The remaining percentage of songs were released by independent labels. Data retrieved by the author from Spot on Track.

In “Chill Vibes,” users’ lack of familiarity with the artists helps Spotify territorialize the Chill space by disconnecting it from previous associations they may have with artists and keeping the musical mood contained strictly within the platform’s own context.

Pelly and others have referred to the songs on playlists like “Chill Vibes” and “Chill Hits” as “Spotify-core,” illustrating the platform’s success at connecting its brand to the mood. Distancing itself from major label artists in popular playlists like “Chill Vibes” allows Spotify to territorialize this space as distinctly its own and, as the record-label executive mentioned above claims, Chill is the realm in which Spotify has been

37. However, Spotify requires these independent artists to strictly adhere to the axioms of the format. Spotify holds even more power over those with fewer resources, perhaps another reason it makes Chill such a priority. It reminds artists in “Chill Vibes” of this power when it regularly removes and re-adds songs, seemingly at random intervals—little nudges that remind producers not to get too comfortable.

most successful “breaking” artists to call its own. For instance, Nina Nesbitt, from chapter two, has climbed her way from the anonymity of Chill all the way to Times Square billboards and provides a paradigmatic example of “Spotify-core” and Spotified success.

As the “wallpaper” or “soundtrack” to a feeling, Chill’s method of attention capture can, as Spotify claims, “enhance and regulate every moment.”<sup>38</sup> Even without users surrendering their full attention it still extracts value from their time on device. Schüll observes that gambling machine “[d]esigners seek to extend time-on-device by creating an intimate reverberation between technical elements and the human senses,” that allows the user to “feel in that cocoon.”<sup>39</sup> Gamblers exchange their attention, time, money, and data for a state of suspension in the zone. Chill provides music-derived suspension and in Spotify-chilling, users turn a part of themselves over to the machine as it to enhances and regulates their mood. Schüll explains that, for gamblers, “[t]he link in question is forged not through coercion, but through a kind of *collusion* between the structures and functions of the machine and the cognitive, affective, and bodily capacities of the gambler.”<sup>40</sup> Spotify invites the same collusion between its users and the machine as it suspends them, or the parts of them not otherwise occupied, in space and time with a Chill playlist. Whether isolated and alone or traveling in a portable ear pod, at least a portion of users’ often-divided attention is lodged in the zone. Netflix, when a user has

---

38. “Understanding People,” Spotify for Brands.

39. Schüll, *Addiction by Design*, 63, 58.

40. Schüll, 73.

watched for hours without a break asks, “are you still watching?” This is not a feature in the “the chill zone.” This machine doesn’t really care if you’re still listening, as long as the music is playing.<sup>41</sup>

#### 4.1.5 Losing identity: eliminating risk and silencing the self

Pressure to perform belief in self-actualization is embedded in the social subjection of surveillance capitalism, as evidenced by those who practice “self-surveillance” in their listening behaviour to ensure a favourable “Wrapped” presentation of the self. Listening to the “wrong” music is a risk they are not willing to take. In her study of Chill, Robin James invokes neoliberalism in which context “our political economy (with its structure of subjectivity) requires people to take on a lot of risk.”<sup>42</sup> The evisceration of the welfare state responsabilizes individuals in terms of their own life choices and each choice is subsequently infused with an element of risk. Anderson acknowledges: “Choice in such an expanded field [digital streaming platforms] is both effortful and anxiety inducing,”<sup>43</sup> but through its easy-to-match and easy to access essentialized mood playlists like Chill, Spotify diminishes the burden of making the “right” choice to fit the desired function. For the risk-weary individual, the inoffensiveness of Chill is almost always appropriate, or at least appropriate enough not to turn off.

---

41. In *Capitalist Realism*, Mark Fisher calls this “interpassive,” as opposed to interactive consumption. In observing a young student’s music consumption, he writes: “Why wear the headphones without playing music or play music without wearing the headphones? Because the presence of the phones on the ears or the knowledge that the music is playing (even if he couldn’t hear it) was a reassurance that the matrix was still there, within reach” (chapter 4). His notion of interpassive consumption aligns well with the notions of Chill I discuss in this chapter.

42. James, “Pop’s Chill Thrills.”

43. Anderson, “Neo Muzak and the Business of Mood,” 826.

Nolen Gertz, in *Nihilism and Technology*, writes about the contemporary option of deferring the risk of decision making to the machine. As consumers enter a state of what Gertz christens “techno-nihilism,” where the last thing they want to do is make another decision or take another risk, Spotify offers ways to alleviate the pressure—to chill. Gertz argues that suggestive algorithmic technology exacerbates a nihilistic “who cares” attitude. He writes: “Preferring to let others make decisions for us—whether because we want to avoid being wrong or being held accountable or because we want to avoid having to think or expend energy—is how we cut ourselves off from what makes our lives meaningful;”<sup>44</sup> a surrender of the “will to will.” The ideal-typical individualized music consumer is abstracted from the self, has no will to choose, no will to interpret or to identify with individual songs, and Chill seamlessly reterritorializes the nothingness with its “in-between-ness.” Lazzarato writes: “Technologies dissect human senses (sight, hearing, touch, smell, taste) and recompose them in view of producing a subjectivity such that ‘consumption for consumption’s sake’ can fulfill and enact that other law of capitalism, ‘production for production’s sake.’”<sup>45</sup> Users’ deference of risk and their consumption for consumption sake becomes Spotify’s endless production (of data) for production’s sake.

Schüll argues that commercial casino design exemplifies contemporary capitalism’s “strategic attempts to mobilize and derive value from consumers’ affective

---

44. Gertz, *Nihilism and Technology*, chap. 2, Apple Books.

45. Lazzarato, *Governing by Debt*, 194.

capacities.”<sup>46</sup> Spotify follows the same path without yet provoking the personal, financial, and physical ruin resulting from machine gambling addiction. Schüll explains that “machine gambling is a potentially inexhaustible activity whose only sure end is the depletion of gambler funds”—what her gaming executives call “extinction.”<sup>47</sup> A gambler, when they finally exit “the zone” after a session will often face dire consequences such as financial debts, ruined relationships, or soiled clothing as the result of their total immersion in the machine. A Spotify user, on the other hand, pays a monthly subscription fee or is subjected to advertisements, but the machine’s extraction from their “affective capacities” is not revealed as clearly. Spotify shows users and producers the “fun side” of data, but there is no point, yet widely understood, of “extinction” for its extraction.

Like machine gambling, Chill constructs an experience “characterized not by stimulation, participation, and the gratification of agency, but by uninterrupted flow, immersion, and self-erasure.”<sup>48</sup> It invites users to attach its nothingness to everything. As Fisher argues, contemporary “capitalism both feeds on and reproduces the moods of populations.”<sup>49</sup> Spotify, again, puts music at the crux between its users’ “social subjection” and “machinic enslavement,” feeding on and reproducing their need for chill; transforming the chaos of choosing who to be, how to feel, or whether to feel at all into the “vanilla” rhythm of “the zone.”

---

46. Schüll, *Addiction by Design*, 51.

47. Schüll, 181.

48. Schüll, 171.

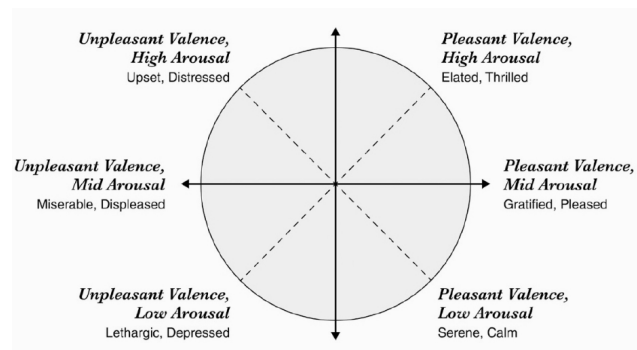
49. Mark Fisher, *Capitalist Realism*, chap. 5.

## 4.2 Designed to Stream

### 4.2.1 Compression

Spotify Chill is a compression of emotional and musical attributes. Like most modern popular music recordings, individual musical elements are subjected to audio “compressors,” both digital and analogue, but here I use the term compression more expansively to describe the process by which Chill smooths out “highs” and “lows” throughout all aspects and in all stages of its production. “The prototypical mood,” Anderson writes, “isn’t directed at anything in particular. Therein lies its mystery, ambiguity, and power.”<sup>50</sup> Spotify mobilizes Chill’s ambiguity to create a musical emotion concept designed, above all, to operate as a frictionless supply route for data. As long as the music doesn’t disrupt the user’s zone, the data never stops flowing.

At any given time, Barrett writes, “[y]our affect is always some combination of valence and arousal, represented by one point on the affective circumplex” (see fig. 4.6).<sup>51</sup> In my analysis, Chill falls somewhere within the lower right quadrant:



**Figure 4.6:** Barrett’s “Affective Circumplex” from *How Emotions Are Made* (74).

pleasant valence, low/mid arousal. The “Audio Features” of Chill, as illustrated by my data analysis in chapter three, maintain medium tempo, medium valence and medium energy in comparison to “happy” and “sad” playlists (see fig. 3.6, page 107). Chill offers

50. Anderson, “Neo Muzak and the Business of Mood,” 817.

51. Barrett, *How Emotions Are Made*, 74.

a break from “unpleasant valence, high arousal” associated with the chaos of anxiety and “social subjection” of self-actualization.

Schüll observes that one of her interviewees experiences “a mechanically mediated tempo [that] functions as a form of predictability that structures and regulates his play, transforming risk into rhythm.”<sup>52</sup> Chill’s rhythm is driven by its unified component musical parts and, like the gambling machines discussed above, seems designed to eliminate risk and keep users immersed in the machine zone its playlists territorialize. Deleuze and Guattari, too, invoke “rhythm” as a factor in subjectivation. In *A Thousand Plateaus* they identify a state resembling Chill and call it “the in-between.” They write: “*Between* night and day, between that which is constructed and that which grows naturally, between mutations from the inorganic to the organic, from plant to animal, from animal to humankind... In this in-between, chaos becomes rhythm, not inexorably, but it has a chance to.”<sup>53</sup> Here, I adopt the term, “the in-between” to describe Chill’s transformation of risk to rhythm, and its balance between foreground and background, close and detached, connected and abstracted, acoustic and electric, signal and noise, human and machine.

#### 4.2.2 Optimal differentiation

As mentioned in chapter three, the Chill music for which I collected data (“Chill Hits” and “Chill Vibes”) has a high level of “optimal differentiation”—balance between sameness and difference—compared to other mood playlists. While it allows for variation of musical elements from song to song, a Chill playlist coordinates the component parts

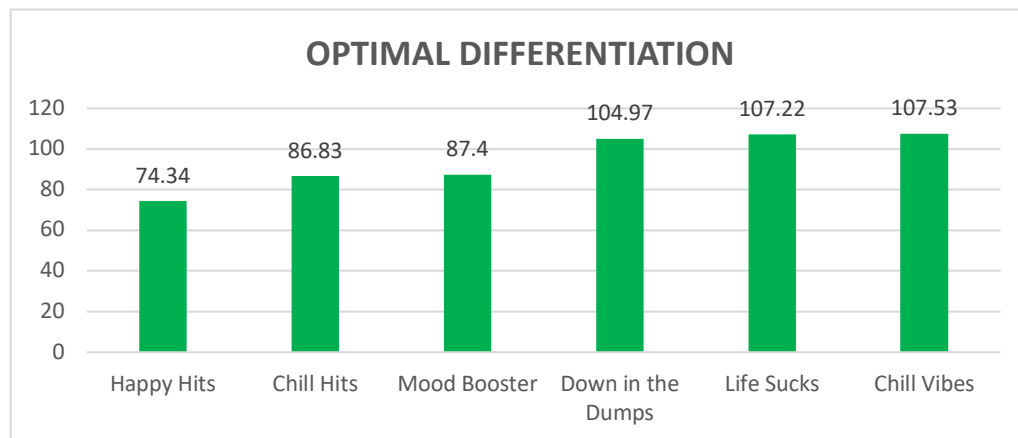
---

52. Schüll, *Addiction by Design*, 54.

53. Deleuze and Guattari, *A Thousand Plateaus*, 313.



into a continuous stream, achieving territorialization by means of this coordination. The similarities that bind the songs together within the mood offset perception of their variations and together they offer an unwavering flow of mood. Chill songs may vary greatly in “Audio Features” such as “acousticness,” or even tempo but, my analysis suggests, none of this variation comes at the expense of the song’s dedication to maintaining the mood. As the “weight” of algorithmic data extraction and analysis compresses musical features to minimize risk of disruption, Chill music just gets chiller. As Deleuze and Guattari write, “a mistake in speed, rhythm, or harmony would bring back the forces of chaos,”<sup>54</sup> so following this logic Chill songs must stay in the “in-between” or face the threat of expulsion or exclusion and the consequences of the resulting inaudibility.



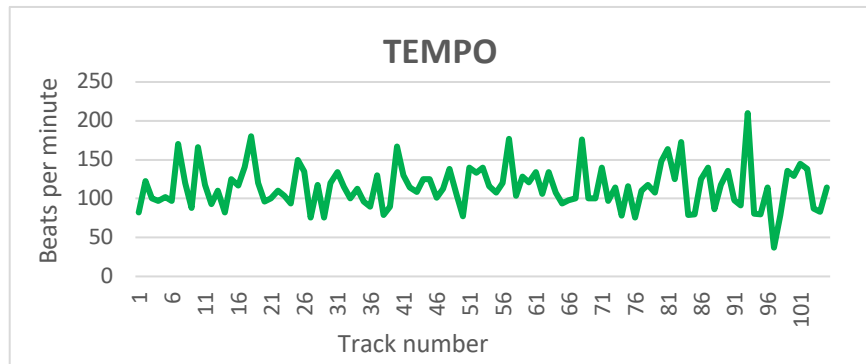
**Figure 4.7:** “Chill Vibes” has the highest “optimal differentiation” score, meaning it has the most allowance for variation, of these 6 mood-based playlists. Based on data collected by the author from Spot on Track.

“Optimal differentiation,” in my usage, depicts the ideal level of variance between songs within each distinct mood. “Chill Vibes” high rating indicates the “Audio Features” of its songs have the most variation of the mood-based playlists for which I collected data.

---

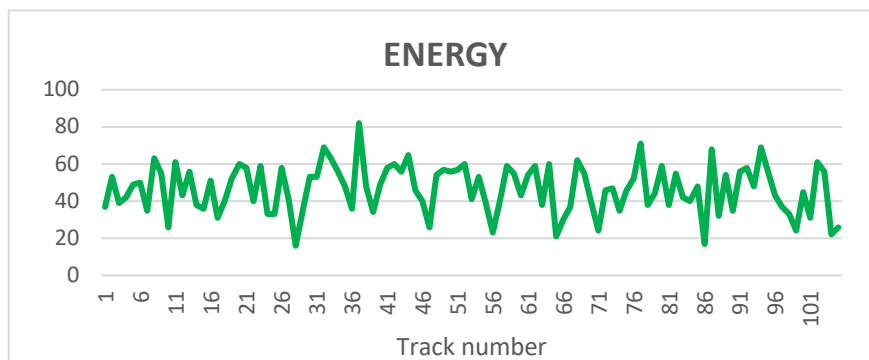
54. Deleuze and Guattari, *A Thousand Plateaus*, 333.

While listening to “Chill Vibes” *feels* and sounds (to me) like a smooth compressed vector of “pleasant valence, low arousal,” the graphs included below (from the playlist’s February 2018 edition) depict a substantially more jagged visualization of the mood, conveying its high degree of “optimal differentiation.” For instance, tempos range from 37 to 210 bpm (*fig. 4.8*).<sup>55</sup>



**Figure 4.8:** Tempos for “Chill Vibes” February 1, 2018. Data collected by the author from Spot on Track.

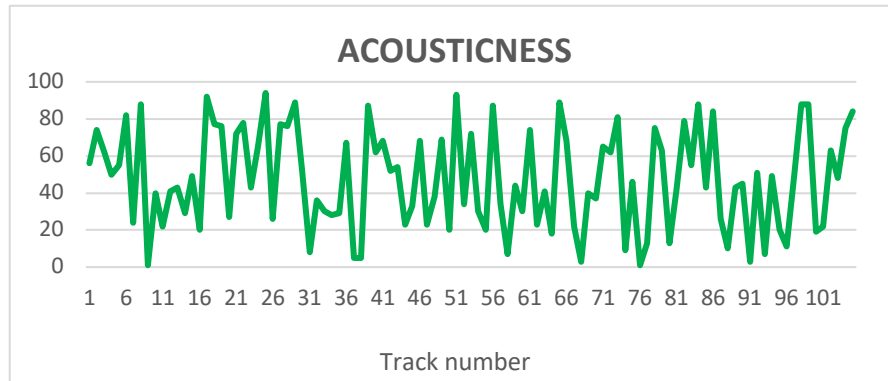
Mood-based “Audio Features” that would connect closely to maintenance of an affective state, such as “energy” (*fig. 4.9*) plot equally jagged courses through the playlist’s 109 songs, ranging from 16 to 82 (on a scale of 0-100).



**Figure 4.9:** “Energy” of “Chill Vibes” February 1, 2018. Data collected by the author from Spot on Track.

55. The tempo reading of 37 bpm, for “Everything’ll Change” by Michi, is not accurate. But for these purposes, it doesn’t matter what the tempo actually is, it matters what the Echo Nest thinks the tempo is.

“Acousticness” (*fig. 4.10*) shows the playlist’s most extreme variation, where scores range from 1 to 94. As I detail below, most “Chill Vibes” songs use a mix of acoustic and electric sounds, accounting for the extremes of variance in this metric.



**Figure 4.10:** “Acousticness” for “Chill Vibes” February 1, 2018. Data collected by the author from *Spot on Track*.

Despite “Chill Vibes” high level of “optimal differentiation,” when reassembled, the “Audio Features” of Chill songs, as shown in chapter three (*fig. 3.6*), come out consistently in the middle of the mood-measuring categories like “Danceability,” “Energy,” and “Valence.” Through musical analysis of “Chill Vibes,” in the following section I ask: *How does Spotify compress, moderate, and mediate the mood of Chill? What features territorialize these seemingly diverse individual components together into an often-indistinguishable collection of individualized songs? How does Spotify achieve mood-based compression over a very long playlist?*

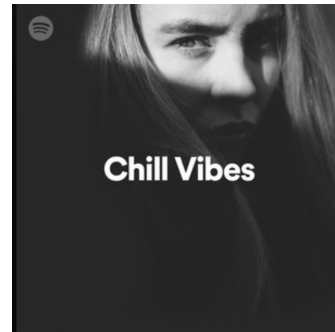
#### 4.2.3 Playlist case study: “Chill Vibes”

The music of “Chill Vibes” is characterized by its dedication to maintaining the mood more so than the by distinctiveness of its production techniques, but it does maintain a modern and stylized version of musical “in-between.” Like “Happy Hits” and “Life Sucks” discussed in chapter three, the playlist features repetitive musical elements that align with its presentation to territorialize an environment in which users can find

their musical “machine zone.” “Chill Vibes” is of particular interest to my research because it is representational of what Pelly calls “Streambait Pop” or “Spotify-core.”<sup>56</sup> As the naming suggests, it is music that producers, such as Neanderthal from chapter two,<sup>57</sup> have created with Spotify’s algorithmic sorting and mood-based categorization in mind throughout the creative process.

#### 4.2.3.1 Presentation

“Chill Vibes” has over 1.1 million followers.<sup>58</sup> Its cover image is a shadowy black and white likeness of a millennial woman. There is a stark contrast between the light and dark shadow within the image, but her



**Figure 4.11:** “Chill Vibes” cover. Retrieved by the author March 8, 2019.

expression is neutral. Unlike the obvious signifiers and colour pallets of “happy” and “sad” in the cover images of “Happy Hits” and “Life Sucks,” with “Chill Vibes” the answer to how/what this woman is feeling lies somewhere in “the in-between” of grey—just like the feeling of being chill. Making an essentialist interpretation, her expression connotes an introspective mood, her affective state, perhaps, pleasant arousal and mid/low valance. While she squints slightly from the light in her face, most of the image remains in shadow or complete blackness. The playlist description says “Just chill...” There is no need to risk engaging in a more detailed definition.

---

56. Pelly, “Streambait.”

57. Cf. Neanderthal, chapter 2, page 68.

58. “Chill Vibes, a playlist by Spotify,” Spotify, accessed March 8, 2020, <https://open.spotify.com/playlist/37i9dQZF1DX889U0CL85jj?si=V4LGIsYrSlah3DWFakOTeA>. \*After using the above image as the cover for “Chill Vibes” for more than two years, Spotify changed it on March 27, 2020. I have kept my analysis of the old imagery as it still provides value to my work here.

#### 4.2.3.2 Instrumentation

Songs in Spotify’s “Chill Vibes” are characterized by sparse instrumentation, most often based around a single synthesizer or guitar part. The sounds of the synthesizers vary, but they often connote a sense of distance, using “hollow” sounding digital square waves with heavy reverb. Acoustic guitars are prevalent and electric guitars are often “bell-like” and often make use of delay and reverb to create a digital representation of space. The use of vocal samples, when a producer “cuts” a single sung word or syllable and repurposes it as a “playable” digital instrument, is another popular sonic choice in Chill songs, seeming to advance contingency between human and machine.<sup>59</sup> Each song, as mentioned above, starts slowly, often fading in or introducing one musical element at a time. Vocals usually enter following a five to fifteen second introduction. This facilitates each song on the playlist blending into one another and creating the casino-like, time-suspending sensation of no beginnings and no endings.

Chill songs introduce programmed percussion at various intervals—usually including an electronic kick drum on the down beat and often initially paired with sampled finger snaps before eventually building to a steady, sparse beat by the first chorus or second verse. The percussive elements, always gridded precisely in time, provide the rhythmic grounding of a pulse locked in place by a machine. Another popular rhythmic element of Chill is the use of “sidechain compression.” In this technique, a sustained harmonic instrument, usually a synthesizer, is “linked” to the bass drum so that it is inaudible at the attack of the bass drum and “opens up” as the drum decays. This sonic “trade off” creates a subtle and organic sensation of a rhythmic swell that

---

59. Pelly, “Streambait Pop.”

exaggerates the pulse of the song without interfering with the grounding provided by the gridded percussive elements.

As in “Happy Hits,” all components of Chill songs are lacquered in the digital polish modern recording technology avails. Producer Brian Eno says “the temptation of the technology is to smooth everything out” and those who succumb often produce music where “there’s no evidence of human life at all.”<sup>60</sup> Most producers of Chill give in to this temptation, and the “human” qualities are all but erased as songs move through a system of digital musical machines even before the final product is diced into individualized data by Spotify’s machine.

#### 4.2.3.3 Vocal techniques

To balance the often “inhuman” digitally polished instrumentation of “Chill Vibes,” the vast majority of songs feature vocalists. The average rating of “instrumentalness” over my collection of 718 “Chill Vibes” songs indicates an 88.65% chance a song will have vocals. Many Chill songs contain what Pelly’s songwriter informant calls “a kind of coo-y vocal,”<sup>61</sup> mostly murmured in airy tones and recorded close to the microphone, connoting intimacy. While there is variety in the timbre and range of the singing voices heard within the “Chill Vibes,” the singers’ performances and common vocal production techniques result in what sounds like a continuous flow of monotonous variety.

---

60. Brian Eno, “Brian Eno Explains the Loss of Humanity in Modern Music.” *Open Culture*, July 2016, <http://www.openculture.com/2016/07/brian-eno-explains-the-loss-of-humanity-in-modern-music.html>.

61. Pelly, “Streambait Pop.”

Another distinguishing feature of the vocals in “Chill Vibes” is the prevalence of what has been referred to in popular culture as “Indie Pop Voice.” It is characterized by the breathy and “coo-y” timbre discussed above but also incorporates distinctive word pronunciation, especially of vowels. Linguist Gretchen McCulloh explains: “They’re turning monophthongs, or pure vowels that are associated with only one sound, into diphthongs, which are two vowel sounds that are kind of smushed together. The ‘uh’ sound in ‘good’ as you or I would probably say it, is a monophthong. Whereas ‘oi’ in ‘boy’ is a diphthong.”<sup>62</sup> For instance, in “Sunrise,” by Kevitch (featured in “Chill Vibes” in March 2020) she sings, “something ‘bout the way we touch [pronounced more like ‘toich’].”<sup>63</sup>

Though Chill vocal performances are designed to portray intimacy, like most other pop vocals, they are subjected to rigorous digital polishing that includes five basic processes: *digital or analog compression*—to even out any variation in volume; *equalization*—to remove any unwanted or “offensive” audio frequencies and boost desirable ones; *pitch correction*—to centre each note perfectly “in-tune;” *time correction*—to place every syllable precisely on the musical grid; and *spatial manipulation*—to create a sense of artificial distance with digital reverb effect. The resulting vocal performances are smoother, more precise, and more consistent than a human could naturally sing. Unlike the multi-layered vocals of “Happy Hits,” Chill

---

62. Quoted in Reggie Ugwu, “Selena Gomez’s ‘Good For You’ And The Rise Of ‘Indie Pop Voice,’” *BuzzFeed News*, October 6, 2015, <https://www.buzzfeednews.com/article/reggieugwu/what-is-indie-pop-voice>.

63. Kevitch, “Sunrise,” 1562171 Records DK, 2019. This was in the first phrase I heard when I picked a song at random in “Chill Vibes.” Perhaps I got lucky, or perhaps that’s an illustration of how prominent this type of singing is in “Chill Vibes.”

performances are often solitary. However, “Chill Vibes” vocalists seem to keep their feelings at a distance. Despite the intimacy they work to convey, Chill vocals are characterized by their portrayal of detached indifference to the words being sung. Like the instrumental components, they stay in “the in-between,” as though they have already been deterritorialized and disconnected before they enter into service of the Spotify machine.

#### 4.2.3.4 Lyrics

Lyrically, the songs of “Chill Vibes” are often introspective, despite the disconnected delivery of the singers. Dividualized songs mobilized as data-fied packages carry their messages through machinic feedback loops of inputs and outputs, squashing the “highs” and “lows” of language into a middle ground. Lyrics often connect to what could be causes of anxiety but allow listeners the space to engage with these possibilities at a distance—through the polished, chilled out voices whispering into their ears. Chill songs favour vague thematic suggestions over clear statements. For example, in his song “Potion” from “Chill Vibes” in August 2018, Peter Kuli sings:

*All of these voices that I want inside my bed [pronounced bey-ad]  
Can we pressure [sic] like the walls inside my head.<sup>64</sup>*

“Can we pressure,” sounds like something approaching tension, but its strange grammar defangs the notion and releases the pressure before it even begins to accumulate.

Elsewhere, in “Sweet Soul,” also from August 2018’s “Chill Vibes,” alayna gently coos:

*I like the bags under your eyes  
It makes me wonder what you lose sleep over.<sup>65</sup>*

---

64. Peter Kuli and Still Haze, “Potion,” Majestic Casual, 2018. “Chill Vibes” suitability score: 26.46.

65. alayna, “Sweet Soul,” 2018. From *Common Culture vol. 3*, Heard Well, 2018. “Chill Vibes” suitability score: 36.38.



The content and subject matter of the songs contributes to the introspective nature of Chill music, while illustrating another area in which producers avoid risk—in this case, the risk of saying anything that means too much. As James writes, “committing to and expressing an idea or an emotion is deeply un-chill.”<sup>66</sup>

#### 4.2.3.5 Harmony

The compression of “Chill Vibes” is evident even in its treatment of basic musical elements. The creation of harmonic tension and release has long been at the centre of Western music. The theory of Western functional harmony is based entirely around building tension before releasing it through proper resolution. Guitarist Jack Jennings explains simply in *Songwriting Magazine*:

To us, as musicians, it’s our inbuilt sense of how things should sound and where the music is going. As listeners, it’s what makes us sit on the edge of our seat and then feel satisfied when the music makes you feel at home. We identify tension as the moment when the music sounds unresolved, and wants to go somewhere, before it can settle. In contrast, when the music feels fully at peace with itself – like the way a song ends on a ‘pleasant note’ – that’s called release.<sup>67</sup>

Bradley W. Vines, Regina L. Nuzzo and Daniel J. Levitin take their analysis to a scientific extreme using “differential calculus” to examine the same musical device:

Musical tension gives rise to an emotional experience in listeners that references real-world, nonmusical counterparts, such as tension in physical objects, in the body, and in social situations.... The experience of “release” complements the experience of “tension,” and the

---

66. James, “Pop’s Chill Thrills.”

67. Jack Jennings, “Songwriting Technique: Tension and Release,” *Songwriting Magazine*, October 22, 2015, <https://www.songwritingmagazine.co.uk/tips-techniques/songwriting-technique-tension-and-release/2716>.

ebb and flow of these opposites elicits emotional responses to music.<sup>68</sup>

Both explanations appear to agree that tension and release are integral aspects of creating emotional responses to music. “Chill Vibes” all but erases these harmonic pillars of Western music in targeting “the in-between.” Staying chill involves minimizing the risk posed by tension, even at the cost of giving up the “pay off” of release. In “Chill Vibes” harmonic tension and function become virtually irrelevant as chords float from one to the next, ethereal and untethered. For example, both of the above-mentioned songs contain simple and highly consonant chord progressions. Peter Kuli’s “Potion,” for instance, uses just two chords, floating back and forth—between an E major 7 (E, G#, B, D#) and a B major 7 (B, D#, F#, A#). Each chord shares two of its four notes (B and D#) with the other and all are derived from the notes of the B major scale, so there is little tension. It never strays far from the safety of harmonic “home” (B) so there is minimal release when it arrives every other bar. Just as it does with sounds, performances, and lyrics, Chill compresses harmonic tension into a flat line of “zone-like” suspension.

#### 4.2.3.6 Form

To offset its compression of the tension and release that usually gives shape to popular songs, “Chill Vibes” uses a different sort of punctuation to guide users through familiar verse-chorus-verse song forms. Reward-based aural stimulation is also a key point in Schüll’s analysis of gambling machine design. She cites an industry advertisement that claims a machine’s sound design “guides players through the game

---

68. Bradley W. Vines, Regina L. Nuzzo, and Daniel J. Levitin, “Analyzing Temporal Dynamics in Music,” *Music Perception* 23, no. 2 (2005): 138, <http://doi.org/10.1525/mp.2005.23.2.137>.

play of the slot.”<sup>69</sup> The carefully calibrated chimes provide grounding, help maintain the gambler’s rhythm, and provide a vague semblance of punctuation within the suspension of “the zone.” Chill music uses its own subtle signals to guide listeners through what might otherwise become a murky or shapeless arrangement of compressed components.

Sonic carryovers from electronic dance music that Robin James calls “soars” and “drops” provide formal demarcation.<sup>70</sup> “Soars” come from rising synthesizer-derived gestures and “drops” from falling sub-bass drum sounds. These features serve as musical punctuation to keep users in the comfort of formulaic popular music while minimizing emotional ebb and flow, arrival and departure, or tension and release. James writes, “[w]ith the tension-release flattened out, soars function more to organize the song grammatically than to express a meaning or feeling.”<sup>71</sup> When songs, like “Potion” and “Sweet Soul” from above, consist of tension-less harmonic patterns and vocalists retain their detached sensibility throughout, “soars” and “drops” help establish formal guidance for the listener. Both these songs use bass drops to help signify to the listener when it is the chorus, even though little else changes. As musical elements of “Chill Vibes” move minimally and stay suspended in the “in-between,” soars and drops guide users through the familiarity of popular music’s standard formal structure embedded within heavily compressed emotional, instrumental, vocal, and lyrical highs and lows.

---

69. Schüll, *Addiction by Design*, 63.

70. James, “Pop’s Chill Thrills.”

71. James, “Pop’s Chill Thrills.”

#### 4.2.3.7 Post-production

One of the most poignantly binding features of “Chill Vibes” is also the most difficult to convey in material terms. In addition to the overall smoothness and compression of music and emotion, each song is infused with what can best be described as a sense of digital “airiness” that is a by-product of stacking layers of reverb and other filtering, “bit crushing,” and “down sampling” plugins such as one called Lo-Fi.<sup>72</sup> These effects are used to distort digital clarity and fidelity to reproduce the imperfections—the noise—of analog recording. Digital recording offers unnaturally “clean” audio and the introduction of digital noise helps to achieve a more desirable balance of signal and noise. This is exaggerated in many of the songs contained in Chill. In order to soften the competing signals, Chill producers add artificial noise back into their songs, which acts as a sonic lacquer holding the sonic elements in place. The “sidechain compression” explained above can pulse the “air” to make it feel like the song is breathing. The artificial noise is heard and felt as a distinctive quality of the songs of “Chill Vibes.” Here, as Attali describes: “The presence of noise makes sense, makes meaning,”<sup>73</sup> and the balance of signal and noise offers another instance of the “in-between.”

Though not a feature unique to Chill, the volume levels of *all* songs must be compressed to the conventions of Spotify’s playlist environment. In the casino, Schüll writes: “Astute audio engineers have learned that the art of facilitating time-on-device involves paying as much attention to softening and equilibrating sound as to intensifying

---

72. Plugins are digital effects that can be added to a sound inside a recording program. “Lo-Fi,” a plugin that adds this digital noise is made by a company appropriately called Air.

73. Attali, *Noise*, 33.

it” and this is integral to maintaining playlist flow.<sup>74</sup> Pop producer Mark Ronson notes that in Spotify’s playlist environment, “you have to make sure the kick drum and the guitar have the same loudness and presence all the way through the whole fucking song or you don’t stand a chance [of playlist success]. It’s kind of crazy how you have to think about music now.”<sup>75</sup> However, Spotify takes this a step further by taking volume level out of the hands of the producer; to startle the listener with something too loud or too soft risks a break from the zone. In May 2017 without warning, Spotify significantly lowered the volume threshold across the *entire* platform. Bruno Romani, writing for *Motherboard Brazil* writes: “Spotify is telling the music industry that there’s no use in trying to sound louder than everyone else. Everything that comes into the platform will sound and be on the same level.”<sup>76</sup> This practice is especially effective in maintaining the formatted flow of mood-based playlists like Chill, as it helps further minimize the risk of disruption.

#### 4.2.3.8 Territorial vibes

Spotify’s effective territorialization of the space of consumption that is “Chill Vibes”—the playlist, the mood—binds the differences between individual songs into a undisruptive flow that inhabits the “in-between” of foreground and background to mediate the “collusion” between human and machine that is “the zone.” As Schüll

---

74. Schüll, *Addiction by Design*, 63.

75. Quoted in Alexis Petridis, “Mark Ronson: ‘I Was Floundering. I Was Drinking Too Much and Giving Orders,’” *The Guardian*, February 22, 2019, <https://www.theguardian.com/music/2019/feb/22/mark-ronson-i-was-floundering-i-was-drinking-too-much-and-giving-orders>.

76. Bruno Romani and Fabricio Costa, “Why Spotify Lowered the Volume of Songs and Ended Hegemonic Loudness,” *Vice*, July 28, 2017, [https://www.vice.com/en\\_us/article/ywgeek/why-spotify-lowered-the-volume-of-songs-and-ended-hegemonic-loudness](https://www.vice.com/en_us/article/ywgeek/why-spotify-lowered-the-volume-of-songs-and-ended-hegemonic-loudness).

explains the addict's relationship to the gaming machine: "More often than not, the features and effects intended to 'entertain' are precisely the ones players wish would fade into the background."<sup>77</sup> As the anonymous record executive mentioned above tells *The Guardian*: "If an abrasive band like, say, the Pixies were coming out now, they would be penalised by algorithms because the skip rates would be too high."<sup>78</sup> Spectacular, "abrasive," or potentially polarizing features like those of disco, punk, or r&b are to be disdained by producers seeking Chill placement, to ensure their "good little song" won't disrupt the playlist's flow. Producers and users of Chill stay in "the in-between" attaching its nothingness to everything and if the playlists functions as designed then, as Schüll describes, "[t]he rhythm of the game belongs to the machine, the program decides."<sup>79</sup>

Like the gambling machines built with the intention of capturing users in the "machine zone," "Chill Vibes" is systematically designed to territorialize and enfranchise the deterritorialized and disenfranchised individual and absorb them into an affective cocoon of a musical flow. Spotify and the producers of Chill music provide the means for users to literally and figuratively drown out the calls to choose or feel that await in the world outside of their zone.

### 4.3 Conclusions

Journalist Simon Reynolds traces Chill music's origin to UK club culture of 1989 and "The White Room" at the London nightclub Heaven. Reynolds, in *Energy Flash: A*

---

77. Schüll, *Addiction by Design*, 169.

78. Iqbal, "Forget the DJs."

79. Schüll, *Addiction by Design*, 57.

*Journey Through Rave Music and Dance Culture*, explains the “chill-out room” was set up as a sanctuary for club-goers overwhelmed by or exhausted from drug-addled dance floor experiences. Inside, DJ Alex Patterson, who would later go on to form the successful electronic duo The Orb, “provided soul-soother succour for the acieed-frazzled by spinning records by Brian Eno, Pink Floyd, The Eagles, War, 10 cc, and Mike Oldfield, all at very low volume and accompanied by multi-screen video projections.”<sup>80</sup> Music territorialized the “chill-out room” for those who were seeing, hearing, or feeling too much. “The White Room” offered protection from a “bad trip;” an escape from choice, stakes, and specificity, just like going back to 1959 provides Ragle Gumm with a way to “live in his stress free world,”<sup>81</sup> and like the gambler’s “machine zone” becomes a “personal escape pod” from the chaos that awaits outside.<sup>82</sup>

In the end, it is revealed that Gumm, like machine gamblers, began his collusion with the machine willingly. Bill Black explains: “He gave us the idea for all this. He got himself into a dilemma, and the only way he could solve it was to go into a withdrawal psychosis.”<sup>83</sup> The only way that Gumm could cope with his obligation to participate actively in the war by predicting bomb strike locations was to psychically disassociate and retreat to a time before he was burdened by the weight of protecting the interests of the machine. He put himself “out of joint” and into enslavement in order to find a

---

80. Simon Reynolds, *Energy Flash: A Journey through Rave Music and Dance Culture* (London: Faber and Faber, 2013), 167.

81. Dick, *Time Out of Joint*, 200.

82. Schüll, *Addiction by Design*, 41.

83. Dick, *Time Out of Joint*, 199-200.

solution to his defining inner conflict. Chill, too, is “constructed” from the choices of users and producers enabled as component parts in Spotify’s machine. The algorithmic weight of “traceable inputs” is what continuously compresses the songs and keeps them “in-between” and “inoffensive” as their influence on a song’s success finds its way back to producers and informs their creative process.

Chill represents a deterritorialized space for the socially subjected, like Gumm, to withdraw “into a fantasy of tranquility” and find silence from the noise of everything that exists outside of “the zone” and the closed system.<sup>84</sup> After Spotify builds its promises of freedom, choice, and self-actualization for both users and producers, Chill provides withdrawal for the risk-weary individual and Spotify seeks to condition their consumption behaviour with the reward of “the zone.” As Spotify’s surveillance capitalism becomes omnipresent and its users and producers are increasingly “decomposable into partial and modular subjectivities,”<sup>85</sup> the machine churns endlessly, closing the system more tightly and reterritorializing those inside. It shields them from the outside and seeks a claim to their inner space with the promise that users and producers can “feel more of whatever they’re feeling”—in this case, nothing that is not “tranquil, reassuring, and calm.”<sup>86</sup>

---

84. Dick, 200.

85. Lazzarato, *Governing by Debt*, 194.

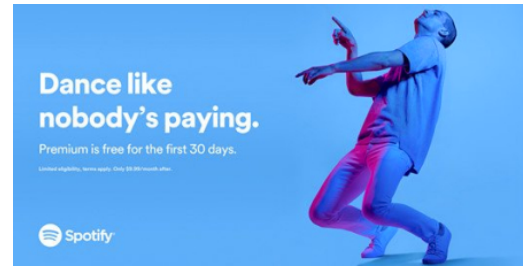
86. Attali, *Noise*, 7. Attali writes that Andrei Zhdanov, a prominent figure in Stalin’s Russian regime, said in a 1947 speech that in order to be used as “an instrument of political pressure” music “must be tranquil, reassuring, and calm.”



## 5 Conclusion: “Dance like nobody’s paying”

“We can put everything we know together, he realized, but it doesn’t tell us anything, except that something’s wrong. The clues we are getting don’t give us a solution; they only show us how far-reaching the wrongness is.”<sup>1</sup>

“You can soundtrack your entire life with Spotify,” a since removed playlist description claimed. “Whatever you’re doing or feeling, we’ve got the music to make it better.”<sup>2</sup> A soundtrack guides us



**Figure 5.1:** Spotify advertisement retrieved by the author March 2019.

through a narrative and helps us know what to feel and when to feel it. It provides grounding and context, while it also connects us to something mysterious and otherworldly. In *Cruel Optimism* Lauren Berlant writes that a soundtrack is “what tells you that you are really most at home in yourself where you are bathed by emotions you can always recognize.”<sup>3</sup> “The ‘soundtrack of your life,’” she continues, “holds a place open for an optimistic rereading of the rhythms of living.”<sup>4</sup> Spotify claims its users “turn to streaming to enhance and regulate every moment. Spotify is the indispensable part of their lives that they never get bored with, rely on and trust.”<sup>5</sup> Throughout this work, I have illustrated some of the ways in which Spotify strives to become “indispensable” by

---

1. Dick, *Time Out of Joint*, 87-88.

2. Eriksson et al., *Spotify Teardown*, 121.

3. Lauren Berlant, *Cruel Optimism* (Durham: Duke University Press, 2011), 34.

4. Berlant, 35.

5. “Understanding People,” Spotify for Brands.

enmeshing itself within our sense of self, our emotions, and eventually our escape from being or feeling. By endeavoring to become a part of every moment, by reterritorializing the “space” where we feel “most at home,” Spotify seeks to *rewrite* the rhythms of living. More than it wants to *provide* the soundtrack of our lives, Spotify wants to *be* the soundtrack of our lives.

By linking my research on music streaming to broader topics of discussion I hope to have shown, through Spotify and through music, some of what’s at stake as more and more aspects of contemporary life are treated as objectified component parts within a vast assemblage of interconnected social and surveillance machines. “Wrapped” illuminates some of the implications of our tendency to see and measure ourselves on the terms of those who seek to subjectivize us. Every “step” we count or “like” in which we *believe* strengthens the bond of our “machinic enslavement.” Spotify’s mood-based sorting is more than a music and capital problem, it’s an emotion problem. Barrett’s theory suggests that we have agency to feel something useful about our precarious, subjected, enslaved lives, but Spotify’s reaffirmation of essentialism, asks us to *forget* our own ability to exercise agency in emotional experience. Chill’s provision of a musical “machine zone” that we can’t be bothered to turn off is about more than “vanilla” music, it’s about colluding with technology that seeks to abstract us from our ability to create meaning, fill everything with nothingness, and keep us living in the figurative *silence* of “the in-between.” Spotify seeks to enclose us within a space where we can “dance like nobody’s paying,” *but what is the true cost when surveillance infiltrates the soundtrack of our lives?*

A software developer tells Zuboff: “We are learning to write the music, and then we let the music make them dance.”<sup>6</sup> Spotify, like any other digital media platform, is constantly re-writing and refining its interface design, its choice architecture, its algorithmic suggestion models, and its priorities. The company continues to introduce new features that invite users and producers to *believe*, to *forget*, and to be *silent*.

The habituation process I illustrated with “Wrapped” has led Spotify to act as though streams and (potentially) data are now so valuable and integral that producers should pay for them. In fall 2019, the company introduced a new service called “Marquee” that offers “advertising” in order to elevate a song’s stream count. In this case, advertising means the producer (or label) pays Spotify for special treatment that includes “adds” to branded playlists. In a March 2020 *Bloomberg* piece titled “Spotify’s Newest Pitch to Labels and Musicians: Now You Pay Us,” Lucas Shaw writes that “Spotify has inserted sponsored songs in listeners’ playlists, and has also discussed charging artists and labels for data about [users’] habits.”<sup>7</sup> Marquee’s minimum \$5000 buy-in puts the service out of reach for many independents and will seemingly only widen the industry’s already gaping wealth disparity. Zola Jesus is outraged that her Spotify royalties don’t cover a monthly subscription and now Spotify asks producers to pay once a month to listen to music and pay again and again to fend off the threat of

---

6. Zuboff, *Surveillance Capitalism*, 295.

7. Travis Shaw, “Spotify’s Newest Pitch to Labels and Musicians: Now You Pay Us,” *Bloomberg.com*, March 2, 2020, <https://www.bloomberg.com/news/articles/2020-03-02/spotify-s-newest-pitch-to-labels-and-musicians-now-you-pay-us>. As with many of Spotify’s positions in the music industry, this resembles a cyclical pattern that calls back to the days of “payola” in which labels paid cash to radio DJs in exchange for playing their artists.

inaudibility. Spotify invites producers to pay for their own exploitation and few, beyond its major label partners, will even be able to afford to do so.

For those producers not able to afford Marquee and who cannot independently crack the playlist code, Spotify has a second proposition: they'll connect you with producers who can make your music for you. In September 2019, Spotify purchased a platform called "SoundBetter" that acts as a musical marketplace for those seeking record production, mixing, mastering services. It even offers a selection of fully produced "tracks" that a vocalist can sing over, starting at \$99.<sup>8</sup> In pitching the service to artists, Spotify implies that the services and songs are "Spotify Approved" and offer an inside track to streaming success. *Who knows what the machine wants better than the machine itself?* The subject heading from a February 2020 promotional email reads: "10K+ artists, 10K+ songs, 100m+ streams. All via SoundBetter."<sup>9</sup> With this service, Spotify offers another means to fend off the threat of inaudibility, while producers who oblige pay the machine to tune their songs into more efficient data supply routes. Spotify invites producers to *forget* their active role in their own musical expression and the machine profits whether the resulting music is streamed 20 million times or ends up among the unheard 20%.

Finally, Spotify has found ways to silence producers entirely, by contracting companies to make idealized functional playlist music that comes at a cheaper rate. Within the background/instrumental realm of Chill, Spotify allegedly plants "fake" artists

---

8. Spotify puts a cap on the number of streams that can be accumulated from these "non-exclusive" licensing deals. Tracks on SoundBetter can also be purchased outright with an exclusive license at a higher fee, most around \$1500. There is no stream ceiling for an exclusive licence.

9. Spotify for Artists, Email newsletter, February 4, 2020.

in its playlists. For instance, Chill “artist” Jan Thiel has released just three songs and they can only be found on Spotify. The artist has no face, no live performances listed, and no presence on other streaming services or social media platforms. A Google search of “Jan Thiel” yields listings for beachside hotels in Curaçao. “Süda” (Estonian for “heart”), Jan Thiel’s most streamed song, has nearly 3 million plays in just over two months and is currently included on seven Spotify branded playlists that have a total of 7,424,359 followers.<sup>10</sup> There are many more suspicious cases just like this. Spotify, not surprisingly, first denied any knowledge of “fake” artists, but later admitted to paying lower royalties for songs it commissions from companies like the Swedish production house Epidemic Sound.<sup>11</sup> A former Spotify representative anonymously tells *Variety*: “It’s one of a number of internal initiatives to lower the royalties they’re paying to the major labels.”<sup>12</sup> In this scenario, not only are coveted playlist spots being withheld from “real” producers, but the “stream share” model is driven out of proportion, as millions of streams paid at a lower rate dilute the pool of funds allocated for artists. For music producers, this is more than a threat of inaudibility, this is actual *silence*.<sup>13</sup>

---

10. “Süda - Jan Thiel,” Spot on Track, accessed March 8 <https://www.spotontrack.com/artists/3692884/tracks>.

11. Tim Ingham, “Why Spotify's Fake Artists Problem Is an Epidemic. Literally,” *Music Business Worldwide*, July 13, 2017, <https://www.musicbusinessworldwide.com/why-spotifys-fake-artists-problem-is-an-epidemic-literally/>.

12. Roy Trakin and Jem Aswad, “Spotify Denies Creating 'Fake Artists,' Although Multiple Sources Claim the Practice Is Real,” *Variety*, July 11, 2017, <https://variety.com/2017/biz/news/spotify-denies-creating-fake-artists-although-multiple-sources-claim-the-practice-is-real-1202492307/>.

13. Spotify’s enthusiasm for podcasts over the past two years (mostly because they keep users “on-device” *without* the company having to pay pesky royalties to producers) may provide an even more vivid representation of “silence,” but I wanted to keep this about music.

Increasingly, Zuboff writes, “products and services are merely hosts for surveillance capitalism’s parasitic operations” and I have shown some of the parasitic ways in which Spotify uses music as a host.<sup>14</sup> Attali states that “[m]usic makes [social/political/economic] mutations audible”<sup>15</sup> and I have argued throughout this thesis that the characteristics of surveillance capitalism and subjectivation/enslavement are audible when we listen to Spotify and reflect the impact of surveillance on important aspects of our humanity.

“When money first appeared,” Attali writes, “music was inscribed in usage; afterwards, the commodity entraps, produces, exchanges, circulates, and censors it. Music is then no longer affirmation of existence, it becomes valorized.”<sup>16</sup> Even in its commodified, valorized state, the soundtrack of our lives can still provide an affirmation of existence. Digital technology has made music easier than ever to produce and distribute, and there are opportunities for a system in which “users” can once again become “listeners” and producers can sidestep surveillance firms and distribute the products of their labour (more) directly to an audience. For instance, on March 20, 2020, Bandcamp (a music distribution platform geared toward independent producers) waived its usual 10% distributor fee as a show of support for producers facing the financial burden of performance cancellations from the COVID-19 pandemic. During the one-day event, according to Bandcamp, “fans bought nearly...\$4.3 million worth of music and

---

14. Zuboff, *Surveillance Capitalism*, 500.

15. Attali, *Noise*, 3.

16. Attali, *Noise*, 36.

merch,” totalling “more than 15 times our normal Friday,”<sup>17</sup> offering an affirmation of existence for music producers in a time of great need.

Meanwhile, in order to provide “financial relief to creators around the world to find ways to support our community,”<sup>18</sup> Spotify announced it was “matching donations” made by its users to a number of musician’s support organizations to a maximum of \$10 million and working on a digital “tip jar” for producers to integrate into their profiles. Artist Blake Morgan (*see fig. 5.3*) offers context for Spotify’s “relief,” calculating that, (as long as the money isn’t distributed according to the “stream share” model) it wouldn’t even cover the cost of one month of Spotify subscriptions for the 1.2 million producers who provide Spotify with music.<sup>19</sup> The machine will never give its producer “partners” more than it takes from them.

In the end of *Time Out of Joint*, Ragle Gumm decides to stop finding “the little green man,” and the war machine shuts down. Spotify’s machine, fueled by millions of



**Figure 5.2:** Blake Morgan provides context for Spotify’s “relief” plan. Retrieved by the author, March 26, 2020.

17. Ethan Diamond, “Update on Friday’s Campaign to Support Artists During the Covid-19 Pandemic,” *Bandcamp Daily*, March 23, 2020, <https://daily.bandcamp.com/features/update-on-fridays-campaign-to-support-artists-during-the-covid-19-pandemic>.

18. “Spotify COVID-19 Music Relief,” Spotify for Artists, March 25, 2020, <https://artists.spotify.com/blog/spotify-covid-19-music-relief>.

19. Blake Morgan, “The CEO of Spotify,” Twitter post, March 25, 2020, <https://twitter.com/theblakemorgan/status/1242871781305827328?s=12>.

users and producers drawn in by the irresistibility of its “magic spell,”<sup>20</sup> is much more difficult to shut down and bigger, more powerful surveillance firms like Amazon and Google wait in the wings, should it collapse. While \$4.3 million directly from fans to artists represents “15 times the normal Friday” on Bandcamp, Daniel Ek hoards billions of dollars and Spotify’s major record label partners make, on average, \$22.9 million every day from streaming royalties.<sup>21</sup> As long as the majority of music consumption stays in the hands of technology and surveillance companies and their major label partners, music’s existence affirming qualities become increasingly deterritorialized. In this system, each song is produced under very real threats of invisibility, inaudibility, and financial instability and subjected into the service of the machine where it has little chance of survival. By enlisting music as a tool of surveillance, Spotify’s usage surpasses the limits faced by the physical music commodity and uses music’s connection to an affirmation of existence to extract everything it can *from* our existence. The machine’s process of dividualization and algorithmic reassembly continues to distance us from music’s connection to our humanity and reterritorializes the empty space with whichever “good little song serves best.” Spotify’s enclosure invites us to believe, asks us to forget, and keeps us silent while it puts the soundtrack of our lives at the crux of “social subjection” and “machinic enslavement.” Attali’s commodified usage of music wanted your money, now Spotify’s surveillance usage wants your life.

---

20. Mumford, *Myth of the Machine*, 224.

21. Tim Ingham, “It’s Happened: The Major Labels Are Now Generating over \$1m Every Hour from Streaming,” *Music Business Worldwide*, February 25, 2020, <https://www.musicbusinessworldwide.com/its-happened-the-major-labels-are-now-generating-over-1m-every-hour-from-streaming>.



## 6 Bibliography

- Åker, Patrik. "Spotify as the soundtrack to your life: encountering music in the customized archive." In *Streaming Music: Practices, Media, Cultures*, by Sophia Johanson, Ann Werner, Patrick Åker and Gregory Goldenzwaig, 81-104. New York: Routledge, 2018.
- alayna. "Sweet Soul," from *Common Culture vol. 3*. Heard Well, 2018.
- Anderson, Paul Allen. "Neo Muzak and the Business of Mood." *Critical Inquiry* 41, no. 4 (2015): 811-840. <https://doi.org/10.1086/68178>
- Askin, Noah, and Michael Mauskapf. 2017. "What Makes Popular Culture Popular? Product Features and Optimal Differentiation in Music." *American Sociological Review* 82, no. 5 (June 2017): 910-944. <https://doi.org/10.1177/0003122417728662>.
- Attali, Jacques. *Noise: A Political Economy of the Music Industry*. Translated by Brian Massumi. Minneapolis: University of Minnesota Press, [1985] 2017.
- Barrett, Lisa Feldman. *How Emotions Are Made: The Secret Life of the Brain*. New York: Mariner, 2017.
- Beaumont-Thomas, Ben, and Laura Snapes. "Has 10 Years of Spotify Ruined Music?" *The Guardian*, October 5, 2018. <https://www.theguardian.com/music/2018/oct/05/10-years-of-spotify-should-we-celebrate-or-despair>.
- Berlant, Lauren. *Cruel Optimism*. Durham: Duke University Press, 2012.
- Bonini, Tiziano, and Alessandro Gandini. 2 "First Week Is Editorial, Second Week Is Algorithmic": Platform Gatekeepers and the Platformization of Music Curation." *Social Media + Society*, no. 4 (2019): 1-11. <https://doi.org/110/1177/2056305119880006>.
- Boucher, Taina. *If...Then: Algorithmic Power and Politics*. New York: Oxford University Press, 2018.
- Bruell, Alexandra. "Spotify Has Big Ambitions for its Ad Business," *Wall Street Journal*, August 17 2017. <https://www.wsj.com/articles/spotify-has-big-ambitions-for-ad-business-1502964001>.
- Burkeman, Oliver. "'The attention economy is in hyperdrive': how tech shaped the 2010s," *The Guardian*, November 22, 2019. <https://www.theguardian.com/culture/2019/nov/22/attention-economy-in-hyperdrive-how-tech-shaped-2010s-oliver-burkeman>.
- BuzzAngle Music. *BuzzAngle Music 2017 U.S. Report*. BuzzAngle Music, 2017.
- Cox, Jamieson. "Zola Jesus – 'Exhumed,'" *Pitchfork*, June 7, 2017. <https://pitchfork.com/reviews/tracks/19173-zola-jesus-exhumed/>.
- Dance, Gabriel J., Michael Laforgia, and Nicholas Confessore. "As Facebook Raised a Privacy Wall, It Carved an Opening for Tech Giants," *New York Times*, December 19, 2018. <https://www.nytimes.com/2018/12/18/technology/facebook-privacy.html>.

- Deahl, Dani. "Spotify Is Profitable Once Again as It Cuts Costs and Adds Cheaper Plans," *The Verge*, October 28, 2019.  
<https://www.theverge.com/2019/10/28/20936612/spotify-q3-earnings-cheaper-plans-profitable-costs-cuts>.
- Deleuze, Gilles, and Félix Guattari. *A Thousand Plateaus*. Translated by Brian Massumi. Minneapolis: University of Minnesota Press, [1980] 1987.
- Deleuze, Gilles, and Félix Guattari. *Anti-Oedipus: Capitalism and Schizophrenia*. Translated by Robert Hurley, Mark Seem, and Helen R. Lane. New York: Penguin, [1972] 2009.
- Diamond, Ethan. "Update on Friday's Campaign to Support Artists During the Covid-19 Pandemic," *Bandcamp Daily*, March 23, 2020.  
<https://daily.bandcamp.com/features/update-on-fridays-campaign-to-support-artists-during-the-covid-19-pandemic>.
- Dick, Philip K. *Time Out of Joint*. London: Orion Publishing Group, [1959] 2003.
- Dubner, Steven J., and Matt Frassica. "How Spotify Saved the Music Industry (But Not Necessarily Musicians)," *Freakonomics*, April 10, 2019.  
<https://freakonomics.com/podcast/spotify/>.
- Duffy, Brooke Erin, and Ngai Keung Chan. 2018. "'You Never Really Know Who's Looking': Imagined Surveillance Across Social Media Platforms." *New Media & Society* no. 1 (July 2018): 119-138. <https://doi.org/10.1177/1461444818791318>.
- Eno, Brian. "Brian Eno Explains the loss of Humanity in Modern Music," *Open Culture*, July 27, 2017. <http://www.openculture.com/2016/07/brian-eno-explains-the-loss-of-humanity-in-modern-music.html>.
- Eriksson, Maria, Rasmus Fleischer, Anna Johansson, Pelle Snickars, and Patrick Vonderau. *Spotify Teardown: Inside the Black Box of Streaming Music*. Cambridge: MIT Press, 2019.
- Fisher, Mark. *Capitalist Realism: Is there no alternative?* Winchester: Zero Books, 2010. Apple Books.
- Fleetwood Mac. "Dreams," *Rumours (Deluxe Edition)*. Rhino, 2013.
- Flyvbjerg, Bent. *Making Social Science Matter: Why social inquiry fails and how it can succeed again*. Translated by Steven Sampson. Cambridge: Cambridge University Press, [2001] 2019.
- Forde, Eamonn. "'They could destroy the album': how Spotify's playlists have changed music for ever," *The Guardian*, August 17, 2017.  
<https://www.theguardian.com/music/2017/aug/17/they-could-destroy-the-album-how-spotify-playlists-have-changed-music-for-ever>.
- Friedlander, Joshua P. "2019 Revenue Report," Record Industry Association of America, 2020.
- Gertz, Nolan. *Nihilism and Technology*. London: Rowman & Littlefield, 2018. Apple Books.
- Graves, Daniel. "Despite the naysayers." Twitter, December 10, 2018. Accessed November 2019. [https://twitter.com/daniel\\_graves/status/1072170184960557057](https://twitter.com/daniel_graves/status/1072170184960557057).

- Greenberg, David M., Michal Kosinski, David J. Stillwell, Brian L. Monteiro, Daniel J. Levitin, and Peter J. Rentfrow. "The Song Is You: Preferences for Musical Attribute Dimensions Reflect Personality." *Social Psychological and Personality Science*, 7, no. 6 (2016): 597-605. <http://doi.org/10.1177/1948550616641473>.
- Guetta, David, Afro Jack, Charlie XCX, French Montana. "Dirty, Sexy, Money." Parlophone France, 2017.
- Haldane, Andy. "Will Big Data Keep Its Promise?" *Bank of England*, August 30, 2018. <https://www.bankofengland.co.uk/speech/2018/andy-haldane-centre-for-data-analytics-for-finance-and-macro>.
- Headley, Janice. "Song of the Day: Zola Jesus – 'Exhumed,'" *KEXP*, July 11, 2017. <https://www.kexp.org/read/2017/7/11/song-of-the-day-zola-jesus-exhumed/>.
- Hern, Alex. "Is Spotify really worth \$20bn?" *The Guardian*, March 2, 2018. <https://www.theguardian.com/technology/2018/mar/02/is-spotify-really-worth-20bn>.
- Hickey, Walt. "Spotify Knows Me Better Than I Know Myself," *FiveThirtyEight*, September 16, 2014. <https://fivethirtyeight.com/features/spotify-knows-me-better-than-i-know-myself/>.
- Hogan, Marc. "Uncovering How Streaming Is Changing the Sound of Pop," *Pitchfork*, September 25, 2017. <https://pitchfork.com/features/article/uncovering-how-streaming-is-changing-the-sound-of-pop/>.
- Ingham, Tim. "Daniel Ek Says Sorry after Spotify's Privacy Backlash," *Music Business Worldwide*, August 24, 2015. <https://www.musicbusinessworldwide.com/daniel-ek-says-sorry-after-spotify-privacy-backlash/>.
- Ingham, Tim. "Drake has generated over \$100m on Apple Music and Spotify alone," *Music Business Worldwide*, July 23, 2018. <https://www.musicbusinessworldwide.com/drake-is-the-biggest-artist-of-all-time-on-apple-music-and-spotify-generating-over-50m/>.
- Ingham, Tim. "It's Happened: The Major Labels Are Now Generating over \$1m Every Hour from Streaming," *Music Business Worldwide*, February 25, 2020. <https://www.musicbusinessworldwide.com/its-happened-the-major-labels-are-now-generating-over-1m-every-hour-from-streaming/>.
- Ingham, Tim. "Nearly 40,000 Tracks Are Now Being Added to Spotify Every Single Day," *Music Business Worldwide*, April 29, 2019. <https://www.musicbusinessworldwide.com/nearly-40000-tracks-are-now-being-added-to-spotify-every-single-day/>.
- Ingham, Tim. "One reason why Spotify's deals with the major labels are balanced on a knife-edge," *Music Business Worldwide*, November 14, 2018. <https://www.musicbusinessworldwide.com/one-reason-why-spotifys-deals-with-the-major-labels-rest-on-a-knife-edge/>.
- Ingham, Tim. "The major labels will generate over \$14bn in 2019, as Warner bucks trend of streaming slowdown (just)," *Music Business Worldwide*, December 10, 2019. <https://www.musicbusinessworldwide.com/major-labels-will-generate-over-xbn-in-2019-as-warner-bucks-trend-of-streaming-slowdown-just/>.

- Ingham, Tim. "Why spend \$4.1bn on A&R? Because new artists are accelerating streaming's growth," *Music Business Worldwide*, June 7, 2019.  
<https://www.musicbusinessworldwide.com/why-spend-4-1bn-on-ar-new-artists-are-accelerating-streamings-growth/>.
- Ingham, Tim. "Why Spotify's fake artists problem is an Epidemic. Literally," *Music Business Worldwide*, July 13, 2017.  
<https://www.musicbusinessworldwide.com/why-spotifys-fake-artists-problem-is-an-epidemic-literally/>.
- Iqbal, Nosheen. "Forget the DJs: Spotify playlists are the new musical starmakers," *The Guardian*, April 28, 2019.  
<https://www.theguardian.com/music/2019/apr/28/streaming-music-algorithms-spotify>.
- James, Robin. "Pop's Chill Thrills Aren't So Cheap," *Sound Studies Blog*, August 1, 2016. <https://soundstudiesblog.com/2016/08/01/pops-chill-thrills-arent-so-cheap/>.
- Jardine, Alexandra. "Spotify Announces the World's Most-Streamed Music on Its End-of-Year Microsite," *Ad Age*, December 5, 2017.  
<https://adage.com/creativity/work/2017-wrapped/53359>.
- Jardine, Alexandra. "'Thanks 2016, It's Been Weird,' Says Spotify in Biggest-Ever Global Campaign," *Ad Age*, November 28, 2016.  
<https://adage.com/creativity/work/thanks-2016/50063>.
- Jennings, Jack. "Songwriting Technique: Tension and Release," *Songwriting Magazine*, October 22, 2015. <https://www.songwritingmagazine.co.uk/tips-techniques/songwriting-technique-tension-and-release/2716>.
- Johansson, Sofia. "Online Music in Everyday Life." In *Streaming Music: Practices, Media, Cultures*, by Sofia Johansson, Werner Ann, Patrick Åker and Gregory Goldenzwaig, 27-43. New York: Routledge, 2018.
- Kevitch. "Sunrise." 1562171 Records DK, 2019.
- Krukowski, Damon. *Ways of hearing*. Cambridge: The MIT Press, 2019.
- Kuli, Peter and Still Haze. "Potion." Majestic Casual, 2018.
- Lazzarato, Maurizio. *Governing by Debt*. Translated by Joshua David Jordan. South Pasadena, California: Semiotext(e), 2015.
- Lazzarato, Maurizio. *Signs and Machines*. Translated by Joshua David Jordan. Los Angeles: Semiotext(e), 2014.
- Lyon, David. "Surveillance Culture: Engagement, Exposure, and Ethics in Digital Modernity." *International Journal of Communication* 11 (2017): 824-842.
- Mahdawi, Arwa. "Spotify Can Tell If You're Sad. Here's Why That Should Scare You," *The Guardian*, September 16, 2018.  
<https://www.theguardian.com/commentisfree/2018/sep/16/spotify-can-tell-if-youre-sad-heres-why-that-should-scare-you>.
- Mamiit, Aaron. "Spotify Says Thanks to Weird 2016 in New Ad Campaign that Shows the Fun Side of User Data," *Tech Times*, November 30, 2016.

- <https://www.techtimes.com/articles/187415/20161130/spotify-says-thanks-to-weird-2016-in-new-ad-campaign-that-shows-the-fun-side-of-user-data.htm>.
- Marwick, Alice E., and dannah boyd. "I tweet honestly, I tweet passionately: Twitter users, context collapse, and the imagined audience." *New Media & Society* 13 no. 1 (July 2010): 114-133. <https://doi.org/10.1177/1461444810365313>
- Marwick, Alice. "The Public Domain: Surveillance in Everyday Life," *Surveillance & Society* 9 no. 4 (2012): 378-393. <https://doi.org/10.24908/ss.v9i4.4342>.
- Mashurov, NM. "Double Trouble," *Real Life Magazine*, November 14, 2019. <https://reallifemag.com/double-trouble/>.
- McAlone, Nathan. "People Are Quitting Spotify Over Its New Privacy Policy," *Business Insider*, August 21, 2015. <https://www.businessinsider.com/people-are-quitting-spotify-over-new-privacy-policy-2015-8>.
- Mercedes, Evelin. "Concert Review: Nina Nesbitt Le Poisson Rouge - New York," *Celeb Mix*, March 11, 2019. <https://celebmix.com/concert-review-nina-nesbitt-le-poisson-rouge-new-york/>.
- Moore, Phoebe V. *The Quantified Self in Precarity: Work, Technology and What Counts*. New York: Routledge, 2019.
- Morgan, Blake. "The CEO of Spotify." Twitter, March 25, 2020. <https://twitter.com/theblakemorgan/status/1242871781305827328?s=12>.
- Morris, Jeremy Wade. "Curation By Code: Informediaries and the Data Mining of Taste." *European Journal of Cultural Studies* 18 no. 4-5 (2015): 446-463.
- Mumford, Lewis. "The First Megamachine." *Diogenes* (1966): 1-15.
- Mumford, Lewis. *The Myth of the Machine*. San Diego: Harcourt, 1967.
- Neanderthal. "I can't wait." Twitter, December 7, 2018. [https://twitter.com/\\_\\_\\_Neanderthal/status/1071158754270302208](https://twitter.com/___Neanderthal/status/1071158754270302208).
- Neanderthal. "Me putting my music." Twitter, June 1, 2019. [https://twitter.com/\\_\\_\\_Neanderthal/status/1134902034065268736](https://twitter.com/___Neanderthal/status/1134902034065268736).
- Neanderthal. "AHHHHH." Twitter, July 27, 2019, [https://twitter.com/\\_\\_\\_Neanderthal/status/1155241057845596160](https://twitter.com/___Neanderthal/status/1155241057845596160).
- Neanderthal. "Thank you." Twitter, December 6, 2019. [https://twitter.com/\\_\\_\\_Neanderthal/status/1202858421076156417](https://twitter.com/___Neanderthal/status/1202858421076156417).
- Neanderthal featuring Satyrn and Keepitinside. "White Lies," 2019.
- Nesbitt, Nina. "2018 Highlights." Twitter, December 31, 2018. <https://twitter.com/ninanesbitt/status/1079690790891413512>.
- Nesbitt, Nina. "thank you." Twitter, September 24, 2019. <https://twitter.com/ninanesbitt/status/1176516876215734272>.
- Nesbitt, Nina. "start of the decade." Twitter, December 27, 2019. <https://twitter.com/ninanesbitt/status/1210678259979038724>.
- Nesbitt, Nina. "It's been a great year." Twitter, December 5, 2019. <https://twitter.com/ninanesbitt/status/1202665774248267778>.

- Nietzsche, Friedrich Wilhelm. *On the Genealogy of Morality and Other Writings*. Cambridge: Cambridge University Press, [1887] 2017.
- Nusca, Andrew. "Spotify Saved the Music Industry. Now what?" *Fortune*, January 22, 2020. <https://fortune.com/longform/spotify-music-industry-profits-apple-amazon/>.
- O'Dair, Marcus, and Andrew Fry. "Beyond the black box in music streaming: the impact of recommendation systems upon artists." *Popular Communication* 18 no. 1 (October 2019): 65-77. <https://doi.org/10.1080/15405702.2019.1627548>.
- Pallett, Owen. "Explaining the Genius of Daft Punk's 'Get Lucky'-Using Music Theory," *Slate*, March 28, 2014. <https://slate.com/culture/2014/03/daft-punks-get-lucky-explained-using-music-theory.html>.
- Party Nails. "I don't use Spotify." Twitter. December 5, 2019. <https://twitter.com/partypartynails/status/1202676408662683648>.
- Pelly, Liz. "Big Mood Machine," *The Baffler*, June 10, 2019. <https://thebaffler.com/downstream/big-mood-machine-pelly>.
- Pelly, Liz. "Streambait Pop," *The Baffler*, December 20, 2018. <https://thebaffler.com/downstream/streambait-pop-pelly>.
- Pelly, Liz. "The Problem with Muzak," *The Baffler*, December 7, 2017. <https://thebaffler.com/salvos/the-problem-with-muzak-pelly>.
- Perry, Katy. "Never Really Over." Capitol Records, 2019.
- Peterson, Tim. "Spotify to Use Playlists as Proxy for Targeting Ads to Activities, Moods," *Ad Age*, April 16, 2015. <https://adage.com/article/digital/spotify-playlists-gauge-moods-ad-targeting/298066>.
- Petridis, Alexis. "I Was Floundering. I was Drinking Too Much and Giving Orders," *The Guardian*, February 22, 2019. <https://www.theguardian.com/music/2019/feb/22/mark-ronson-i-was-floundering-i-was-drinking-too-much-and-giving-orders>.
- Raustiala, Kal, and Christopher Jon Sprigman. "The Second Digital Disruption: Streaming and the Dawn of Data-Driven Creativity." *New York University Law Review* 94 no. 6 (December 2019): 101-164. <https://www.nyulawreview.org/issues/volume-94-number-6/the-second-digital-disruption-streaming-and-the-dawn-of-data-drive-creativity/>.
- Reynolds, Simon. *Energy Flash: A Journey through Rave Music and Dance Culture*. London: Faber and Faber, 2013.
- Romani, Bruno, and Frabicio Costa. "Why Spotify Lowered the Volume of Songs and Ended Hegemonic Loudness," *Vice*, July 28, 2017. [https://www.vice.com/en\\_us/article/ywgeek/why-spotify-lowered-the-volume-of-songs-and-ended-hegemonic-loudness](https://www.vice.com/en_us/article/ywgeek/why-spotify-lowered-the-volume-of-songs-and-ended-hegemonic-loudness).
- Russell, Jon. "Tencent Music, Spotify's Strategic Partner in China, Is Valued at over \$12B," *Tech Crunch* March 1, 2018. <https://techcrunch.com/2018/02/28/tencent-music-spotify/>.

- Sandoval, Greg. "The Major Labels are upset that they don't get more play on Spotify's mega popular playlists, says Deutsche Bank," *Business Insider*, July 12, 2018. <https://www.businessinsider.com/spotify-curated-playlists-labels-2018-7>.
- Schüll, Natasha Dow. *Addiction by Design: Machine Gambling in Las Vegas*. Princetown: Princeton University Press, 2014.
- Segarra, Lisa Marie. "Spotify Wrapped Isn't Just a Personalized Playlist. It's an App Download Blitz," *Fortune*, December 11, 2019. <https://fortune.com/2019/12/11/spotify-wrapped-playlist-app-download/>.
- Shaw, Travis. "Spotify's Newest Pitch to Labels and Musicians: Now You Pay Us," *Bloomberg*, March 2, 2020. <https://www.bloomberg.com/news/articles/2020-03-02/spotify-s-newest-pitch-to-labels-and-musicians-now-you-pay-us>.
- Simon, Herbert A. "Designing Organizations for an Information-rich World." In *Computers, Communications, and the Public Interest*, edited by M. Greenberger, 38-72. Baltimore: Jon Hopkins Press, 1971.
- Solsman, Joan E. "Spotify Is Profitable for Once, Sort of..." *CNET*, November 1, 2018. <https://www.cnet.com/news/spotify-is-profitable-for-once-hits-87-million-subscribers-keeping-it-worlds-biggest-streaming-music-service/>.
- Spot on Track. "Süda," Jan Thiel. Accessed March 8, 2020. <https://www.spotontrack.com/artists/3692884/tracks>.
- Spot on Track. "Black & Blue," Nina Nesbitt. Accessed December 6, 2019. <https://www.spotontrack.com/tracks/43637564>.
- Spot on Track. "The Best You Had," Nina Nesbitt. Accessed December 6, 2019. <https://www.spotontrack.com/tracks/1283977>
- Spot on Track. "Exhumed," Zola Jesus. Accessed November 5, 2019. <https://www.spotontrack.com/tracks/664723>.
- Spot on Track. "Skin," Zola Jesus. Accessed November 5, 2019. <https://www.spotontrack.com/tracks/791089>.
- Spotify Canada. "Music for every moment." Twitter. Accessed March 6, 2020, <https://twitter.com/SpotifyCanada>.
- Spotify for Artists. "Spotify COVID-19 Music Relief," March 25, 2020. <https://artists.spotify.com/blog/spotify-covid-19-music-relief>.
- Spotify for Artists. "How Spotify Pays Artists." Accessed March 6, 2020. <https://artists.spotify.com/videos/the-game-plan/how-spotify-pays-you>.
- Spotify for Artists. "How to Read Your Data." Accessed March 12, 2020. <https://artists.spotify.com/videos/the-game-plan/how-to-read-your-data>.
- Spotify for Brands. "Audiences." Accessed March 5, 2020. <https://www.spotifyforbrands.com/en-CA/audiences/>.
- Spotify for Brands "Cannes Rewind: Our Top Moments from the South of France." Accessed March 20, 2020. <https://www.spotifyforbrands.com/en-NZ/news/cannes-2019-recap>.
- Spotify for Brands. "The New Golden Age of Audio." Accessed March 5, 2020. <https://www.spotifyforbrands.com/en-CA/insights/the-new-golden-age-of-audio/>.

- Spotify for Brands. "Understanding People Through Music: Millennial Edition," Marketing Report, May, 2108.
- Spotify for Developers. "Discover Spotify's Features." Accessed March 3, 2020. <https://developer.spotify.com/discover/>.
- Spotify for Developers. "Get Audio Features for a Track." Accessed March 14, 2020. <https://developer.spotify.com/console/get-audio-features-track/>.
- Spotify. "Chill Vibes, a Playlist by Spotify." Accessed March 8, <https://open.spotify.com/playlist/37i9dQZF1DX889U0CL85jj?si=lMIPLDbiR92Z0swRi4z3TQ>.
- Spotify. "Down in the Dumps, a Playlists by Spotify." Accessed March 8, 2020. <https://open.spotify.com/playlist/37i9dQZF1DWSqBruwoIXkA?si=9P5zNeeCTB2k1v1gFZThNw>.
- Spotify. "Happy Hits, a playlist by Spotify." Accessed March 8, 2020. <https://open.spotify.com/playlist/37i9dQZF1DXdPec7aLTmlC>.
- Spotify. "Life Sucks, a Playlist by Spotify." Accessed March 8, 2020. <https://open.spotify.com/playlist/37i9dQZF1DX3YSRoSdA634?si=ppIk9sPKSoGErTTOBGYpVg>.
- Spotify. "Mood Booster, a Playlist by Spotify." Accessed March 8, 2020. [https://open.spotify.com/playlist/37i9dQZF1DX3rxVfibe1L0?si=msDQsgkZQ0esalwv\\_D-Ibg](https://open.spotify.com/playlist/37i9dQZF1DX3rxVfibe1L0?si=msDQsgkZQ0esalwv_D-Ibg).
- Spotify. "Music for Every Mood." Twitter. Accessed March 10, 2020, <https://twitter.com/Spotify>.
- Spotify. "Neanderthal." Accessed March 5, 2020. [https://open.spotify.com/artist/7AV66Eu1XevhHitr3MEama?si=XQ5H\\_LzeRHafBQkhfX6ZHW](https://open.spotify.com/artist/7AV66Eu1XevhHitr3MEama?si=XQ5H_LzeRHafBQkhfX6ZHW).
- Spotify. "Nina Nesbitt." Accessed March 5, 2020. <https://open.spotify.com/artist/7AzjETXRUKNRSJHmw9GIqd?si=ttSJieS5TpGGjf5GJk1ZBw>.
- Spotify. "Zola Jesus." Accessed March 5, 2020. [https://open.spotify.com/artist/78OKNrrjc3BvniYTqvpOp6P?si=By0nT3\\_1SN68CKmEX2BZQw](https://open.spotify.com/artist/78OKNrrjc3BvniYTqvpOp6P?si=By0nT3_1SN68CKmEX2BZQw).
- Spotify Newsroom. "Spotify Wrapped 2019 Reveals Your Streaming Trends, from 2010 to Now," December 2019. <https://newsroom.spotify.com/2019-12-05/spotify-wrapped-2019-reveals-your-streaming-trends-from-2010-to-now/>.
- Spotify. "Shareholder Letter Q4-2019," Spotify Financials, February 5, 2020. <https://investors.spotify.com/financials/default.aspx>.
- Srnicek, Nick. *Platform Capitalism*. Cambridge: Polity, 2017.
- Stars. "here's our spotify wrap." Twitter. December 6, 2019. <https://twitter.com/youarestars/status/1202993367887400961>.
- Sterne, Jonathan. "Sounds like the Mall of America: Programmed Music and the Architectonics of Commercial Space." *Ethnomusicology* 41 no. 1 (Winter 1997): 22-50. <https://jstor.org/stable/852577>.



- Stewart, Rebecca. "Spotify Hits 140 Million Monthly Users as It Notes 'Explosive' Growth of Automated Audio Ads," *The Drum*, June 15, 2017.  
<https://www.thedrum.com/news/2017/06/15/spotify-hits-140-million-monthly-users-it-notes-explosive-growth-automated-audio-ads>.
- Stutz, Colin. "Spotify Gifts Artists With '2017 Wrapped' Year-End Data. Billboard," December 13, 2017.  
<https://www.billboard.com/articles/business/8070349/spotify-artists-2017-wrapped-year-end-data>.
- Trakin, Roy, and Jem Aswad. "Spotify Denies Creating 'Fake Artists,' Although Multiple Sources Claim the Practice Is Real," *Variety*, July 11, 2017.  
<https://variety.com/2017/biz/news/spotify-denies-creating-fake-artists-although-multiple-sources-claim-the-practice-is-real-1202492307/>.
- Tranter, Justin. "Without songs." Instagram, March 7, 2019.  
<https://www.instagram.com/p/Buu6JEXlleB/>.
- Turner, David. "How Musicians Fought, and Won, Against Big Business." *Penny Fractions Newsletter*. December 11, 2019.
- Turner, David. "Spotify's Perfectly Calculated 'Wrapped' Campaigns." *Penny Fractions Newsletter*. November 20, 2019.
- Ugwu, Reggie. "Selena Gomez's 'Good For You' And The Rise Of 'Indie Pop Voice'" *BuzzFeed News*, October 6, 2015.  
<https://www.buzzfeednews.com/article/reggieugwu/what-is-indie-pop-voice>.
- Vines, Bradley W., Regina L. Nuzzo, and Daniel J. Levitin. "Analyzing Temporal Dynamics in Music," *Music Perception: An Interdisciplinary Journal* 23 no.2 (December 2005): 137-152. <https://doi.org/10.1525/mp.2005.23.137>.
- Vlessing, Ethan. "Warner Music Group Sells Spotify Stake for \$504M," *Hollywood Reporter* August 07, 2018. <https://www.hollywoodreporter.com/news/warner-music-group-sells-spotify-stake-504m-1132692>.
- Vonderau, Patrick. "The Spotify Effect: Digital Distribution and Financial Growth." *Television and New Media* 21 no. 1 (2019): 3-19.  
<http://doi.org/10.1177/1527476417741200>.
- Watson, Amy. "Music Streaming Market Share," *Statistica*, December 9, 2019.  
<https://www.statista.com/statistics/653926/music-streaming-service-subscriber-share/>.
- Weiss, Haley. "Why People Love Spotify's Annual Wrap-Ups," *The Atlantic*, December 13, 2018. <https://www.theatlantic.com/technology/archive/2018/12/spotify-wrapped-and-data-collection/577930/>.
- Witt, Stephen. "Spotify Is, For Now, The World's Most Valuable Music Company," *NPR*, April 4, 2018.  
<https://www.npr.org/sections/therecord/2018/04/04/599385111/spotify-is-for-now-the-worlds-most-valuable-music-company>.
- Wolfson, Sam. "'We've got more money swirling around': how streaming saved the music industry," *The Guardian*, April 24, 2018.

<https://www.theguardian.com/music/2018/apr/24/weve-got-more-money-swirling-around-how-streaming-saved-the-music-industry>.

Wong, Julia Carrie. “The Cambridge Analytica Scandal Changed the World – But It Didn't Change Facebook,” *The Guardian*, March 18, 2019.

<https://www.theguardian.com/technology/2019/mar/17/the-cambridge-analytica-scandal-changed-the-world-but-it-didnt-change-facebook>.

Webby Awards “Your 2017 Wrapped,” Winners. Accessed March 2020.

<https://www.webbyawards.com/winners/2018/advertising-media-pr/craft/best-user-experience/your-2017-wrapped/>.

Zola Jesus. “On AI and Silicon Fascist Privilege,” Patreon, November 24, 2019.

<https://www.patreon.com/posts/31828469>.

Zola Jesus. “not gonna post spotify.” Twitter, December 7, 2018.

<https://twitter.com/zolajesus/status/1071124589604937728?s=12>. [since deleted].

Zola Jesus. “according to this calculator.” Twitter, December 5, 2019.

<https://twitter.com/zolajesus/>. [since deleted].

Zola Jesus. “streaming services are extortion,” Twitter, January 29, 2020.

<https://twitter.com/ZOLAJESUS/status/1222572662318301185>.

Zola Jesus. “thanking spotify.” Twitter, March 1, 2020.

<https://twitter.com/ZOLAJESUS/status/1234164991261126662>.

Zola Jesus. “very grateful + honored.” Twitter, December 6, 2019.

<https://twitter.com/zolajesus/>. [since deleted].

Zola Jesus. “I’m a millimeter away.” Twitter, March 1, 2020.

<https://twitter.com/ZOLAJESUS/status/1234123852902522880>.

Zuboff, Shoshana. *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power*. New York: PublicAffairs, 2019.

## Appendix

### Appendix A: Additional data collection methodology

The Echo Nest “listens to” and “measures” a song in many different categories, ten of which are available from Spot on Track.

First, it reads a song’s *tempo* in beats per minute. This is, more or less, a concrete measure of a song’s speed. However, it does not seem to always properly account for songs with a “half-time” or “double-time” feel and, thus, some songs that “feel” slow to the listener can have surprisingly high BPM readings. This data allowed me to calculate and compare average tempos for each mood.

Next, Echo Nest reads the letter name of the song’s key - A, A#, B, C, C#... through G#. This should be another somewhat concrete measurement, though there could be some musicological dispute on songs with related major/minor modulations in different sections (common in pop songs), or key changes. It also only reads “sharp keys” which would fuel some musicological dispute. I did not find any particularly intriguing application for this data. Paired with the song’s key, Echo Nest reads its “mode” as either major or minor. As with “reading” the song’s key, there is room for subjective interpretation in analysis of a song’s mode, though within these mood-based playlists, the major/minor binary is mostly accurate and effective. This allowed me to calculate the average number of songs in a major or minor key in each iteration of the playlist and for each overall mood. Tempo, key, and mode are the extent of the traditional musical measurements that Spot on Track provides for a song’s metadata.

The remaining measurements are categories devised by Echo Nest and become increasingly opaque. Given that the categories are constructed by Echo Nest itself, it

makes the most sense to define them in the company's own terms. From Spotify for Developers (the company's website for those accessing its application programming interface or API):<sup>1</sup>

- ***Danceability***: “Danceability describes how suitable a track is for dancing based on a combination of musical elements including tempo, rhythm stability, beat strength, and overall regularity.”
- ***Valence***: “A measure from 0.0 to 1.0 describing the musical positiveness conveyed by a track. Tracks with high valence sound more positive (e.g. happy, cheerful, euphoric), while tracks with low valence sound more negative (e.g. sad, depressed, angry).”
- ***Energy***: “Energy is a measure from 0.0 to 1.0 and represents a perceptual measure of intensity and activity. Typically, energetic tracks feel fast, loud, and noisy. For example, death metal has high energy, while a Bach prelude scores low on the scale. Perceptual features contributing to this attribute include dynamic range, perceived loudness, timbre, onset rate, and general entropy.”
- ***Acousticness***: “A confidence measure from 0.0 to 1.0 of whether the track is acoustic. 1.0 represents high confidence the track is acoustic.”
- ***Instrumentalness***: “Predicts whether a track contains no vocals. “Ooh” and “aah” sounds are treated as instrumental in this context. Rap or spoken word tracks are clearly “vocal”. The closer the instrumentalness value is to 1.0, the greater likelihood the track contains no vocal content. Values above 0.5 are intended to

---

1. “Get Audio Features for a Track,” Spotify for Developers, accessed March 14, 2020, <https://developer.spotify.com/documentation/web-api/reference/tracks/get-audio-features/>.

represent instrumental tracks, but confidence is higher as the value approaches 1.0.”

- ***Liveness***: “Detects the presence of an audience in the recording. Higher liveness values represent an increased probability that the track was performed live. A value above 0.8 provides strong likelihood that the track is live.”
- ***Speechiness***: “Speechiness detects the presence of spoken words in a track. The more exclusively speech-like the recording (e.g. talk show, audio book, poetry), the closer to 1.0 the attribute value. Values above 0.66 describe tracks that are probably made entirely of spoken words. Values between 0.33 and 0.66 describe tracks that may contain both music and speech, either in sections or layered, including such cases as rap music. Values below 0.33 most likely represent music and other non-speech-like tracks.”

**Note:** Spot on Track displays scores as a percentage rather than from 0.0 to 1.0 and my data reflects its adaptation.

Spotify for Developers calls tempo, danceability, energy, and valence measurements of “mood;” speechiness and instrumentalness measurements of “properties;” and liveness and acousticness measurements of “context.” The Echo Nest additionally collects data on “loudness,” (a property) “duration” in milliseconds, and “time signature” (which it calls “segments”),<sup>2</sup> but Spot on Track does not tabulate these, so I was not able to take them into consideration. Additional data I was able to collect from Spot On Track includes the record label a song was released on—which I sub-

---

2. “Discover Spotify’s Features,” Spotify for Developers, Accessed March 3, 2020, <https://developer.spotify.com/discover/>.

categorized into four classifications (major, prominent independent label, small independent label, and no label)—and release date, which allowed me to calculate measurement of “song age.” I use the final two calculations sparingly.

In analysing the data collected from mood playlists, I have adapted a simplified version of the methodology introduced by Noah Askin and Michael Mauskapf’s 2017 article “What Makes Popular Culture Popular? Product Features and Optimal Differentiation in Music” to help decipher what Spotify’s listening machine “hears” in happy, chill, or sad music and to attempt to analyze what makes a song fit or thrive on a mood-based playlist. Askin and Mauskapf use their methodology to analyze and retroactively score the likelihood of Billboard chart success based on levels of “optimal differentiation.”

Following their framework, I subjected the data I collected from mood-based playlists to the following process:

1. For each playlist sample I calculated the average rating of all seven Echo Nest Audio Features (bpm, danceability, valence, energy, acousticness, liveness, and speechiness).
2. I tabulated each song’s difference or “variance” from the average in every unique column. For example: *The average tempo for “Chill Vibes” from August 1, 2017 was 111.96 and the first song on the list “Homegrown” by Haux and Empty Woods has a tempo of 120. Its variance in tempo is 8.04.*
3. I calculated each song’s “total variance” by adding together the variance from the average in each category. *“Homegrown” has a variance of 8.04 in Tempo, 22.62 in Danceability, 2.08 in Valence, 2.36 in Energy, 31.63 in Acousticness, 73.12 in*

*Instrumentalness, 4.15 in Liveness, and 3.78 in Speechiness, for a “total variance” of 147.79.*

4. The average of the “total variance” column represents the playlist’s version of what Askin and Mauskapf call “optimal differentiation;” the playlist’s preferred balance of sameness and variation as represented by “Audio Features.” *The average total variance, or “optimal differentiation” for Chill Vibes August 2017 is 111.40.*
5. I take the notion of “optimal differentiation” one step further to determine each song’s “suitability” for the mood playlist. I calculate the *difference from the “optimal differentiation”* which yields what I see to be a quantified indication of each song’s “playlist suitability.” The lower the Playlist Suitability score, the closer it is to the ideal level of “optimal differentiation” for the playlist, and therefore, most suitable. *“Homegrown” had a Playlist Suitability of 36.38. The average score for the playlist was 27.91, so it was slightly “less suitable” than the average song in this iteration.*
6. I then compiled five iterations of each playlist and subjected the songs to the above calculations in order to construct the six mood sets to which I refer in chapters three and four.

## Curriculum Vitae

**Name:** Terrance Andrew Braun

**Post-secondary Education and Degrees:** Southwestern Community College School for Music Vocations  
Creston, Iowa, United States  
2001-2003 Associate of Applied Arts

Capilano University  
North Vancouver, British Columbia, Canada  
2004-2008 BMus in Jazz Composition

Western University  
London, Ontario, Canada  
2018-2020 MA Popular Music and Culture (Pending)

**Honours and Awards:** Province of Ontario Graduate Scholarship  
2019-2020 (awarded not accepted)

Social Science and Humanities Research Council (SSHRC)  
Canada Graduate Scholarship  
2019-2020

**Conference Presentations** IASPM Canada 2020 – Cape Breton University (postponed)

CultCom 2020 – McMaster University (postponed)

IASPM Canada 2019 – University of Montreal

**Related Work Experience** Teaching Assistant  
Western University  
2018-2020

Composer, Songwriter, Producer, Touring Musician  
North Vancouver, BC  
2008-current

Recording Artist  
North Vancouver, BC  
2009-2019