The editorial playlist as container technology: on Spotify and the logistical role of digital music packages

Maria Eriksson

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Maria Eriksson

Department of Culture and Media Studies & Humlab, Umeå University, Umeå, Sweden

ABSTRACT

This article explores the role of editorial playlists in Spotify's streaming economy. In particular, it approaches Spotify's playlists as container technologies – i.e. technical solutions that assemble, preserve, and transport music objects and thereby uphold logistical operations within the music industry. Such an approach seeks to complement previous research concerning playlists, which has often analyzed their emotional and affective dimensions but paid less attention to how playlists enhance calculative, mathematical, and logistical retail flows within the online music economy. On the one hand, the article considers how playlists – like containers in general – materialize principles of modularization and automation in ways that enhance control and remote oversight. On the other hand, it discusses how the playlist is far from a perfected means of measurement and control, and sometimes acts as an unruly transport device. Ultimately, the article shows how the playlist format occupies an uneasy position between order and disorder within the digital music economy which has not yet been fully accounted for in the context of music-oriented media studies.

Introduction

Digital playlists have been used to organize collections of recorded sound since the 1990s and are now located at the heart of the financial growth of the streaming industry for music. Building on older practices of queuing tracks before they are broadcasted (as has long been the habit in radio broadcasts and cassette mixtaping for example), playlists were originally introduced to assist fans in the personal organization of musical archives (Drew 2005, Morris 2015). With time, however, they have also become increasingly important tools in driving online traffic. Most streaming services for music are now filled with editorial playlists that are either owned and operated by streaming services themselves or run by third-party brands or playlist businesses. One streaming platform which has especially invested in the development of commercially-driven playlist services is Spotify – currently the world's largest streaming services for music with over 108 million paying monthly subscribers (Spotify 2019a). Since 2013, Spotify has taken several decisive steps towards the establishment of a 'lean-back' customer experience where users are encouraged to consume editorial playlists rather than actively browsing for tracks (Eriksson et al. 2019, p. 19). As a result of these efforts – which have equally involved the re-design of user interfaces and heavy investments in AI-powered music recommendation systems – Spotify recently described their editorial playlists as the 'driving force

CONTACT Maria Eriksson ✉ Maria.c.eriksson@umu.se 🖂 Department of Culture and Media Studies & Humlab, Umeå University, Humanisthuset, Biblioteksgränd 3, Umeå universitet, 901 87 Umeå, Sweden

behind music discovery and demand creation' on its platform (Spotify 2018a, p. 4). Furthermore, the company declared that its editorial playlists now account for roughly thirty percent of its total streams (ibid.). As streaming services work hard to capture and retain the attention of online listeners and distinguish themselves from their competitors, the editorial playlist has become a key instrument in shaping online listening.

The increased influence of editorial playlists calls for a deeper understanding of their role within online markets for music. By analyzing corporate statements, press releases, news reports, product descriptions, and public responses to editorial playlists,[1] I explore the function of pre-packaged playlists within Spotify's streaming economy. In particular, the article contributes to scholarly debates about the role of music-oriented software technologies by locating Spotify's editorial playlists within a longer history of industrial (and musical) commodity transportation. This perspective complements previous research regarding playlists, which has frequently focused on the affective dimensions of playlists and their ways of mobilizing identities and emotions (Hagen 2015, Eriksson and Johansson 2017, Prey 2019, Siles et al. 2019) but tended to overlook their basic role in facilitating the movement sound. Playlists, I argue, should not just be understood as vehicles of identity-making, but also rigid logistical devices that regulate flows of goods and services. Rather than exploring how editorial playlists shape or express identities, the article therefore highlights their infrastructural and logistical role.

Spotify's descriptions of playlists can be used as an entryway for approaching and rethinking what editorial playlists do within online markets for music. While Spotify has framed their curated playlists in many different ways (as a 'personalized ecosystem' and 'discovery tool,' for example), I specifically address Spotify's description of playlists as a type of 'wrappings' or 'containers' for tracks.[2] This description is re-iterated throughout the Spotify platform and especially appears in information that explains how Spotify works to users and software developers (e.g. Spotify 2018b). It is also a description that encompasses a much longer history of conceptualizing sound technologies as a type of packages for music. Already in the late nineteenth century, the composer John Philip Sousa made the famous remark that phonograph recordings were 'canned music'; a standpoint that reveals how cultural imaginaries of containment and preservation have long shaped perceptions of recorded sound (Sterne 2003, p. 292). In an effort to take these descriptions seriously, I ask what a consideration of playlists alongside other types of containers – urns, boxes, packages – could teach us about the role of playlists in Spotify's music economy. What does an editorial playlist and a container, such as a carton box, have in common? And how do editorial playlists relate to the musical containers that came before them?

While drawing parallels between playlists and other types of containers (boxes, bottles, etc.) may seem far-fetched, a container perspective provides an opportunity to locate playlists within a longer history of logistics management; that is, as part of efforts to manage the 'mobility of people and things to achieve economic, communication, and transport efficiencies' (Neilson 2012, p. 322). Even though the editorial playlist may seem firmly rooted in the digital era, a container approach helps reveal how its role within markets is, in fact, ancient. Just like traditional commercial containers (such as freight vessels or standardized food wrappings) have provided a consistent means of commodity shipment and facilitated new and financially-driven forms of transport optimization, so does the playlist as container make distributive practices around music uniform, measurable, and thereby more financially valuable. My strategy of approaching the playlist as a container technology, then, represents an effort to describe and make sense of playlists with the help of a much older and more familiar set of concepts: commercial boxes, vessels, and packages.

To pursue this goal, I borrow theories and insights from research into container technologies and systems (Sofia 2000, Sterne 2012, Klose 2015), as well as studies into logistical processes and operations (Rossiter 2016, Chua et al. 2018). In particular, I adhere to a growing field of critical research into logistics that not only emphasizes the tendency for container technologies to streamline, rationalize, and successfully increase extractions of value in commodity chains, but also points towards their inclination to cause unsettlement and disruption (e.g. Chua et al. 2018). Here, the propensity

for containers to cause safety hazards (Klose 2015), gives rise to extensive networks of smuggling and illicit trade (Greenland 2018), and to instigate choke-points and blockages has for example been highlighted (Alimahomed-Wilson and Ness 2018). In line with this field of research, I account for the dual role of the editorial playlist as a container technology; that is, its ways of facilitating both logistical order *and* disorder. If the editorial playlist can be conceptualized as a container for tracks that upholds logistical operations within the online music industries, then a study of playlists must not only consider how they *succeed* in optimizing the transportation and delivery of music. Simultaneously, it must also account for how playlists sometimes cause logistical disturbances. The two final sections in this article therefore consider how the playlist occupies an uneasy position between logistical control, transparency, and oversight on the one hand – and trickery, fraud, and manipulation on the other. This dual role of editorial playlists has not yet been fully accounted for in the context of music-oriented media studies.

The playlist as container technology

What is a container technology? And how does Spotify's ways of containing music in editorial playlists relate to the musical containers that came before them? At their core, container technologies are designed to assemble and hold things in place. Containers compile, protect, and facilitate the gathering of things (Sofia 2000). They are also responsible for ensuring supply, as containers keep content on stand-by and regulate how it can be accessed (ibid.). Objects such as urns, jugs, and baskets, for example, constitute precursors to modern container technologies and have long aided humans in their efforts to store, retrieve, and most importantly move valuable objects. While some trace the appearance of specialized transport containers back to the appearance of urban, agrarian, and bureaucratic societies in Mesopotamia and Egypt (Bevan 2014), others describe the Roman amphorae as one of the first modern commercial containers, since it provided as a standardized means of commodity transport that was not limited to a locality or region (Klose 2015). Serving as mundane yet significant keystones in the history of human life, commercial container technologies testify to the centrality of commodity circulation in human culture and speak of intensified systems of trade and consumption.

Today, containers do not just exist in an analog form – they also come in the shape of zeroes and ones as software systems are designed to gather and hold digital goods and information in place. Indeed, programed containers constitute one of the most fundamental elements in computer programing. Here, the creation of a container generally refers to the process of writing code that assembles data into manageable packages that are easy to store, monitor, and transport (e.g. Mehta and Sahni 2018). Unlike its analog relatives, a programmed container does not enclose a hollowed space but instead consists of algorithms and binary numbers that give software the ability to contain data (commonly as lists or arrays). This means that the capacity for programmed containers to hold and transport items is rooted in abstract rules and functional definitions, rather than graspable physical shapes, such as the void in an amphora. Just like their analog ancestors, however, programmed containers are built to optimize the transportation of goods and information. By standardizing the arrangement of digital objects and creating a basis from which distributive practices can be made more efficient, programmed containers assist in heightening the speed, value, and quantity of goods that can be transported across networks.

These tasks are essentially logistical – i.e. part of a wider set of commercial practices and techniques that are concerned with the organized movement of people, commodities, and information in the interest of increasing profit (Rossiter 2016). At its core, logistics can be described as 'a calculative rationality' that is aimed at facilitating and rationalizing the circulation of goods and capital (Chua et al. 2018, p. 618). Standardized commercial containers have played a key role in the development of logistical operations as they reduce transportation costs by rationalizing the size and weight of packages. They also facilitate statistical oversight over the movement of goods. For example, freight containers revolutionized modern trade in the mid-twentieth century by

establishing a uniform method of distribution that was interoperable across global markets and open to detailed monitoring and financial comparisons (Klose 2015). In similar ways, programmed containers facilitate online mobility by creating a uniform wrapping for digital cargo.

As Spotify suggests, the playlist is one example of a programmed container. The MP3 file is another (Sterne 2012). Both playlists and MP3's files are designed to contain music data, yet while an MP3 captures and stores actual audio content, a playlist that is found online does not commonly carry any music in itself. As Jörgen Skågeby once put it, playlists are tools for circulating 'meta-information about a sequence of selected songs' (Skågeby 2011). Instead of holding actual audio content in place, playlists contain information that points to music which is located elsewhere on local or remote servers. Furthermore, they take part in organizing how such data can be handled and retrieved. In the particular case of Spotify's playlists, audio content may be pulled from a wide range of global storage locations when content is streamed (Eriksson 2018). In administrating how such retrievals of data take place, playlists contain music in ways that take full advantage of the ability for digital technologies to coordinate and arrange communication across networks. By carrying metadata instead of heavy sound files, the playlist encompasses a logic of compression (Sterne 2003, 2012); i.e. a strategy for improving storage and transportation capacities by reducing the amount of information that needs to be kept within a container. Playlists are light – they keep content on constant stand-by.

In the context of music, however, the playlist is certainly not the first technology that has been designed to hold music in place and facilitate its movement. The history of the containment of melodies and rhythms can be traced back to the very first efforts to store and 'capture' sound (Katz 2010). Written musical notations, for example, constitute a type of containers in the sense that they *hold* and preserve music, thereby making it transportable across space and time. While scattered evidence of musical notations can be traced back to the Byzantine era, an 11th-century Italian Benedictine monk known as Guido d'Arezzo is generally credited for having invented the first standardized and wide-spread system of written musical notations (Taruskin 2005). Inscribed on pieces of parchment or paper, d'Arezzo's notations captured and conveyed melodies and rhythms to unfamiliar ears and thus encapsulated music in ways that did not depend on live performances. In doing so, standardized written musical notations – that followed to a consistent form and semantics – also played a key role in reifying and turning music into a commodity to be bought and sold. By the early twentieth century, the sale of printed sheet music was booming in the U.S. and Britain and marked the beginning of the music industries as we know them today (Johns 2009). Sheet music constituted one of the first standardized musical containers that prompted an industrialized trade in music objects.

Since the invention of standardized and mass-produced written musical notations, virtually all sound recordings – from wax cylinders and gramophone records, to cassette tapes and compact discs – can be described as container technologies that serve to hold music in place and facilitate its movement within markets. Each of these musical containers has brought with them specific material affordances that have affected the ability for music to move and markets to develop. For instance, early sound recordings made of beeswax ran the risk of melting if exposed to heat, while early vulcanite rubber records were sensitive to twists and bends (Devine 2015). This affected the pricing of music, as well as the ease with which recorded sounds were distributed, bought, and sold. In the late nineteenth century, for instance, wax cylinders could only be played about three times until they broke. They also had to be wrapped in cotton and were kept in special round boxes. Even though the durability of wax cylinders improved with time, they remained delicate and had to be treated with care. Hence, the sale of recorded music did not fully pick up speed until the introduction of gramophone discs that could hold more music, took up less storage space, and were less sensitive to damage (Gronow 1983). In short, the material constitution of musical containers has played a key role in the development of the music industries. Containers are not passive devices that simply hold objects in place, but entities that carry the capacity to shape and transform markets (Sofia 2000).

This is also true for playlists which, in many ways, are materially, technically, and economically superior to earlier forms of musical packages. Thanks to its digital format, a playlist can be produced, updated, and distributed in next to real-time. This gives actors such as Spotify the possibility to facilitate the production of hundreds of thousands of playlists at very low cost – and sometimes by automated and algorithmically governed means. Seen from the historical perspective of musical containment, the playlist has revolutionized the ability to contain music and greatly expanded the speed and ease with which music collections can be assembled and distributed. For instance, consider Spotify's editorial and algorithmically generated 'Discover Weekly' playlist, which has been delivered in a personalized form to Spotify users every Monday since 2015. Given that Spotify currently has over 232 million active monthly users (including both premium and non-paying customers), this implies that over 230 million unique versions of the 'Discover Weekly' playlist are produced and delivered across the earth *each week* (Spotify 2019a). Indeed, editorial playlists have been described as factory outputs that push the industrial production of commercial musical assemblages to new levels (Ugwu 2016).

Spotify's editorial playlist as calculative device

Spotify started promoting editorial playlists in 2013, shortly after it acquired the music-discovery startup Tunigo – a business that specialized in the production of themed playlists (Dredge 2013). As opposed to merely providing customers with an empty search box and access to a vast music archive (as Spotify had done since 2006), its investment in editorial playlist services formed part of a broader shift where Spotify started to actively promote selected music to users (Eriksson et al. 2019). On the one hand, editorial playlists were described as a feature that would assist users in need of musical guidance. On the other, they provided an efficient means to put more power in the hands of Spotify. Like most streaming services, Spotify does not own the rights to any music, but editorial playlists offer a strategically important influence over music consumption. Hence, playlists were also placed at the center of Spotify's move towards becoming a full-fledged music recommendation service from 2013 and onwards. By 2016, Spotify claimed that it had produced over 4,500 editorial playlists which collectively generated one billion streams per month (Spotify 2016). With tens of millions of followers, Spotify's editorial playlists now reach a broader audience than most radio stations – even in large markets such as the U.S. It therefore comes as no surprise that Spotify currently describes its editorial playlists as its 'top real estate' (e.g. Spotify 2019b) and continuously imposes new measures to expand their reach and influence.

Given to the obvious centralization of power that editorial playlists provide (as compared to users freely deciding what music to play), Spotify has historically worked hard to present its playlists as intimate, neutral, and dependable containers. By wrapping playlists in casual and approachable language and visual art (as displayed in titles such as 'Songs to Sing in the Shower' and images of singing bathers wearing shower caps), editorial playlists borrow from the nostalgic, personal, eclectic, and quirky tropes of earlier music packages – such as mixtapes – and capitalize on their personal and homemade feel (Drew 2005). Spotify's description of playlists as a type of containers also evokes images of 'frictionless, well-ordered organization' as the container metaphor brings forth notions of neutral and efficient movements of goods and information (Klose 2015, p. 76). In the context of describing how editorial playlists are produced (which most commonly occurs through a mix of human and algorithmic curation), Spotify employees have also emphasized the need for 'building trust' (Heath 2015) and creating 'a place of safe discovery' that is untainted by fakeness and dishonesty (Spotify 2019c). In particular, Spotify's algorithmically generated editorial playlists have been described as transparency vehicles that introduce a democratic means of promoting music, since algorithms (rather than humans) are involved in deciding what music is endorsed. For instance, Spotify has argued that getting featured on its editorial playlists is 'as simple as making sure your music is on Spotify,' and stressed that its algorithmic music recommendation system 'recommends

artists of all sizes' (Spotify 2016); thereby suggesting that its machine-generated editorial playlists are at once smooth, egalitarian, and non-discriminatory.

At the same time, however, there is no doubt that Spotify also uses editorial playlists as strategic financial tools. While editorial playlists have undoubtedly assisted many fans in their musical discoveries, they are also containers that carry with them a specific 'logic of resourcing and supply' (Sofia 2000, pp. 195–6). Arranged in the form of editorial playlists, tracks are subjected to specific rules that guide how they can be accessed and handled. In the mobile and ad-financed version of Spotify, for example, users are currently only allowed to skip six songs per hour when they listen to editorial playlists (Spotify 2019d). Up until recently, they also had to listen to all playlists in shuffle mode, meaning that Spotify kept tight control over the order in which music was played (ibid.). In this way, editorial playlists are used to enforce artificial material constraints on music collections – and not least push users towards becoming premium subscribers, who can skip and play music in whatever order they like.

From a business perspective, editorial playlists are also vital nodes in Spotify's strategies of gaining advertisement revenues; a source of income which currently gives Spotify a quarterly income of roughly €120 million (Spotify 2019e). By building editorial playlists according to moods and activities (such as 'Calm Vibes,' 'Life Sucks,' or 'Fun Run'), Spotify is setting the stage for behavioral marketing – an advertisement targeting strategy aimed at segmenting audiences based on their habits and emotional states (Peterson 2015). Here, editorial playlists form part of broader strategies of commodifying listener's emotional relationships to music (Morris and Powers 2015, Prey 2019). By allowing advertisers to reach audiences according to their mindsets, editorial playlists function as logistical devices that binds together listeners with advertisers and capital. If the playlist functions as a container for tracks, it can thereby be described as a 'commercial *skin*' or package that both contains goods and connects them to market transactions (Hawkins 2018, p. 388). Spotify's editorial playlists do not just resource and supply music content, they also transform listeners into a resource whose attention can be bought, sold, and supplied on a market.

Importantly, one of the key characteristics of Spotify's playlists is also that they stabilize and combine music objects in ways that make them – and their listeners – ripe for calculation, comparisons, and data extraction. Spotify's playlists do not simply hold data in place – several calculative operations are continuously triggered within and around them. Each Spotify playlist is assigned a unique identification number that makes it – and whatever happens to its content – traceable and trackable (Spotify 2018b). Editorial playlists are designed to be worked upon by algorithms and the interactions that occur within them are constantly quantified in terms of clicks, follows, skips, saves, and likes. In this sense, editorial playlists are dynamic containers whose cargo is continuously measured and analyzed – often with predictive results in mind. Spotify's editorial playlists are increasingly used as a type of crystal balls that can help discern everything from the next big hit, to the decline and demise of popular music. For instance, Nick Holmsten – formerly Spotify's head of shows and editorial – once claimed that by digging into playlist data, he can predict which song will be a hit in half a year's time (Pierce 2017).

In interviews and reports from within the music industries, playlists have also been described as sites of calculative experimentation (Ugwu 2016, Cowan 2017, Marks 2017, Pierce 2017, Nelson 2018, Iqbal 2019). Here, the editorial playlist is not only presented as a stable, trustworthy, and neutral container for tracks, but also used as a space for experimenting with music collections. In particular, Spotify has been known to use its editorial playlists to conduct various forms of controlled A/B testing. Such tests involve trying out new musical combinations on selected subsets of users to study their response and adjust the cargo of playlists accordingly. A/B testing is certainly not unique to Spotify (most online services use it to test new updates and features), yet few have made a habit of publicly promoting their use of A/B tests as a way to actively and repeatedly test hypotheses regarding the taste and habits of audiences. In a recent Vulture interview, for example, Tuma Basa – global programming head of hip-hop at Spotify – described how his curation of over 30 of Spotify's most popular hip-hop playlists is guided by a combination of 'gut' and detailed data calculations and

experimentations (Marks 2017). Another Spotify employee has described the perfect editorial playlist as being assembled by a 'human curator armed with data and tools' (Flanagan 2017). More specifically, Spotify has been known to use a software tool called PUMA (an acronym for Playlist Usage Monitoring and Analysis) to evaluate the accomplishments of individual tracks on its editorial playlists (Ugwu 2016). Based on the forms of analysis such tools provide, Spotify has also experimented with giving songs exposure on playlists in different national contexts, carefully measuring how well they perform. According to Spotify, hits such as Starley Hope's *Call on Me* exploded globally as a result of such experimentations, reaching two million daily plays during the peak of its popularity (Flanagan 2017).

By facilitating 'performance tests' and the broader study of 'playlist metrics' (Marks 2017), editorial playlists extend traditional efforts to experiment with – and evaluate – the success and failure of transport operations. Similar types of tests and experimentations have also been key to the broader development of logistical operations. In the 1950s, for example, container logistics was revolutionized as logistics experts started to conduct systematic market experimentations (Klose 2015, pp. 209–211). Such experiments involved developing complex simulation models that included hundreds of goods and travel routes, all to assess the potential economic outcomes of different logistical arrangements. In similar ways, Spotify uses editorial playlists as a space to experiment with, measure, and test the success of music deliveries and collections. Here, tracks and artists are positioned as building blocks that can be rearranged and exchanged for one another in the interest of finding the most 'optimized' model of musical delivery. 'Optimized,' in this context, means scoring well on the standardized criteria that Spotify values (number of clicks, follows, skips, etc.).

Spotify's experimental and calculative treatment of editorial playlists can be understood as an effort to predict, pre-empt, and mitigate logistical vulnerabilities (Cowen 2011). An editorial playlist is a tool for transporting, promoting, and delivering pre-packaged music to audiences and a playlist that nobody appreciates is utterly useless to Spotify. Spotify's constant experimentations with playlists – where the 'success' of tracks is carefully monitored and evaluated – can be understood as a strategy for minimizing the risk of delivering playlists that nobody likes. Spotify's ongoing experiments with editorial playlists can also be understood as a strategic means of tending to relationships within the wider music industries, since control over editorial playlists gives Spotify leverage and bargaining power in negotiations with rights holders. Editorial playlists are tools of power whereby Spotify can deny – or adhere to – critique coming from the music industries, thereby adjusting its corporate image and relations. In March 2019, for example, Spotify did precisely such a thing when it announced that it would expand the number of editorial playlists that are assembled by algorithms (Spotify 2019f). This change was publicly presented as an effort to cater to the requests of independent musicians, who have long called for more diversity in Spotify's editorial playlists. Legitimized by Spotify's internal research – which had shown that algorithmically generated playlists 'increase the number of artists featured on playlists by 30% and the number of songs listeners are discovering by 35%' (ibid.) – the decision to automate a wider range of editorial playlists was promoted as an inclusive and equal playlist reform. Simultaneously, the incident also revealed how Spotify uses editorial playlists as levers for adjusting how major and independent artists are promoted and made visible on the platform.

By enabling wide-ranging calculative practices, then, playlists position music and listeners as unlocked treasures and resources that can be subjected to tests and experiments. Here, tracks are put under careful mathematical scrutiny and measurement, whether it is done in the interest of predicting musical futures, optimizing musical deliveries, or attracting advertisers. Playlists assist in ordering, ranking, and quantifying music and listeners and in doing so, also make recorded sounds commensurable: i.e. measurable according to the same standards. As with all efforts to statistically compare goods and objects, this inevitably involves reducing them to a series of easily identifiable and quantifiable criteria. The playlist as container works as a facilitator of 'circulation that smooths differences, create connections amid separation, and treat unequal things identically' (Klose 2015, pp. 99–100); it flattens disparities between sound recordings and exposes all recorded music to

the same forms of measurements and evaluations. Here, what matters is not necessarily the individual qualities of individual tracks, but rather their serial and cumulative value (the clicks, follows, and skips they trigger). Editorial playlists also function as logistical devices that assist in arranging people (Spotify listeners, artists) and things (tracks, metadata) in space and time by upholding rules regarding how music can be accessed and used. Moreover, they enhance logistical control, increase the ability to monitor listening practices, and assist in optimizing what Spotify considers to be the most efficient ways of delivering recorded music.

Opacity and the uncanny in editorial playlists

An increased means of control and calculation is not the only thing that editorial playlists bring with them, however – at least not for everyone. Rather than serving as a perfected means of control and calculation, the container logistics of playlists sometime display wild tendencies. This is also true for container technologies writ large. While the introduction of standardized commercial containers have historically produced a 'sense of mastery' over markets and transport operations (Harris 2016), the fact remains that most containers are opaque and function as black boxes: from the outside, it is often difficult to discern how, when, and by whom their cargo has been assembled. In the context of global trade, the capacity of containers to *safely contain according to plan* is increasingly also questioned as a result of accidents (Klose 2015), criminal activities (Greenland 2018), and congestion problems (Alimahomed-Wilson and Ness 2018). Similar tendencies are also apparent within music distribution. Unruliness and messiness have frequently surrounded Spotify's editorial playlists, which highlights the dual role of playlists in containing sound.

Despite Spotify's repeated efforts to present editorial playlists as neutral, trustworthy, and safe carriers of tracks, a series of unsettling news concerning their integrity and containment abilities rose to the surface in the years between 2015 and 2018. These incidents problematize the perception of the editorial playlist as a smooth and transparent container for music and reveal how editorial playlists are also sites of circulatory struggle and conflict. In 2015, for example, the music industry analysis company Music:)ally released a report concerning a bourgeoning industry centered on 'playlist pitching' which involved artists and rightsholders paying their way to placements on popular playlists (Music:)ally 2015). Evoking earlier controversies around payola – the process by which artists and rightsholders have historically been found to pay their way to radio airtime (Segrave 1994) – the issue of playlist pitching awakened longstanding worries about music industry corruption. For instance, a leading major-label marketing executive told journalists at *Billboard* that 'pay for play is definitely happening' on streaming platforms and disclosed that playlists themselves are sometimes also bought and sold (Peoples 2015). Currently, Spotify's Terms and Conditions of Use explicitly forbid offering or accepting any compensation to put music on playlists (ibid.), yet an entire market for playlist promotions has developed in the recent years, with music aggregators and marketing businesses offering playlist 'consultancy' services to artists (Jenkins 2018). Major label employees who specialize in dealing with Spotify have also reported that even though money might not be directly changing hands, Spotify is collaborating closely with major labels regarding their editorial playlists – the deal often being that if Spotify puts an artist on an editorial playlist, that same artist helps promote and drive traffic to Spotify (Pelly 2017). In January 2018, 80 percent of the songs on Spotify's editorial playlist 'RapCaviar' and 70 percent of the tracks on the editorial playlist 'A-List: Hip-Hop' were found to belong to either Sony Records, Universal Music Group, or Warner Music Group (Nelson 2018) – cumbersome statistics which suggest that Spotify's editorial playlists favor major label artists.

In the same year, journalists also reported that for several months, Spotify appeared to have been scammed by a Bulgarian bot network (Ingham 2018). First spotted by a major labor executive in late September 2017, evidence indicated that thousands of Spotify premium accounts had been manipulated to play selected playlists on repeat. In particular, two third-party editorial playlists – 'Soulful Music' and 'Music From The Heart' – were placed at the center of the

potential scam. Seemingly from out of nowhere, both of these playlists had suddenly skyrocketed on Spotify's global charts for popular playlists and thus been ensnared in the platform's automatic system for promoting playlists. Fueled by the news that Spotify's competitor Tidal had been manipulating plays at scale and was found guilty of having turned a significant amount of its customers (including a principal living outside of Seattle, a chef from Minneapolis, a 29-year old Norwegian student, and an Australian rally-driver) into unwarranted fans of either Beyoncé or Kanye West (Johnsen and Franke 2018, Tobiassen and Sæter 2018), reports concerning Spotify bot scams raised questions regarding potential streaming fraud and the capacity for Spotify to protect the integrity of its users.

Yet one incident especially caused worries about the capacity for Spotify's editorial playlist's to safely contain. In 2016, reporters at *Music Business Worldwide* discovered a large amount of suspect tracks in some of Spotify's most popular editorial playlists having hundreds of thousands, and in some cases millions of plays (Ingham 2016). What was suspicious about these tracks was that the artists behind them were completely unknown, despite having attracted large amounts of plays. For instance, the editorial playlist 'Piano & Chill' was found to contain tracks by artists named Charlie Key, Ana Olgica, Otto Wahl, Piotr Miteska, and Karin Borg – each at the time boasting about 24 million streams (Ingham 2017a). Despite such popularity, however, these artists had virtually no other online presence and thus appeared as ghost musicians. What the suspect tracks had in common was that they were non-vocal and appeared on editorial playlists that were oriented towards jazz, chill, and ambient music; playlists that at the time had between 300,000–2 million followers. In particular, concerns were raised that Spotify was embedding such songs in their playlists to 'water them down' and save cash (ibid.). Like all streaming platforms, Spotify negotiates royalty deals with record labels, and as a rule, major labels are given more generous royalty contracts as compared to independent musicians and record labels. By adding tracks with a low royalty payout to popular playlists (low in comparison to the royalties that Spotify has agreed to pay major record labels), Spotify could decrease their overall royalty payouts and thereby increase their profits. The apparent losers in such an arrangement were already existing artists and rights-holders, who miss out on potentially valuable streaming revenues.

For a company that describes its music discovery system and editorial playlists as a 'circle of trust' (Spotify 2019c), this meant bad publicity. While some reports disclosed that Spotify had secretly been 'paying producers to create tracks' (Ingham 2016), the company strongly denounced such accusations, claiming 'we do not and have never created 'fake' artists and put them on Spotify playlists. Categorically untrue, full stop' (Gensler 2017). This statement, however, did not specify what Spotify defines as 'fake artists' and did thus not rule out the possibility that Spotify could have purposefully added 'cheap' and mass-produced sounds to its editorial playlists. The statement also failed to answer how, when, and why the large number of mysterious songs had appeared on the playlists in the first place.[3] In July 2017, a former Spotify employee told *Variety* that the practice of adding pseudonym tracks to Spotify playlists is 'one of a number of internal initiatives to lower the royalties they're paying to the major labels' (Trakin and Aswad 2017), thus adding to the discomfort within the wider music community. As music journalist David Turner noted:

> There was a concern that Spotify was just filling their playlists with all of these artists that essentially weren't artists you could ever go see live in concert, you couldn't by their music, you couldn't become a fan of these artists, but you could just sort of hear their midi tunes, or a better phrase would be muzak, on their playlist … None of these artists are real, but you can still hear their music on Spotify and they're getting millions of plays on all these top playlists. (Glaser 2018)

Turner's comment suggests that the news about suspect content in Spotify's editorial playlists did not only raise doubts about what constitutes a 'real artist', it also threw fan-hood into deep uncertainty: can someone who enjoys mysterious and anonymous music be considered a proper fan? Had fans somehow been fooled and ripped off by Spotify? As speculations regarding the mysterious tracks

took up speed, the tracks were also suspected of having been algorithmically produced (Petridis 2017), thus evoking earlier critique regarding programmed music (such as Muzak) and broader concerns about the threat of AI taking over artistic and creative practices.

At its core, however, the 'fake artist' incident highlights how playlists function as black boxes: to the general audience, there was simply no way of telling how the cargo of Spotify's 'chill' playlists had been assembled. And as Spotify widens its use of algorithmic playlist engines (e.g. Spotify 2019f) whose decision-making processes are challenging to back-track, these forms of ambiguities are likely to increase. While commercial playlists open up for detailed means of controlling and measuring acts of listening seen from the perspective of rightsholders, advertisers, and not least streaming services themselves, a cloud of uncertainty also surrounds them. For users, pre-packaged playlists may obscure as much as they disclose.

Seen from the perspective of traditional container logistics, however, there is nothing particularly surprising about the suspect content found in Spotify's playlists. Smuggling and the practice of hiding rouge objects among 'legit' goods is common in global systems of trade. Indeed, the masking of illicit cargo among trustworthy objects can be described as a key characteristic of global container traffic. In the case of mysterious music appearing in Spotify's playlists, however, it was not dangerous, remarkable, or highly sought-after objects in the traditional sense that were smuggled among regular goods (as when drugs, weapons, or jewelry is hidden inside watermelons or sown into couches). Rather, the mysterious tracks appeared to have been added to the playlists precisely because of their mundanity. The tracks were ordinary and discreet and seemed to blend in seamlessly with other musical works. A journalist at *The Guardian* described them as 'bizarrely nondescript' and 'the musical equivalent of a scented candle' (Petridis 2017). Yet despite – or perhaps because of – their unobtrusiveness, many users seemed to find the suspect music to be quite enjoyable. In online forums, fans were requesting sheet music for the mysterious tracks, sometimes noting that the recordings sounded 'fantastic' (Ingham 2017c). In other words, it was not necessarily the case that the mysterious music caused unsettlement due to its poor quality. Instead, what was perceived as eerie was the efficiency with which the anonymous tracks were cunningly *contained* within playlists. The news concerning 'fake artists,' indicated that Spotify's popular editorial playlists were holding something unsettling and unexpected: anonymous, cheap, and profit-maximizing goods.

Taken together, the previously discussed reports concerning Spotify's editorial playlists have challenged the image of the editorial playlist as a neutral format for music delivery. The discovery that unknown artists may mysteriously appear in popular playlists, news regarding payola, and the realization that bots may be programmed to hijack streaming accounts and manipulate plays at scale has stirred uncanny sentiments among fans and artists alike. This shows how the playlist as container is surrounded by struggles and tensions that problematize the image of controlled and smooth commodity flows. While the playlist as container partly functions as a stabilizing device that prepares music for mathematical calculation and transport optimization, it also carries a capacity to give rise to disorder, unsettlement, and potential fraud.

Conclusion

By approaching the playlist as a container technology, this article has highlighted how playlists can be situated within a longer history of efforts to optimize of transport operations and intensify financial extractions of value in commodity chains. Rather than focusing on the role of playlists in shaping emotional and personal relationships to music (Hagen 2015, Eriksson and Johansson 2017, Prey 2019, Siles et al. 2019), I have stressed the similarities between playlists, freight containers, and commercial packages, and thereby underlined their logistical role. On the one hand, the article has shown how the playlist functions as a tool for increasing the calculability of music by facilitating statistical oversight over modes of listening. Based on the analysis of sources that highlight and discuss the function of playlists, I have shown how editorial playlists facilitate calculative

and musical experimentations – not least in the interest of forecasting musical futures and pre-empting logistical vulnerabilities. In this context, the editorial playlist appears to succeed with its logistical tasks; it functions as a calculative device that assists in optimizing the delivery of music content and increases online extractions of value.

At the same time, however, I have also shown how editorial playlists sometimes cause anxieties and unsettlement. By highlighting a series of events that have questioned the ability for playlists to safely contain, the article has shown how editorial playlist are also cloaked in struggles regarding online fraud, murky online marketing strategies, and suspicious acts of musical smuggling. Here, it becomes clear that the control and transparency that commercial playlists provide is mainly geared towards rights holders and platform owners, rather than individual users. While Spotify suggests that playlists are neutral and trustworthy carriers for tracks, editorial playlists are also sites of contestation.

Writing about processes of encapsulation in architecture and built environments, historian Chris Otter notes that 'enclosure allows safe monitoring, controlled interaction, regulation, and various forms of oversight, inspection or surveillance' (Otter 2018, p. 56). However, Otter also mentions that leaks and niches of disorder haunt even the most hypercontrolled containers which often fail to protect from noise and turbulence. While playlists enclose music into neatly controlled and monitored packages, they are also open to multiple types of exploitation, instability, and manipulation. Ultimately, this means that the editorial playlist occupies an uneasy position between logistical control on the one hand, and logistical disturbances on the other. This dual role needs to be accounted for if we are to grasp the role of editorial playlists in the online music economy.

Notes

1. In detail, the article builds on the analysis of 132 documents concerning playlists that were gathered during 2014–2019 as part of the research project Streaming Cultural Heritage, funded by the Swedish Research council, framework grant scheme D0113901. These documents have included corporate statements, product descriptions, press releases, news reports, blog posts, website information, API documentation, and public responses to playlists, such as Twitter threads and forum discussions. The news material has mainly been gathered from English websites such as *Wired*, *The Guardian*, *Billboard*, *TechCrunch*, *Buzzfeed* and *Music Business Worldwide*. I have also used Spotify's own webpage as a main source (sometimes accessed via archive.org). In my analysis, I have especially focused on sources that highlight the functionalities of playlists and how they behave—and, importantly, sometimes *misbehave*—following a longer tradition of highlighting noises, failures, and anomalies in technical processes (e.g. Frabetti 2010, Nunes 2011, Parikka 2016).
2. Spotify's use of the term 'container' here should not be confused with the use of virtual machines, which is also known as a 'container technology' setup (e.g. Wang 2018).
3. About sixty of the suspect tracks could later be linked to the Swedish production music house Epidemic Sound who were deeply offended by the use of the term 'fake artists' in discussions around their music's presence in popular playlists (Ingham 2017b).

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Maria Eriksson is a postoc at Humlab, Umeå University, Sweden and a visiting scholar at the Department of Arts, Media and Philosophy at Basel University, Switzerland. Her most recent book, co–authored together with Rasmus Fleischer, Pelle Snickars, Anna Johansson and Patrick Vonderau, is *Spotify Teardown: Inside the Black Box of Streaming Music* (MIT Press, 2019).

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