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# The Mediation of Genre, Identity, and Difference in Contemporary (Popular) Music Streaming

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#### Abstract

Music streaming service Spotify has recently declared that genre is becoming less important in popular music culture, linking this idea to post-identity claims. In contrast, the central argument of this article is that genre continues to matter in music streaming, where algorithmic recommendation systems remediate genre and its association with constructions of identity and difference. We examine Spotify's mediation of genre through a multimodal discourse analysis of genre metadata as presented on the website Every Noise at Once, playlist curation, and media discourse. Analysing the genres bubblegrunge and rap français (French rap), we show that the algorithmic and human processes of Spotify and its users rearticulate genre, shaping, in turn, patterns of recommendation, curation, and consumption. These processes remediate earlier constructions of identity, temporality, and place in music culture. Simultaneously, they intensify differentiation and individuation, tying in with postulations of multiplicity and diversity in neoliberalism that conceal power imbalances.

## Introduction

Are there no more popular music genres in the streaming era? Music streaming services such as Spotify have recently propagated the notion that the production and consumption of popular music is decreasingly structured by genre. Instead, it is argued that music streaming has recast genre as 'context', organizing music around activity- and mood-based playlists to provide 'context-specific' listening.<sup>1</sup> Popular discourse surrounding the proposed end of genre has also been related to claims about post-racial and post-gender identity among listeners and artists. For example, Spotify has introduced and advertised a number of 'genreless' curated playlists, including POLLEN and Lorem, which have been presented as reactions to listeners' increasingly 'genrefluid' listening practices and 'multidimensional' identities.<sup>2</sup> The notion that popular music becomes increasingly genrefluid or post-genre in the streaming era builds on the assumption that

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Mads Krogh, "Context Is the New Genre": Abstraktion og singularisering i digital musikformidling', Norsk Medietidsskrift 107/3 (2020).

<sup>2</sup> Spotify Advertising, 'Culture Next Global Trends Report: Meet the Generation Working to Rebuild Society', https:// ads.spotify.com/en-SE/culture-next/the-2020-report. These playlists and associated ideas about 'post-genre' music and 'post-identity' listeners have also been reiterated in Spotify's subsequent 'Culture Next' reports (Spotify Advertising, 'Culture Next 2021', https://culturenext.byspotify.com/; Spotify Advertising, 'Culture Next 2022', https://culturenext2022.byspotify.com/).

genres were definite, static, and unambiguous in the twentieth century. However, popular music genres have previously been understood as hybrid and dynamic formations that intersect with the identities of individual listeners and listening communities in multiple and complex ways.<sup>3</sup>

The argument here is that genre continues to matter, and to construct identity and difference, in the era of music streaming, where algorithmic music recommendation systems rearticulate and remediate genre. Genre in music streaming functions as an active agent shaping recommendation and playlist curation in popular music culture. We examine constructions of genre in music streaming through a case study of Spotify. In the second half of 2022, the Swedish streaming company Spotify had 456 million reported monthly active users, making Spotify the leading global company with a market share of 30.5% of global music streaming subscriptions.<sup>4</sup> Having transformed from a music database to a recommendation system,<sup>5</sup> Spotify combines algorithmic and human curatorial processes, which issue new, 'algotorial' forms of power.<sup>6</sup>

This article examines how the cultural and technological interventions of streaming mediate genre and, in the process, participate in shaping identity and difference, not only in music streaming but also in algorithmic culture<sup>7</sup> more broadly.<sup>8</sup> By doing so, we substantiate James's (2017) argument that the question of what artists are perceived to be able to move beyond genre is still governed by gendered and racialized constructions of genre.<sup>9</sup> It contributes to initial research about the intersections of genre and identity in algorithmic music recommendation, including analyses of normalizing and marginalizing effects of Spotify's mediation of genre through meta-data,<sup>10</sup> the function of genre in the segmenting of users in algorithmic music recommendation systems,<sup>11</sup> and the mediation of genre and identity in Spotify's 'genrefluid' playlists.<sup>12</sup>

<sup>3</sup> David Brackett, *Categorizing Sound. Genre and Twentieth-Century Popular Music* (Oakland, CA: University of California Press, 2016), 20.

<sup>4</sup> Statista, 'Share of Music Streaming Subscribers Worldwide in the 2nd Quarter of 2022, by Company', www.statista. com/statistics/653926/music-streaming-service-subscriber-share/.

<sup>5</sup> Maria Eriksson, Rasmus Fleischer, Anna Johansson, Pelle Snickars, and Patrick Vonderau, *Spotify Teardown: Inside the Black Box of Streaming Music* (Cambridge, MA: MIT Press, 2019).

<sup>6</sup> Tiziano Bonini and Alessandro Gandini, "First Week is Editorial, Second Week is Algorithmic": Platform Gatekeepers and the Platformization of Music Curation', *Social Media* + *Society* 5/4 (2019).

<sup>7</sup> Ted Striphas, 'Algorithmic Culture', European Journal of Cultural Studies 18/4-5 (2015).

<sup>8</sup> Neta Alexander, 'Catered to Your Future Self: Netflix's "Predictive Personalization" and the Mathematization of Taste', in *The Netflix Effect: Technology and Entertainment in the 21st Century*, ed. Kevin McDonald and Daniel Smith-Rowsey (New York: Bloomsbury, 2016); Daniel Smith-Rowsey, 'Imaginative Indices and Deceptive Domains: How Netflix's Categories and Genres Redefine the Long Tail', in *The Netflix Effect*; Miriam Johnson, 'Genre Fiction Is Leading the Way', in *Books and Social Media: How the Digital Age Is Shaping the Printed World* (London: Routledge, 2022).

<sup>9</sup> Robin James, 'Is the Post- in Post-Genre the Post- in Post-Identity?', Popular Music 36/1 (2017).

<sup>10</sup> Tom Johnson, 'Chance the Rapper, Spotify, and Musical Categorization in the 2010s', American Music 38/2 (2020). Johnson's article builds on the findings of his 2018 doctoral dissertation on genre in twenty-first-century pop music. Thomas Johnson, 'Analyzing Genre in Post-Millennial Popular Music', doctoral diss., City University of New York, 2018.

<sup>11</sup> Nick Seaver, 'Seeing Like an Infrastructure: Avidity and Difference in Algorithmic Recommendation', *Cultural Studies* 35/4–5 (2021).

<sup>12</sup> Veronika Muchitsch, "Genrefluid" Spotify Playlists and Mediations of Genre and Identity in Music Streaming', *IASPM Journal* 13/3 (2023).

Subjectivation, the process of shaping identity, describes the discursive construction of the self in dialogue with pre-existing ideas about groups and social factors; a construction that is multiple and contingent and also has material implications. Judith Butler argues that the subject should be understood as not epistemologically given, but that we nevertheless must hold on to the political importance of the subject and identity.<sup>13</sup> Gender identity is not separate from other aspects of subject formation, such as race, class, and sexuality, rather, it is situated within contemporary sociocultural and political frameworks that articulate histories of gender oppression, colonialism, racism, and other forms of marginalization.<sup>14</sup> Here we regard formations of identity and difference as part of a processual subjectivation that is contingent, in Butler's terms. In music culture, processes of identification between individuals or groups and forms of music may take on a range of relationships, from homologous, wherein audiences recognize 'themselves' in music, to 'performative'<sup>15</sup> or fantasized – including exoticist – relationships that involve desires for 'others' through music perceived as fundamentally different.<sup>16</sup>

This article investigates Spotify's mediation of genre in music streaming through a study of Spotify's genre metadata and its presentation on the website Every Noise at Once, in playlist curation on Spotify, and in media discourse. The genres (used as genre tags by Spotify) bubblegrunge and rap français (French rap) serve as cases in these analyses. Bubblegrunge appears to be a generic creation by Spotify as the descriptor first appeared in Spotify's 2021 individualized year-end reports, *Spotify Wrapped*.<sup>17</sup> The term 'bubblegrunge' was briefly used by music critics in the 1990s,<sup>18</sup> as a (gendered) term to unfavourably describe the music of (white, male) post-grunge bands that was deemed too soft or too catchy.<sup>19</sup> In Spotify's genre metadata, bubblegrunge is assigned to a new generation of musicians and stylistically diverse music, although broadly sharing elements of alternative rock, and includes more female musicians than other rock genres on Spotify. In contrast, rap français may be described as a genre that exists 'in culture', with a social scene of artists and fans performing and listening to rap in French since the 1980s. In Spotify's genre metadata, rap français is distinguished from the genres rap and hip hop by its national label 'français'.<sup>20</sup> Rap français is included in

<sup>13</sup> Judith Butler, 'Contingent Foundations: Feminism and the Question of Post-Modernism', in *Feminists Theorize the Political*, ed. Judith Butler and Joan W. Scott (New York: Routledge, 1992), 14.

<sup>14</sup> Butler, 'Contingent Foundations', 14.

<sup>15</sup> Brackett, Categorizing Sound, 20.

<sup>16</sup> See also Georgina Born, 'Music and the Materialization of Identities', Journal of Material Culture 16/4 (2011); Eric Lott, Love and Theft: Blackface Minstrelsy and the American Working Class (Oxford: Oxford University Press, 1993).

<sup>17</sup> Justin Curto, 'Spotify Wrapped 2021: Our Top Questions', Vulture, 1 December 2021, www.vulture.com/tags/ bubblegrunge%3F!/.

Cianna Garrison, 'Bubblegrunge Keeps Popping Up in People's Spotify Wrapped 2021 Results, and What?', *Elite Daily*,
December 2021, www.elitedaily.com/news/spotify-wrapped-2021-bubblegrunge-genre-tweets.

<sup>19</sup> Music critic Gavin McNett claims that he coined the term to describe music by 1990s rock bands such as the Toadies, Collective Soul, and Seven Mary Three. McNett explains that '[i]t's not a complimentary term' and he implies the concept of rock authenticity (and the lack thereof) in his review of Seven Mary Three. Gavin McNett, 'American Standard: Seven Mary Three', Amazon.com, n.d., www.amazon.com/American-Standard-Seven-Mary-Three/dp/B000002JVD.

<sup>20</sup> In this article, we use the (correct) spelling 'rap français' despite the Spotify genre tag being spelled 'rap français'.

editorial Spotify playlists marketed to French-speaking audiences and is largely a genre represented by male, Black, French-speaking artists. Through these two examples, we seek to detail the ways in which the cultural and technological interventions of streaming mediate genre and, in turn, constitute formations of identity and difference. We discuss formations of social identity, temporality, and space as central structuring dimensions in these mediations.

## Literature review: genre theory and studies of music streaming

To better understand how genre constitutes identity and difference in the current age of algotorial mediation in streaming, it is crucial to discern what genre means. In popular music studies, genre is understood as both a theoretical concept and an empirical field. Scholars have studied individual popular music genres<sup>21</sup> and discussed the social practices<sup>22</sup> and institutional and corporate processes<sup>23</sup> at work in genre formations. Scholarly work has identified issues of denomination and delineation,<sup>24</sup> temporality,<sup>25</sup> and questions of identity, difference,<sup>26</sup> and collectivity<sup>27</sup> as central issues relating to genre formations. Initially, the study of genre was divided into two approaches, which sought to create systematic typologies on the one hand and understood genre as social practice on the other.<sup>28</sup> Seeking to combine

<sup>21</sup> Robert Walser, Running with the Devil: Power, Gender, and Madness in Heavy Metal Music (London: University Press of New England, 1993); Wendy Fonarow, Empire of Dirt: The Aesthetics and Rituals of British Indie Music (Middletown, CT: Wesleyan University Press, 2006); Fabian Holt, Genre in Popular Music (Chicago: University of Chicago Press, 2007); Jennifer Lena, Banding Together: How Communities Create Genres in Popular Music (Princeton, NJ: Princeton University Press, 2012); Joti Rockwell, 'What Is Bluegrass Anyway? Category Formation, Debate and the Framing of Musical Genre', Popular Music 31/3 (2012); Brackett, Categorizing Sound; Mimi Haddon, What Is Post-Punk? Genre and Identity in Avant-Garde Popular Music 1977–82 (Ann Arbor, MI: University of Michigan Press, 2020).

<sup>22</sup> Jason Toynbee, Making Popular Music. Musicians, Creativity and Institutions (London: Arnold, 2000); David Hesmondhalgh, 'Subcultures, Scenes or Tribes? None of the Above', Journal of Youth Studies 8/1 (2005); Fonarow, Empire of Dirt; Lena, Banding Together; Holly Kruse, 'Subcultural Identity in Alternative Music Scenes', Popular Music 12/1 (1993).

<sup>23</sup> Keith Negus, Music Genres and Corporate Cultures (London: Routledge, 1999); Motti Regev, Pop-Rock Music: Aesthetic Cosmopolitanism in Late Modernity (Cambridge: Polity, 2013); David Hesmondhalgh, 'Indie: The Institutional Politics and Aesthetics of a Popular Music Genre', Cultural Studies 13/1 (1999).

<sup>24</sup> Simon Frith, Performing Rites: On the Value of Popular Music (Oxford: Oxford University Press, 1996); David Brackett, 'Questions of Genre in Black Popular Music', Black Music Research Journal 25/1–2 (2005); David Beer, 'Genre, Boundary Drawing and the Classificatory Imagination', Cultural Sociology 7/2 (2012); Rockwell, 'What Is Bluegrass Anyway?'; Matt Brennan, When Genres Collide: Down Beat, Rolling Stone, and the Struggle between Jazz and Rock (London: Bloomsbury, 2017).

<sup>25</sup> Jennifer Lena and Richard Peterson, 'Classification as Culture: Types and Trajectories of Music Genres', American Sociological Review 73/5 (2008); Mads Krogh, 'Music-Genre Abstraction, Dissemination and Trajectories', Danish Musicology Online 9 (2018).

<sup>26</sup> Brackett, 'Questions of Genre in Black Popular Music'; Brackett, *Categorizing Sound*; Born, 'Music and the Materialization of Identities'; James, 'Is the Post- in Post-Genre the Post- in Post-Identity?'

<sup>27</sup> Toynbee, Making Popular Music; Hesmondhalgh, 'Subcultures, Scenes or Tribes?'

<sup>28</sup> Jim Samson, 'Genre', in *The New Grow Dictionary of Music and Musicians*, ed. Stanley Sadie and John Tyrrell (London: Macmillan, 2001).

these approaches, Franco Fabbri defines genre as a 'set of musical events' created from a 'definite set of socially accepted rules'. <sup>29</sup> He outlines five rules that constitute genre: musical ('formal and technical'); semiotic; performance-related ('style' of performers and audience); social and 'ideological'; and economic and juridical. Although Fabbri's model may appear rigid, he opposes the idea that genre classification is objective and determinable by fixed musical or social parameters. Instead, drawing on de Saussure's theory of meaning as a system of difference that lacks positive value,<sup>30</sup> he understands genre as fundamentally relational, temporally and spatially contingent, and dynamic.

David Brackett has theorized popular music genre and social identity, studying the associations between genre and race/ethnicity in twentieth-century American popular music.<sup>31</sup> Drawing on the Deleuzian concept of assemblage, he describes genre formations as fleeting processes whose boundaries are 'permeable and fluctuating' but nevertheless culturally and socially safeguarded.<sup>32</sup> He argues that how people identify with different types of music informs processes of genre division in popular music and that, in turn, the associations between genre and (racial) identity take part in the formations of identity by mediating 'social connotations'.<sup>33</sup> Thus, categorizing similarities in genre does, for Brackett, also involve categorizing similarity in identity, including gender, race, and ethnicity. In similar ways, Georgina Born describes the relationship between genre and identity as an affective process of 'mutual mediation' between the 'self-organizing historical entities' of musical formations and social identity formations.<sup>34</sup>

Formations of genre and identity have in popular music not only mediated each other, but also been shaped by technology<sup>35</sup> and the qualities of technologically mediated music have informed new ways of listening, changed performance practices, and led to the emergence of new musical genres.<sup>36</sup> Scholars have studied how technologically mediated popular music genres and their distribution through media channels such as commercial radio stations have shaped people's awareness of themselves in relationship to a mediated community.<sup>37</sup> Since the late 1990s, the internet and new digital and online media technologies

<sup>29</sup> Franco Fabbri, 'A Theory of Musical Genres: Two Applications', in *Popular Music Perspectives*, ed. David Horn and Phillip Tagg (Göteborg and Exeter: International Association for the Study of Popular Music, 1982), 52.

<sup>30</sup> Franco Fabbri, 'What Kind of Music?', Popular Music (1982), 134.

<sup>31</sup> Brackett, 'Questions of Genre in Black Popular Music'; Brackett, Categorizing Sound.

<sup>32</sup> Brackett, 'Questions of Genre in Black Popular Music, 76.

<sup>33</sup> Brackett, 'Questions of Genre in Black Popular Music, 75.

<sup>34</sup> Born, 'Music and the Materialization of Identities', 383.

<sup>35</sup> Brackett, Categorizing Sound, 47.

<sup>36</sup> Mark Katz, Capturing Sound: How Technology Has Changed Music, rev. edn (Oakland, CA: University of California Press, 2010), 5.

<sup>37</sup> Rick Altman, Film/Genre (London: British Film Institute, 1999), 184, in Brackett, Categorizing Sound. See also Negus, Music Genres and Corporate Culture; Mads Krogh and Morten Michelsen, 'Introduction: Complexities of Genre, of Mediation and of Community', in Music Radio: Building Communities, Mediating Genres, ed. Morten Michelsen, Mads Krogh, Steen Kaargaard Nielsen, and Iben Haye (New York: Bloomsbury, 2018); Eric Weisbard, Top 40 Democracy: The Rival Mainstreams of American Music (Chicago: Chicago University Press, 2014).

have been central to these developments.<sup>38</sup> Feminist scholars have argued that technologies cannot be seen as 'neutral artefacts'.<sup>39</sup> Rather, gendered power relations and articulations of gender shape and are shaped by the discursive and material qualities of technologies,<sup>40</sup> including in digital technologies, where cultural beliefs, identities, and social relations are 'materially reproduced' in software design.<sup>41</sup> For example, it has been argued that the recommendation algorithm of Spotify constructs popular music as masculine in most genres<sup>42</sup> and that algorithmic culture is gendered in music streaming.<sup>43</sup>

In neoliberal capitalism, difference and diversity are understood in positive (although often hierarchical) terms as difference expands possibilities for commodification through the creation of several niche markets (such as women and ethnic minorities) and multiplies branding strategies. For neoliberal society, the meaning of difference is not tied to debates about equity, but rather to ever-expanded opportunities for branding and commodification through a rhetoric of individualization.<sup>44</sup> Tendencies of diversification and singularization that resonate with the neoliberal commodification of difference have also been identified in post-millennial pop music. As Jeffrey Nealon argues, core values of twentieth-century popular music including being authentic, individualistic, and free – or, in short, 'not being like everybody else' – have become organizing elements in contemporary neoliberal capitalism.<sup>45</sup> And Robin James has proposed that resilience, traceable in the sonic, compositional, and textural qualities of twenty-first-century pop music, works as a post-feminist performance of individualized empowerment that sustains white supremacy and patriarchy in the context of neoliberal capitalism.<sup>46</sup> The algorithmic logics of streaming technology similarly address users as highly individualized through personalized recommendations of cultural content.

At the beginning of the twenty-first century, scholars studying popular music genre and media technology predicted that the advent of the online digital music industry would entail a democratization and diversification of tastes and genres,<sup>47</sup> the creation of new niche markets and increased visibility for artists and genres from peripheral parts of the global music industry.<sup>48</sup> These prognoses were tied to the idea that music genres, such as the digital online

48 Ingyu Oh and Hyo-Jung Lee, 'Mass Media Technologies and Popular Music Genres: K-Pop and YouTube', Korea Journal 53/4 (2013).

<sup>38</sup> Georgina Born and Christopher Haworth, 'From Microsound to Vaporwave: Internet-Mediated Musics, Online Methods, and Genre', Music & Letters 98/4 (2018).

<sup>39</sup> Judy Wajcman, Feminism Confronts Technology (Cambridge: Polity, 1991), 22.

<sup>40</sup> Judy Wajcman, 'Feminist Theories of Technology', Cambridge Journal of Economics 34 (2010), 150.

<sup>41</sup> Anne Balsamo, *Designing Culture: The Technological Imagination at Work* (Durham, NC: Duke University Press, 2011), 3.

<sup>42</sup> Maria Eriksson and Anna Johansson, 'Tracking Gendered Streams', Culture Unbound 9/2 (2017b).

<sup>43</sup> Ann Werner, 'Organizing Music, Organizing Gender: Algorithmic Culture and Spotify Recommendations', *Popular Communication* 18/1 (2020).

<sup>44</sup> Camilla Cannon, 'Non-Binary Gender Identity and Algorithmic-Psychometric Marketing Legibility', *Feminist Media Studies* 22/6 (2021), https://doi.org/10.1080/14680777.2021.1902367.

<sup>45</sup> Jeffrey Nealon, *I'm Not Like Everybody Else: Biopolitics, Neoliberalism, and American Popular Music* (Lincoln, NE: University of Nebraska Press, 2018).

<sup>46</sup> Robin James, Resilience & Melancholy: Pop Music, Feminism, Neoliberalism (Winchester: Zero Books, 2015).

<sup>47</sup> Katz, Capturing Sound, 187.

media they are organized and mediated by, were becoming 'less centralized',<sup>49</sup> leading to a popular music culture in which listeners would become 'sole gatekeepers'<sup>50</sup> of cultural production and consumption. By contrast, more recent analyses of online media culture have acknowledged the renewed centralization in cultural production, through shifts in market structures, forms of governance, and infrastructures associated with the platformization of media technologies,<sup>51</sup> including in music recommendation.<sup>52</sup>

Initial studies of genre in music streaming have suggested that the logics and affordances of music streaming media constitute genre in new ways; for example, that Spotify's mood- and activity-based playlists, which use algorithms to draw on both the sound of the music and the activities of the user, recast genre as context.<sup>53</sup> As the playlist has become a central articulation of Spotify's power in the digital music industry,<sup>54</sup> it has also become a site of negotiations of identity and difference, along the lines of gender,<sup>55</sup> sexuality,<sup>56</sup> race, and other social factors. Ignacio Siles et al. propose that streaming playlists themselves may be understood as genres, defined as affective orientations that combine musical, sociotechnological, and sociomaterial elements.<sup>57</sup> While some studies suggest that music streaming fundamentally changes the meaning of genre in music culture, in this article, we emphasize the continuities between genre in streaming, earlier formations of genre, and their mediations of identity and difference. However, we also point to the ways in which Spotify's algotorial mediations of genre, including automated processes, data analysts, music editors and listeners, shape categorizations of genre and identity in new ways.

Nick Seaver finds that creators of algorithmic music recommendation systems frequently describe these systems as 'post-demographic' technologies wherein listener behaviour is taken as a primary indicator of a listener's 'musical identity'.<sup>58</sup> These systems segment listeners using scales of 'avidity', or 'musical enthusiasm', that describe listeners' interest (or disinterest) in exploring new types of music. However, as Seaver explains, although avidity expresses the claim to move beyond ideas about genre and identity in the segmenting of listeners, it rearticulates discourses of musical taste and listening practices that have been coded

<sup>49</sup> Beer, 'Genre, Boundary Drawing and the Classificatory Imagination', 153.

<sup>50</sup> Oh and Lee, 'Mass Media Technologies and Popular Music Genres', 40.

<sup>51</sup> David B. Nieborg and Thomas Poell, 'The Platformization of Cultural Production: Theorizing the Contingent Cultural Commodity', New Media & Society 20 (2018), 4288.

<sup>52</sup> Robert Prey, 'Locating Power in Platformization: Music Streaming Playlists and Curatorial Power', *Social Media* + *Society* 6/2 (2020a).

<sup>53</sup> Krogh, "Context Is the New Genre".

<sup>54</sup> Robert Prey, 'Playlists and the Datafication of Music Formatting', in *Listen to Lists*, ed. Lina Brion and Detlef Diederichsen (Leipzig: Spector, 2020b).

<sup>55</sup> Maria Eriksson and Anna Johansson, "Keep Smiling!": Time, Functionality and Intimacy in Spotify's Featured Playlist', *Cultural Analysis* 16/1 (2017a).

<sup>56</sup> Frederik Dhaenens and Jean Burgess, "Press Play for Pride": The Cultural Logics of Lgbtq-Themed Playlists on Spotify', new media & society 21/6 (2019).

<sup>57</sup> Ignacio Siles, Andrés Segura-Castillo, Mónica Sancho, and Ricardo Solís-Quesada, 'Genres as Social Affect: Cultivating Moods and Emotions through Playlists on Spotify'. Social Media + Society 5/5 (2019).

<sup>58</sup> Seaver, 'Seeing Like an Infrastructure', 785.

in terms of gender, class, and age. For example, Seaver recounts how an engineer explained the concept of avidity by contrasting the repetitive pop tastes of teenage girls with the eclectic listening of the knowledgeable (male) jazz listener.<sup>59</sup> By showing how presumptions about genre, taste, and identity are built into algorithmic systems of recommendation, Seaver illustrates how music streaming's automated systems are not oppositional cultural formations, but rather result from the internal 'culture' of software companies.<sup>60</sup> Automated systems thus are, in the words of Andrejevic and colleagues, 'an extension and intensification of social relations of production'.<sup>61</sup>

Tom Johnson has shown how Spotify's organization of genre in metadata rearticulates previous discourses of genre and identity in popular music culture.<sup>62</sup> He identifies two main characteristics of Spotify's genre metadata: first, Spotify's genre tags vary starkly in scope and scale, resulting in uneven levels of detail and description. For instance, as a locally and temporally specific genre, the tag 'merseybeat' gives more insight than the broad category 'pop'.<sup>63</sup> Second, Johnson finds that the number of tags assigned to artists varies greatly and is in accordance with the specificity of genre tags: while the indie band Dirty Projectors were assigned twenty-six different genre tags, highly commercially successful artists such as Rihanna or Drake only received a few tags each.<sup>64</sup> Building on Umberto Eco's concepts of overcoding and undercoding, Johnson argues that these variations in scope and scale perpetuate earlier ascriptions of cultural value in popular music. As overcoding enables increased differentiation in terms of genre and identity formations, the fine-grained genre distinctions within rock and indie genres rearticulate ascriptions of cultural value to musical genres that have been coded as white and male throughout the history of popular music.<sup>65</sup>

### Material and method

We examine the mediation of genre and its constitution of identity and difference through an analysis of two Spotify genres as they are categorized through Spotify's genre tags, visualized through artist images, and mediated through Spotify- and user-generated playlists and media discourse. Spotify organizes music through a wide range of metadata, including information about genre, and in March 2023 it distinguished between over 6,000 genres. Spotify's genre metadata is generated through a heterogeneous combination of automated and human processes. While Spotify's algorithmic model includes machine learning, audio analysis, and data from online textual analysis and listener activity, the organization of genre also entails direct

<sup>59</sup> Seaver, 'Seeing Like an Infrastructure', 779.

<sup>60</sup> Seaver, 'Seeing Like an Infrastructure, 782.

Mark Andrejevic, Robbie Fordyce, Luzhou Li, and Verity Trott, 'Automated Culture: Introduction', *Cultural Studies* (2022), 1–19, https://doi.org/10.1080/09502386.2022.2042579.

<sup>62</sup> Johnson, 'Chance the Rapper, Spotify, and Musical Categorization in the 2010s'; Johnson, *Analyzing Genre in Post-Millennial Popular Music*.

<sup>63</sup> Johnson, 'Chance the Rapper, Spotify, and Musical Categorization in the 2010s', 182.

<sup>64</sup> Johnson, 'Chance the Rapper, Spotify, and Musical Categorization in the 2010s', 182.

<sup>65</sup> Johnson, 'Chance the Rapper, Spotify, and Musical Categorization in the 2010s', 184.

interventions by data analysts.<sup>66</sup> Drawing on information by Spotify and Spotify's data analyst Glenn McDonald, Johnson describes the organization of genre as a two-step process: first, automated systems analyse the auditory qualities of songs and categorize songs that sound alike; and second, data analysts label these clusters of music with genre tags.<sup>67</sup> Genre tags also result from user activity, as new genre tags may be coined based on 'collective listening patterns'.<sup>68</sup> We will return to this process later.

Spotify's user interface does not currently show genre metadata, and access via Spotify's Web application programming interface (API) requires a 'Spotify for developers' account and basic coding skills. However, Spotify's genre metadata is also presented on the website Every Noise at Once (ENaO). ENaO builds on Spotify's API to visualize genre metadata and was created by Spotify data analyst McDonald. ENaO's presentation of genre metadata includes lists of artists, genre playlists, and word clouds that visualize relationships between artists and genres. Cross-checking ENaO's genre data with Spotify's Web API shows that ENaO's genre data is identical with Spotify's, and we focus on the features of ENaO that directly present Spotify's genre metadata visually through genre tags, artist lists, and playlists. We integrate this analysis with Spotify's 'outward' presentation of genre through playlist curation and media discourse.<sup>69</sup>

The two cases have been chosen as contrasting genres: bubblegrunge is thought to be a Spotify construct (although the term had existed before), unknown to most fans and musicians before appearing on Spotify in 2021, while rap français exists as a large genre 'outside of' Spotify. The genres also differ in terms of their representation of gendered and racialized identities and geographical places. One aspect that the selected genres share is that they are mediated as subcategories of genres, as a subgenre to grunge (bubblegrunge), and a national version of rap (rap français). Although the genres are separated from the umbrella genres, their constitution of identity and difference relates to those of the main genres, which we will return to in our analysis.

Using ENaO's 'research' function, genre searches using the website's 'genre' search field generated 239 exact matches of artists in Spotify's bubblegrunge and 354 exact matches in its rap français genre tags.<sup>70</sup> We examined two primary ways that ENaO presents artists in Spotify's genre categories: 'exact matches' lists of our respective genres that index and visually

<sup>66</sup> Johnson, 'Chance the Rapper, Spotify, and Musical Categorization in the 2010s', 181.

<sup>67</sup> Johnson, Analyzing Genre in Post-Millennial Popular Music, 130-1.

<sup>68</sup> Johnson, Analyzing Genre in Post-Millennial Popular Music, 131.

<sup>69</sup> Our method enables a double lens onto Spotify's mediation of genre and offers new insights about how playlists work as 'mechanism[s] for genre performativities' in relationship to Spotify's genre tags (Johnson, *Analyzing Genre in Post-Millennial Popular Music*, 162). Following Glenn McDonald's layoff from Spotify in December 2023, Every Noise at Once is no longer updated.

<sup>70</sup> The material used to analyse bubblegrunge and rap français in this article was collected from ENaO in May 2022, and from Spotify playlists and music magazines in March 2023, which resulted from the revision process of this article. Collecting the material at the same time would have made Spotify's metadata and its presentation through ENaO and Spotify's playlists even more comparable. However, as we will discuss, despite this time gap, our material shows Spotify's 'internal' and 'external' mediations of genres to be closely connected and to mediate gender, race, temporality, and space in markedly similar ways.

represent artists identified with a genre, and genre playlists presented as sonic representations of a genre (which included 494 songs for 'The Sound of Bubblegrunge' and 717 songs for 'The Sound of Rap Français').

We contextualize our analysis of metadata with Spotify playlists and media discourse to examine how Spotify's internal organization of genre is presented to and negotiated by listeners. First, we analyse the playlists 'PVNCHLNRS' and 'Fresh Rap', two playlists curated by Spotify whose descriptions read 'le première playlist de rap français' ('the foremost/best playlist of rap français') and 'Toutes les nouveautés du rap français' ('all the latest from rap français'), with over 1.3 million/0.7 million followers in March 2023, to discuss how Spotify's internal organization of genre through genre tags resonates with or differs from its external presentation of rap français to playlist listeners.<sup>71</sup> Second, we analyse media discourse surrounding Spotify's bubblegrunge genre. This material includes music reporting in the magazines Vulture, NME, and Elite Daily as well as social media posts by Spotify users following the 2021 edition of Spotify's year-end statistics Spotify Wrapped and prior uses of the term 'bubblegrunge' by music critics in the 1990s. Finally, we analyse the user-curated Spotify playlist 'Best of: Bubblegrunge' created by a user called It's Me, Christy (3,000 followers).<sup>72</sup> Through these examples, we discuss how Spotify's internal organization of genre informs playlist curation and media discourse, and thus becomes an outward construction of genre in streaming culture.

Artist information on MusicBrainz, Wikipedia, social media, and Spotify is used to quantitatively determine gender and nationality in a content analysis of the artists in both genres.<sup>73</sup> We combine content analysis with qualitative discourse analysis as research on social and other digital and online media benefits from combining these approaches when studying identity,<sup>74</sup> and helps to understand the scope of media content *and* gain deeper knowledge about themes and trends. Therefore, the visual representations of artists, the number of genre tags, and sounding music are analysed using multimodal discourse analysis (MDA). MDA is characterized by combining the study of language with other types of modes such as image, music, and sound, especially when dealing with materials that are already multimodal such as music videos and websites, here called multimodal phenomena.<sup>75</sup> While

<sup>71</sup> These two playlists are analysed as they stand on the 15 March 2023 containing forty songs each, the majority of which were performed by one or two artists.

<sup>72</sup> These follower numbers were collected in March 2023.

<sup>73</sup> While MusicBrainz (MB) identifies solo artists' gender, it does not identify the gender of individual band members and does not include trans or non-binary gender identification. Therefore, we used Wikipedia, social media, and music journalism as additional tools for identifying gender among musicians. For a discussion on how digital media's affordances for gender self-identification contribute to the construction of gender, see Rena Bivens and Oliver Haimson, 'Baking Gender into Social Media Design: How Platforms Shape Categories for Users and Advertisers', *Social Media* + *Society* (October–December 2016).

<sup>74</sup> Zizi Papacharissi, 'Without You, I'm Nothing: Performances of the Self on Twitter', International Journal of Communication 6 (2012).

<sup>75</sup> Kay O'Halloran, 'Multimodal Discourse Analysis', in *Continuum Companion to Discourse Analysis*, ed. Ken Hyland and Brian Paltridge (London: Continuum, 2011), 120–1.

discourse analysis traditionally identifies floating signifiers, or nodal points of meaning in language,<sup>76</sup> MDA focuses on the interplay between these semiotic resources in creating meaning.<sup>77</sup> The modes studied in the analysis of our examples are text (spanning from culture reporting to hypertexts such as tags), images, and sounds. They are, in a discourse analytical manner, considered to be shaping the mediation of genre, identity, and difference in music streaming. From a discourse analytical perspective, we assume the multimodal phenomena of Spotify's mediations of genre, through metadata, visual presentation, streaming playlists, and media discourse, to be shaping the mediation of genre in contemporary culture and we investigate recurring themes in this mediation.<sup>78</sup>

#### Identity and difference in two Spotify genres

Spotify's organization of 6,000 genres is characterized by division into subgenres, a continuation of previous popular music genre practices within music industries and fan cultures, where large genres are divided into sections: pop, indie pop, and electro pop are presented as related but different, where pop is the umbrella term. As explained earlier, we understand the denominators and boundaries of genres as always constructed, dynamic, and permeable;<sup>79</sup> however, compared with the genre system pre-dating Spotify, subgenres have multiplied. Spotify's genre system includes well-known genres (e.g., rock, pop, and hip hop) but also cross- (e.g., 'pop rap'), and new genres (e.g., 'escape room'). As McDonald has explained, he coined the latter term to describe 'collective listening patters' he had noticed in Spotify's user data.<sup>80</sup> Neologisms such as 'escape room' or 'bubblegrunge' most readily illustrate the intersections of automated auditory and textual analysis, user data analysis, and direct human interventions in Spotify's organization of genre. However, other idiosyncrasies of Spotify's genre categorization demonstrate how its mediation of genre differs from earlier constructions in popular music cultures and industries. For example, a further characteristic of Spotify's organization of genre is the creation of mood-based genres (e.g., 'rap calme' (mellow rap in French)), and time- or location-specific genres (e.g., 'vintage italian pop', 'atlanta indie', and 'african rock'). Additionally, Spotify also uses genre categories explicitly referring to gender, sexuality, and race (e.g., 'transpop', 'queercore', and 'black americana'). Like the location-specific genres, such tags rearticulate and intensify the association between musical genres, identity, and difference. Spotify's genre tags illustrate how its system of categorizing music bridges the distinction between auditory and cultural aspects of genre; in other words, it 'calls into question the style/genre binary'.<sup>81</sup> But beyond that, and as we will discuss

<sup>76</sup> Ernesto Laclau and Chantal Mouffe, Hegemony & Socialist Strategy (London: Verso, 1985).

<sup>77</sup> Kay O'Halloran, ed., *Multimodal Discourse Analysis: Systemic-Functional Perspectives* (New York: Continuum, 2004), 117–18.

<sup>78</sup> Papacharissi, 'Without You, I'm Nothing'.

<sup>79</sup> Fabbri, 'A Theory of Musical Genres'; Brackett, Categorizing Sound.

<sup>80</sup> Cherie Hu, 'What Is "Escape Room" and Why Is It One of My Top Genres on Spotify?', Festivalpeak, https://festivalpeak.com/ what-is-escape-room-and-why-is-it-one-of-my-top-genres-on-spotify-a886372f003f, cited in Johnson, Analyzing Genre in Post-Millennial Popular Music, 131.

<sup>81</sup> Johnson, Analyzing Genre in Post-Millennial Popular Music, 125.

later, it further intensifies and renders explicit the associations between genre and identity in new ways.

Searching for a genre through ENaO's 'research' function initially presents exact matches lists of all artists assigned the genre, which include names, thumbnail pictures, follower numbers, and genre tags. The logics governing the positioning of artists on the lists remains unknown, but placement appears to relate to follower numbers, production value of thumbnail images, and number of genre tags. ENaO also presents Spotify's genre metadata through playlists, which differ in sequencing from the exact matches lists. Further, in the Spotify-created playlists representing rap français and the user-generated playlist and media discourse surrounding bubblegrunge, discourses of identity, difference, temporality, and place are also drawn upon in similar ways. Our contextualization of Spotify's system of genre tags in playlists and media discourse shows that genre participates in the organization of music and its association with identity and difference in streaming services, and in contemporary popular music cultures. In our analysis we proceed to discuss how.

## Constructions of gender, race, and class

Although some music critics used the term 'bubblegrunge' in the 1990s, most fans and musician became newly aware of bubblegrunge following the 2021 publication of Spotify Wrapped, where some Spotify users found the genre listed among their top five genres of the year. Presenting individualized streaming data including most streamed genres, artists, and songs in a social-media-ready format, Spotify Wrapped has become an annual marketing tool for the company - and a site for Spotify's mediation of genre. Writer Justin Curto jokingly suggests that wondering about the meaning of Spotify's genre categories following the publication of Spotify Wrapped has itself become tradition,<sup>82</sup> and Mark Beaumont similarly suggests that '[t]he best thing about Spotify Wrapped ... is having your taste broken down into genres you never even knew you liked, or even existed'.<sup>83</sup> In December 2021, fans and musicians expressed confusion about bubblegrunge, urged Spotify to explain the genre<sup>84</sup> or made suggestions about its (gendered) meaning in social media posts. For example, the band Mannequin Pussy (@mannequinpussy), who learned that they had been tagged as bubblegrunge, suggested in a tweet that the genre 'means rock music with female vocalist[s]', sarcastically exclaiming that 'we did it girls we got our own genre of music'.<sup>85</sup>

<sup>82</sup> Curto, 'Spotify Wrapped 2021: Our Top Questions'.

<sup>83</sup> Mark Beaumont, 'The WTF Genre from this Year's Spotify Wrapped, Dream SMP, Reveals the Service's Real Motives', NME, 6 December 2021, www.nme.com/features/opinion/spotify-wrapped-2021-dream-smp-wtf-3111036.

<sup>84</sup> Garrison, 'Bubblegrunge Keeps Popping Up in People's Spotify Wrapped 2021 Results, and What?'.

<sup>85</sup> MP (@mannequinpussy), 'Ohhhhh Bubblegrunge Means Rock Music with Female Vocalist Ok Got It Got It Got It Got It Got It We Did It Girls We Got Our Own Genre of Music', *Twitter*, 2 December 2021, https://twitter.com/mannequinpussy/ status/1466216781060714496?s=20. Similarly, Curto suggests that in addition to bubblegrunge, trap queen and country dawn were subgenres that 'seem to be defined by isolating music created by women'. Curto, 'Spotify Wrapped 2021: Our Top Questions'.

Although music critics presented bubblegrunge in the 1990s as a (rockist) critique of pop-oriented (white, male) rock bands,<sup>86</sup> the word's reference to the 1960s term 'bubblegum pop', describing catchy guitar-based pop primarily marketed to teenage girls, gendered the original use of the term 'bubblegrunge'. The media discourse surrounding Spotify's bubblegrunge genre discussed earlier indicates that it is gendered differently from the 1990s term and quantitative representation of gender among artists offers further insights. The representation of gender among the 239 artists and groups tagged as bubblegrunge by Spotify in May 2022 strongly suggests that the genre signifies gendered difference from the normative maleness of rock. In our sample, the largest subset of bubblegrunge artists were mixed gender groups with 47%, followed by 34% of female-identified solo projects or female-only bands, 16% male-led solo projects or male only bands, and 3% non-binary-led solo projects or non-binary only bands.<sup>87</sup> Thus, bubblegrunge includes more solo female and mixed gender bands than other rock genres on Spotify, where male artists dominate. For example, a survey of the artist images of Spotify's 'grunge' tag as visualized on ENaO in September 2022 suggests that among the top thirty artists listed as grunge, Hole was the only band with non-male band members. Importantly, although there are more female and non-binary musicians in bubblegrunge, the roles of band members rearticulate gendered discourses in music. Almost twothirds of the lead vocalists (64%) in our sample were identified as female by online sources, followed by 22% male, and 8% non-binary lead vocalists, and in 7% of the songs, lead vocals were shared by musicians of different genders, reinforcing the feminization of vocal performance<sup>88</sup> and the coding of the electric guitar and other rock instruments and technologies as masculine.<sup>89</sup> Apart from stylistic characteristics such as instrumentation and texture that are broadly associated with alternative rock, female lead vocalists arguably constitute the primary unifying element of many songs in Spotify's bubblegrunge category.

While the representation of gender among artists, band members, and lead vocalists genders the bubblegrunge category feminine quantitatively and sonically, artist thumbnails also visually code the genre in gendered ways.<sup>90</sup> On ENaO's artists list, (female-led) solo projects such as Lucy Dacus, Soccer Mommy, and Snail Mail, all among artists with the highest follower numbers, are represented by close-up portraits against brightly coloured backdrops. These images depict female artists as authoritative and professional, while their largely

<sup>86</sup> See, for example, McNett, 'American Standard: Seven Mary Three'; Gavin McNett, 'Blur', Salon, 20 April 1997, www. salon.com/1997/04/20/sharps\_20/. For a discussion of rockism, see Matthew Bannister, "Loaded": Indie Guitar Rock, Canonism, White Masculinities', Popular Music 25/1 (2006), 88.

<sup>87</sup> In our sample of 239 artists, 77% of artists tagged bubblegrunge were bands and 23% were solo projects. We were not able to identify the gender of all band members in thirty cases, amounting to 13% of the sample. Artist thumbnails and names suggest that roughly two-thirds of this subset are likely to be male-only bands. In cases where gender identification on Musicbrainz (MB) differed from social media – since MB does not include non-binary gender identification – we used artists' self-identification on social media.

<sup>88</sup> Nicola Dibben, 'Gender Identity and Music', in *Musical Identities*, ed. Raymond R. MacDonald, David Hargreaves, and Dorothy Miell (Oxford: Oxford University Press, 2002), 122.

<sup>89</sup> Paul Théberge, "Plugged In": Technology and Popular Music', in *The Cambridge Companion to Pop and Rock*, ed. Simon Frith, Will Straw, and John Street (Cambridge University Press 2001), 13.

<sup>90</sup> The thumbnails on ENaO are the same photos as the artists' profile pictures in the Spotify interface.

subdued visual style - through clothes, hairstyles, and make-up - authenticates the artists within the discursive frameworks of the singer-songwriter and alternative rock traditions that value naturalized constructions of artist personae, in contrast to more explicitly stylized personae common in genres such as pop.<sup>91</sup> Some images subtly queer presentations of femininity and masculinity through hairstyles, fashion, and posture: Snail Mail channels teenage boys in 1970s high school prom pictures in her pastel pink tuxedo and Katy Kirby's pose, short, slicked back hair, loose fit jeans, and white rib tank call back to James Dean, thus invoking female masculinity.<sup>92</sup> Posing against a sky-blue backdrop, the non-binary artist Jodi looks straight at the camera, wearing a pastel pink turtleneck shirt and an iridescent butterfly earring. Right arm lifted overhead, they hold a single stem of a soft pink blooming flower, visually constructing a hyperfeminine softness associated with the hyperpop genre, which has centred trans and queer identities.<sup>93</sup> However, most images resonate with visual imagery associated with indie and alternative music, presenting artists as young and not overly stylized or sexualized, and bands as groups of (often mixed gender) friends. Artist images further indicate that the bubblegrunge category is slightly more inclusive of musicians of colour than rock at large, as artist images suggest that there are some Black and Brown solo artists and band members, although the visual representation largely confirms the construction of indie and alternative rock as white genres.<sup>94</sup>

The 354 artists in our sample tagged as rap français by Spotify were identified by MusicBrainz as male solo acts (89%) and duos/groups (11%). The artists whose gender is assigned on MB, Wikipedia, or in Spotify bios were all identified as men.<sup>95</sup> As with bubblegrunge, MB does not identify the gender of individual musicians in groups, but artist information on Spotify and Wikipedia suggests that there were no identifiable female, trans, or non-binary artists in the sample. Rap and hip hop genres are known to be male dominated and this is reflected in ENaO's visual representation of Spotify's genre categories; for example, in September 2022, Cardi B was the only female artist among the top thirty artists of the rap genre tag and hip hop's top thirty was all male. Still, it seems unusual, almost surprising, not to find a single female, trans- or non-binary musician among 354 artists. Well-known female French-speaking rappers such as Shay (tagged as francoton, french hip hop, and pop urbaine) and Lala &ce (tagged as french hip hop and rap calme) are not assigned to rap français and the lack of included female artists rapping in French genders the rap français genre masculine on Spotify. When we analysed the Spotify-created playlists 'PVNCHLNRS' and 'Fresh Rap' in 2023, one female rapper, Doria, had been tagged as rap français.

<sup>91</sup> Allan F. Moore, Song Means: Analysing and Interpreting Recorded Popular Song (London: Ashgate, 2012).

<sup>92</sup> Jack Halberstam, Female Masculinity (Durham, NC: Duke University Press, 1998).

<sup>93</sup> Lucy March, "Wrap You Up in My Blue Hair": Vocaloid, Hyperpop, and Identity in "Ashnikko Feat. Miku - Daisy 2.0", Television & New Media 24/8 (2022), https://doi.org.10.1177/15274764221093599.

<sup>94</sup> Hesmondhalgh, 'Indie: The Institutional Politics and Aesthetics of a Popular Music Genre', 38.

<sup>95</sup> For new rap français artists with one or two EP releases only, MB, Spotify, or Wikipedia often do not provide information about gender. These artists do not post gendered information on social media, and this can be understood as their masculinity being self-evident, gender categories are not needed. This also means that female, trans or non-binary artists could be 'hidden' in the sample.

The genre's overwhelming masculinity is not only identified through content analysis of artists' gender identity, but also presented in artists' visual styles in their thumbnail images. The pictures follow style codes of masculinity in rap: facial expressions are serious and among top artists on the exact matches list, several artists wear sunglasses (e.g., MAES and Uzi), hide their faces (e.g., Kalash and Gazo), wear hats and hoodies (e.g., Alonzo and Rohiff) or make hand signs (e.g., Guy2bezbar and Moha la Squale), all connoting common tropes of toughness associated with Black masculinity in rap culture.<sup>96</sup> Backdrops are rarely visible, but some show cars (e.g., Hamza) or simple facades of apartment buildings (e.g., MRC, YL, and Kamikaz). The artist's image of Lacrim, positioned as number four on the exact matches list, shows a bird's-eye view of a mansion and a luxury car. Juxtaposed with the austere facades of apartment buildings - symbolically evoking the banlieues of Paris - shown by multiple other artists, his image helps construct the tension between poverty in the banlieues on the one hand, and success, luxury, and money on the other. It invokes a central myth of rap, the narrative trope of rags-to-riches,<sup>97</sup> where poverty and luxury are not contradictions, but create meaning together. Black masculinities in rap are often expressed through 'hardman' tropes,<sup>98</sup> where a serious and tough masculinity is presented to connote stability and strength, while also, especially in gangsta rap, drawing on ideas about hustling or criminal acts. This presentation resonates with bell hooks's theorization of 'patriarchal [Black] masculinity' as an identity formation rooted in slavery and reinforced by capitalism throughout the twentieth century.<sup>99</sup> She argues that the development of what she labels 'gangsta culture' among Black men in the United States, and which she sees presented in rap culture<sup>100</sup> was founded in late capitalism, where earning money by tricking the system became the goal.<sup>101</sup> US rap culture has influenced global rap culture and while 'gangsta' identities in rap today are not simply misogynist or glorifying violence, as sometimes indicated in public debate, they rely on patriarchal ideas and the hope of tricking capitalism to become rich through hustle, as outlined by hooks. Some artist thumbnails contradict these racialized and patriarchal figurations: for example, with his back turned to the camera, the artist Zamdame is looking out over the open sea, MMZ is portrayed under a big blooming cherry blossom tree in bright pink against a white backdrop, and Chanceko is pictured in a snowy landscape with trees. These images present alternative masculinities by foregrounding artists' connections to nature, affirming Murray Forman's argument that constructions of authenticity in hip hop in the 2020s increasingly present Black masculinities that sidestep the stereotypical 'gangsta' figure.<sup>102</sup>

<sup>96</sup> Matthew Oware, 'Brotherly Love: Homosociality and Black Masculinity in Gangsta Rap Music', *Journal of African American Studies* 15 (2011), 23.

<sup>97</sup> Nassim Balestrini, 'Strategic Visuals in Hip-Hop Life Writing', Popular Music and Society 38/2 (2015).

<sup>98</sup> Miles White, From Jim Crow to Jay-Z: Race, Rap, and the Performance of Masculinity (Urbana, IL: University of Illinois Press, 2011).

<sup>99</sup> bell hooks, We Real Cool: Black Men and Masculinity (New York: Routledge, 2003), 4.

<sup>100</sup> hooks, We Real Cool, 62.

<sup>101</sup> hooks, We Real Cool, 16-17.

<sup>102</sup> Murray Forman, "Things Done Changed": Recalibrating the Real in Hip-Hop', Popular Music and Society 44/4 (2021).

The thumbnail of Doria (the only female rap français artist) also differs from the 'gangsta' figure: wearing a furry white bucket hat and bright purple sweatshirt, she faces the camera with a smile.

The playlist generated by ENaO for rap français starts with three melodically oriented tracks with melodious rap flows and melodic hooks in vocals and instrumental arrangements. The playlist is balanced in the relationship between melodically oriented and rhythmically oriented rap flows, the latter primarily characterized by the dismal and monotone cadences, heavy beats, and gloomy samples of drill. The Spotify-generated playlists 'PVNCHLNRS' and 'Fresh Rap' also represent these stylistic types. To illustrate the sonic and lyrical representation of Black masculinity in rap français, Yaro ft. Ninho on 'Dernier Etage' serves as an example.<sup>103</sup> Set at a moderate tempo, the song is introduced by two pairs of three descending synth chords; combined, the motive's downward motion and a subtle harmonic ambiguity in the pattern's latter part create a melancholic melodic-harmonic backdrop. Yaro's rap is subdued at a moderate tempo, while the distribution of his vocals across two time-shifted vocal tracks creates the effect of two voices echoing each other. Jointly, Yaro's mellow and melodic rapping style and the melancholic effect of the synths fittingly soundtrack the lyrics' storytelling. In the first verse, Yaro describes a late-night scene: Overlooking an open terrain, he observes his 'brother' returning home from prison, while Yaro is selling drugs to get himself away from the streets. 'Dernier etage' (top floor), repeated in the lyrics, carries multiple meanings: is the song's narrator feeling like he is on top of the world, is he striving to be on top and with money to leave a poor neighbourhood behind, or is he rather so sad that he may jump off the building he is standing on? Although the lyrics draw on 'gangsta' ideals of drugs and crime, they are complicated by the sadness and lack of celebration conveyed through musical arrangement and rap performance. Thus, 'Dernier Etage' creates an ambiguous Black masculinity. We will return to sounds and lyrics of bubblegrunge, and their implications for identity and difference in the next section.

### Constructions of temporality and (music) history

Grunge is a genre that is distinctly temporally and spatially situated: originating in the American Pacific Northwest in the mid-1980s, it gained mainstream popularity in the 1990s. In contrast, Spotify's bubblegrunge category mainly includes musical projects formed in the 2010s, most of whom have released music in recent years. Music in Spotify's bubble-grunge genre is not stylistically similar to grunge or music called bubblegrunge in the 1990s, but loosely shares stylistic characteristics of indie or alternative rock. On the opening song of ENaO's 'The Sound of Bubblegrunge' playlist, 'Get Bummed Out' by Remember Sports,<sup>104</sup> lead vocalist Carmen Perry draws the listener right into a scene: 'Waking up to just say your goodbyes, feign composure but I know you lied, I know you try so hard, so so hard', she states soberingly. Skipping an instrumental intro and sidestepping conventional verse-chorus structures, the track juxtaposes a perpetual loop of four chords with sudden shifts

<sup>103</sup> Yaro ft. Ninho, 'Dernier Etage', Universal Music Group, 2022.

<sup>104</sup> Remember Sports, 'Get Bummed Out', self-released, 2015.

in tempo and intensity, creating an unstable soundscape scoring the ending of a relationship that never really was. Combined, 'jangly' surf rock guitars and a driving minimalist rock drum kit perform sonic conventions associated with indie pop and rock since the late 1980s, while Perry's subtly adolescent, matter-of-fact vocal tone centres the young female-identified subject as the narrative's protagonist. Following a quiet and somewhat hesitant guitar intro, the playlist's second song, 'Dark Green Water' by Great Grandpa,<sup>105</sup> intensifies in emotive weight as lead vocals, shared by a female and a male band member, set in. Moving in parallel melodic steps set an octave apart, the singers' full vocal qualities in chest register lend gravity to introspective and emotive lyrics: 'All things fade into dark green water down by the lake, mistakes were made and that's the heart of this pain.' In the subsequent chorus, additional vocal tracks are paired with guitars and drums and synchronized to hit heavily on each downbeat, creating the heightened sense of introspection and emotivity associated with emo that originated in the mid-1980s and has been further popularized in several waves since. In sonic stylistic terms, these songs substantiate the juxtaposition of divergent generic roots in Spotify's bubblegrunge genre, where neither grunge nor music described as bubblegrunge in the 1990s are main stylistic touchpoints.

In addition to missing sonic temporal links, bubblegrunge also differs from the visual conventions of grunge. A quick scroll through ENaO's visual representation of Spotify's grunge category illustrates these conventions, revealing an abundance of group shots in black and white and black-to-navy hues, capturing mostly black-clad, mostly male musicians with serious facial expressions, or in live performance settings. Although some artist thumbnails of bubblegrunge recall early 1990s rock music, they resonate more strongly with indie and alternative rock rather than grunge: images feature streetwear items such as baseball hats, sports jerseys, and dungarees (e.g., Origami Angel, Another Michael, and Sun June) or use filters to create rose-coloured hues and grainy or overexposed effects of analogue photographs (e.g., Lomelda, Hovvdy, and Mannequin Pussy).

The sonic and visual qualities of bubblegrunge create an ambivalent temporality. Although most music has been released in the 2010s and early 2020s, artists draw on musical and visual conventions associated with indie and emo, genres that originated in the late twentieth century. Given the missing links to grunge and 1990s bubblegrunge, Spotify's bubblegrunge genre becomes a misnomer and is constructed as an ahistorical category, disconnected from the history of rock, and lacking identification and recognition among artists and listeners. Johnson argues that Spotify's genre metadata appears to be most differentiated in the realm of indie and alternative rock, which he understands as overcoding, describing the ascription of value to a cultural sphere by way of a heightened stylistic differentiation.<sup>106</sup> However, in the case of bubblegrunge, the category does not resonate with stylistic difference. Rather, the stylistic variance, missing links to grunge, and outsized presence of female lead vocalists construct bubblegrunge as 'other' to the (male, white) rock canon.

<sup>105</sup> Great Grandpa, 'Dark Green Water', self-released, 2019.

<sup>106</sup> Johnson, 'Chance the Rapper, Spotify, and Musical Categorization in the 2010s', 184.

Given the initial (social) media reactions to bubblegrunge discussed above, it is noteworthy that some Spotify users have since embraced the genre. In March 2023, searching for bubblegrunge in the 'playlist' section of Spotify's user interface returns over 150 playlists, the majority of which are user-generated playlists.<sup>107</sup> Leading in followers at the time of our analysis (about 3000) is the playlist 'Best of: Bubblegrunge' by the Spotify user It's Me, Christy. The thirty-one songs of the playlist were added just days after the publication of Spotify Wrapped 2021 and ENaO's research tool shows that all but one artist featured on the thirty-one songs are tagged as bubblegrunge. Resonating with music in Spotify's bubblegrunge genre discussed above, 'Best of: Bubblegrunge' features stylistically eclectic alternative and indie music released in the 2010s and early 2020s. The playlist also resonates with and even exceeds the gendered coding of Spotify's bubblegrunge genre tag as all but one song feature female-identified lead vocalists.

The user-generated 'bubblegrunge' playlist illustrates how listeners have embraced Spotify's gendered and temporally ambivalent genre to categorize stylistically variant rock-adjacent popular music. And while Spotify listeners' original reactions to bubblegrunge on social media expressed amusement and bewilderment about the genre, it has since come to inform how some listeners understand and categorize their own music listening – and their identity as listeners. In March 2022, Twitter user @\_mistymeg tweeted: 'this time last year I didn't know what bubblegrunge was, and now it's all I am'.<sup>108</sup> In the grand scheme of Spotify's mediation of genre, these examples are few, but they still interestingly point to a co-construction of genre and identity between listeners and media technologies that is increasingly mediated by Spotify's categorization of music. They show how bubblegrunge turned from an idiosyncratic genre tag that caused amusement and confusion to a gendered and temporally ambivalent organization of music that (some) listeners have come to identify with.

Various online music magazines use rap français and hip hop français interchangeably, defined as a French-speaking popular music genre inspired by US hip hop and rap, emerging in France in the 1980s. According to this cultural history, rap français has existed for almost forty years and MC Solaar, active since the 1990s, is the genre's most internationally successful artist. Music journalists and scholars<sup>109</sup> have described rap français as a stylistically diverse genre of rap, commercially successful mostly in France and other French-speaking countries. The genre has specialized record labels such as Def Jam France, the French branch of the influential US record company, and the most successful artists of the genre are also

<sup>107</sup> The search results also include (1) Spotify's algorithmically generated playlist 'Bubblegrunge Mix', (2) algorithmic Spotify playlists whose names include the word 'bubble', but which seem unrelated to bubblegrunge, (3) the editorial playlist *undercurrents*, which includes some artists tagged bubblegrunge, and (4) four playlists that refer to ENaO. While playlists in the latter category are created by the users 'Sounds of Spotify' and 'Particle Detector', the playlist thumbnails feature the Spotify logo marking Spotify-generated playlists. It is thus plausible that these playlists are generated and curated by a Spotify employee such as Glenn McDonald, and the Spotify logo further emphasizes the close ties between Spotify's mediation of genre and Every Noise at Once.

<sup>108</sup> ri (@\_mistymeg), 'This Time Last Year I Didn't Know What Bubblegrunge Was, and Now It's All I Am', Twitter, 25 March 2022, https://twitter.com/\_mistymeg/status/1507364633597943810?s=12&t=8-Vg0jKxEL-edNG3txwydg.

<sup>109</sup> Karim Hammou, Une Histoire du Rap en France (Paris: Le Découverte, 2012).

entrepreneurs in film, streaming culture, and merchandise. For example, in 2020, artist Gims released a Netflix documentary narrating the past ten years of his career. In Spotify's genre metadata, rap français as genre tag is distinguished from french hip hop, and hip hop français does not exist as a genre tag. However, a range of additional tags, such as pop urbaine, drill français, rap conscient, rap calme, and francophone are used to tag artists that perform rap in French, and it was common for the artists in our sample to be assigned several of these genre tags. Whereas the genre rap français existing in France long before Spotify and increasingly popular since the 1990s<sup>110</sup> would include music from all the genre tags mentioned here, rap français on Spotify signifies a genre that is defined in narrower stylistic and temporal terms. Being recently released is a common denominator of the tracks chosen to represent rap français on the genre playlist generated by ENaO. Twenty-three tracks (3%) out of 717 on the playlist were released before 2017, none of these are in the top thirty-five and no track on the list was released before 2013. The focus on novelty in constructions of rap français on Spotify is even more evident on Spotify's curated rap français playlists 'PVNCHLNRS' and 'Fresh Rap'. On 'PVNCHLNRS' about half of the songs were released in 2023 and the other half in 2022. On 'Fresh Rap', all songs but one was released in 2023, this playlist is also branded as 'all the latest rap français' motivating a focus on novelty among the songs. Here it is important to remember that Spotify playlists are algotorial, influenced by the streaming technology and editors that are in their turn working closely with record companies prone to want to showcase their latest artists. The temporality of the playlists is thus co-constructed.

Founders of rap in France (e.g., MC Solaar who is tagged as french hip hop, french rock, jazz rap, and old school rap français) and major stars, such as Gims, are missing on each of these playlists, and so are any artists who have not released music recently. This practice of selecting 'the latest' is not specific for Spotify – pop radio has also often focused on the latest hits. However, the genre tagging of Spotify further emphasizes the construction of rap français in terms of the present and of youth by separating the genre from 'old school rap français' where older artists are placed. For example, the 46-year-old artist Booba is tagged old school rap français despite releasing music in 2023. This presentation locates rap français in youth and the contemporary moment, rather than a historic continuum, and constructs it as a young genre, its artists being active in recent years. Further, the artists in Spotify's rap français genre look young. When the genre is constructed as young and new, the temporality of present rap français is disconnected from the genre's history.

David Brackett discusses genre as a temporal project, whose mediation of meaning (including through relationships to formations of identity) is contingent on the successful production of temporal lineage and teleology.<sup>111</sup> In contrast, Spotify's mediations of bubblegrunge and rap français do not resonate with constructions of the past as attached to these genres beyond Spotify. Rather, they disrupt temporal lines, in favour of constructions of the present that reach into the future. Studying Netflix and Twitter as cases for theorizing the

<sup>110</sup> Hammou, Une Histoire du Rap en France.

<sup>111</sup> Brackett, 'Questions of Genre in Black Popular Music', 75.

temporalities of digital media, Rebecca Coleman argues that these media construct an 'expanded present',<sup>112</sup> in which 'pasts and futures may be implicated and engaged'.<sup>113</sup> Spotify's mediations of rap français and bubblegrunge through genre metadata, visual representation, playlist curation, and media discourse may be understood as instances of an expanded present where constructions of the past are suspended in favour of a present reaching to the future.

## Place and the construction of international and national music

A total of 86% of the artists in our sample of Spotify's bubblegrunge category were based in the United States, followed by 6% UK-based and 4% Canada-based artists, while the remaining 4% were constituted by Australia, Norway, New Zealand, Sweden, and Spain. Many artists assigned bubblegrunge have additional tags, using US location-based prefixes, such as chicago indie or midwest emo. These regional descriptors vary strongly in scale, ranging from the Swedish town of Umeå (population 90k) to the American Midwest (population 69m). Similarly, artists in rap français are also commonly assigned tags with regional descriptors, including rap marseille and rap lyonnais. Here, tagging practices appear to resonate with conventions of alternative music cultures that have constituted genres in close relationships to local scenes<sup>114</sup> and to music markets as national (in Fabbri's<sup>115</sup> sense). However, the vast differences in scope and scale complicate previous concepts of scenes, which have historically built on an understanding of relatively small-scale networks of artists, record labels, venues, and media,<sup>116</sup> and raise questions about how regional and national specific genre categories constitute identity and difference in Spotify's mediation of genre.

Bubblegrunge includes a wide range of location-based tags from across the United States, and some other cities, regions, and countries. However, most artists are based in the United States and just under a quarter of artists are signed to five US independent record labels, remediating constructions of indie as forming through local scenes. Simultaneously, the dominance of US artists and labels affirms the US centricity of the popular music industry more broadly. The latter is both articulated and hidden in Spotify's genre metadata, where it results in the uneven calibration of geographic descriptors and the omission of 'US' as a location marker. The (unmarked) rearticulation of US-centricity in bubblegrunge is further supported by stylistic elements, as artists primarily draw on American alternative music traditions and rearticulate English as the normative language of alternative rock (neither ENaO's playlist nor the user-generated playlist include a single song in a language other than English). Combined, these elements construct bubblegrunge as an indie music genre, in ways that remediates the formation of local scenes and independent labels in alternative music culture, where the

115 Fabbri, 'A Theory of Musical Genres'.

<sup>112</sup> Rebecca Coleman, 'Theorizing the Present: Digital Media, Pre-Emergence and Infrastructures of Feeling', *Cultural Studies* 32/4 (2018), 613.

<sup>113</sup> Coleman, 'Theorizing the Present', 604.

<sup>114</sup> See Will Straw, 'Systems of Articulation, Logics of Change: Communities and Scenes in Popular Music', Music and Identity 64 (2004); Kruse, 'Subcultural Identity in Alternative Music Scenes'.

<sup>116</sup> Kruse, 'Subcultural Identity in Alternative Music Scenes'.

United States is established as its implicit yet unmarked centre. The spatial situatedness of bubblegrunge further illustrates the negotiation of stylistic and sociocultural dimensions of genre in Spotify's tagging practices, which are mediated by unknown combinations of machine listening, text analysis, and interventions by data analysts.

MB presents most artists of rap français as French nationals (93% of the artists with a nation assigned on MB are French), while a small number of artists were identified as Belgian (4%) and Swiss (1%) and 2% of the coded artists were identified as being from the Ivory Coast, Senegal, Madagascar, DRC, and Cameroon.<sup>117</sup> Further, as all artists rap in French, the genre is constructed as linguistically French. For rap français artists who could not be coded because information about nationality was absent on MB, we examined artist thumbnails, social media and Spotify bios, names, and lyrics, which resonate with the overall picture. These artists also rap in French and seem located mostly in France. The language and location of artists fit the category's linguistic construction, as 'français', and indicate that the 'French' live in France. The Spotify-created playlists largely feature artists tagged rap français and only nine songs (on 'PVNCHLNRS') and six songs (on 'Fresh Rap') are performed by artists not included in our sample of artists tagged as rap français. Among the eleven artists performing these songs, some are attributed adjoining genres tags (francoton, rap Marseille, french hip hop, pop urbaine, rap conscient, drill français, French pop, and rap calme) and some have no tags (they are new artists with one release).<sup>118</sup> The genre rap français as constructed on these Spotify playlists has some room for variations of genre tags, includes some more established artists, and broadens stylistic qualities towards increasingly popand R&B-oriented sounds. However, the outward construction of rap français on the Spotify-created playlists resonates closely with the internal construction of the genre in Spotify's genre metadata.

Tagging practices point to the tension between sonic and social aspects of genre that Fabbri would deem 'formal and technical' versus 'social and ideological'.<sup>119</sup> Notably, while 'rap' is the reference point of 'rap français', no artist tagged as rap français is also tagged as rap. By missing the relation to rap and hip hop, rap français is musically detached from very similar artists due to nation and language. Analysing Spotify's 'related artists' function, Tamas Tofalvy and Júlia Koltai find that nation (in the form of label location) and language mediate reconstructions on Spotify of centre and periphery in the music industry.<sup>120</sup> Studying Hungarian metal bands' association with local and international bands, they find that international label contracts and English language in lyrics prompt the association with international bands, thereby rearticulating the centre of the music industry as English speaking and US based, and its associated patterns of power. In rap français, the name of the genre and the absence of ties to the

<sup>117</sup> A total of 146 artists/groups had no assigned gender on MB, and 134 artists had no assigned nation on MB. Through social media profiles it seems unlikely that these artists would have changed the results of the content analysis.

<sup>118</sup> One artist, Doria, had been added to rap français between our first and second material collection in May 2022 and March 2023.

<sup>119</sup> Fabbri, 'A Theory of Musical Genres'.

<sup>120</sup> Tamas Tofalvy and Júlia Koltai, "Splendid Isolation": The Reproduction of Music Industry Inequalities in Spotify's Recommendation System', New Media & Society (2021).

umbrella genre rap detach rap français from artists outside the francophone world and construct it as periphery to rap's US centre, while Spotify's genre tag rap français and its playlists 'PVNCHLNRS' and 'Fresh Rap' construct a French universe.

According to information on MB and Wikipedia, almost all artists in rap français's exact matches list (who had such information available) are of North, West, or Central African descent, with the Republic of the Congo (colonized by France), DRC (Democratic Republic of the Congo) (colonized by Belgium), Senegal (colonized by France), and Algeria (colonized by France) being the most common countries of parental origin.<sup>121</sup> French and Belgian colonial pasts in Africa are also drawn upon in song titles (e.g., 'Kongolais Mauvais' ('Congolese mistake') by DA Uzi) and artists names (e.g., Yaro, an area of Burkina Faso and Jok'Air, referencing the spirit Jok in Acholi culture), invoking languages, regions, cultures, and nations in Africa.<sup>122</sup> Artists in our sample mix Paris slang, Arabic slang, and accents from francophone Africa and use samples and sounds from pop music of West Africa and Central Africa (e.g., Guy2Bezbar's 'Beretta'). These multimodal qualities construct colonial French identities as central to rap français; rap français is thus multimodally constructed as French coloniality, a concept describing how former colonial structures affect identity, society, and culture in the contemporary world.<sup>123</sup> Rap français thereby continues to negotiate a colonial history of extreme violence and racism by the French and Belgian colonial powers, a history that has been manifest in the genre's focus on racism, social impoverishment in urban France, and postcolonial ties to Africa.<sup>124</sup> While rap is also a genre negotiating US coloniality, Africa, slavery, and 'the Black Atlantic',<sup>125</sup> rap français's ties to French coloniality in Africa are not historical, but an ongoing reality, negotiated by artists, whose parents may have been born in African countries, or who may have been born there themselves.

Spotify's genre metadata implicitly constructs bubblegrunge as a US-centric genre with outposts in Australia, New Zealand, Great Britain, and other western European countries, while rap français is explicitly constructed as a French genre with outposts in Belgium, Switzerland, and a few African countries. When (white) Anglo-American identity remains the unmarked yet normative identity of indie and alternative rock music and rap français

<sup>121</sup> Knowledge about artists' ethnic identity is not quantifiable since biographies containing details about ethnicity or parents' nation of origin only existed for sixty of the artists. Two of the sixty were only described as 'French' and they appeared white. All the other fifty-eight were described as artists with 'origins' in African countries. Artists with no information on parental countries of birth visually fit with Black/Arab/Brown identities.

<sup>122</sup> Notably French colonial pasts in America, for example, Louisiana, Canada, Martinique or French Guiana; Oceania, for example, Tahiti or French Caledonia; the Indian Ocean, for example, Réunion; and Asia, for example, Vietnam, Cambodia, or Laos, are missing. It is the French coloniality shaped by colonialism in Africa that is drawn on in rap français.

<sup>123</sup> Nelson Maldonado-Torres, 'On the Coloniality of Being: Contributions to the Development of a Concept', *Cultural Studies* 21 (2007).

<sup>124</sup> Laurent Béru, 'Le Rap Français, un Produit Musical Postcolonial?', VOLUME! The Franch Journal of Popular Music Studies 6/1–2 (2008).

<sup>125</sup> Paul Gilroy, Black Atlantic: Modernity and Double Consciousness (London: Verso, 1993).

symbolically negotiates the African coloniality of France, negotiations of identity remain central to Spotify's mediation of these genres.

#### Conclusions

Spotify's organization of music remediates earlier categorizations of genres in some ways, and issues changes in others, including the increasing fragmentation of genres, the emergence of mood- and activity-based genres, and the creation of neologisms. In popular music culture, changes in the mediation of genre have been associated with the idea that genre is decreasingly important in popular music culture, and that 'genrefluid' listening is an expression of post-racial and post-gender identity among listeners and artists. In this article, we have argued that genre continues to construct identity and difference in the era of music streaming. Our analysis shows how the algorithmic and human processes forming Spotify's genre metadata, playlist curation, and media discourse demarcate, organize, and structure genre in ways that remediate earlier formations of identity and difference in (popular) music cultures. At the same time, we have pointed to the ways that the intersections of automated and human actants – including music editors, data analysis, and listeners – shape categorizations of genre and identity in new ways.

Our analysis shows how Spotify's mediations of genre rearticulate formations of identity and difference, where gender, race and class, temporality, and place emerged as central dimensions. In fact, internal stylistic plurality, missing stylistic and sociocultural links to grunge and 1990s bubblegrunge, and multimodal formations of gender suggest that bubblegrunge marks a demarcation of genre difference based on gendered difference. In turn, rap français is presented as a genre where Black/Brown/Arab youth and masculinity dominate, omitting women, trans and non-binary artists from the genre, from the African French coloniality that is constructed here, and intensifying the gendering and racialization of rap more broadly. Whereas genre formations have been theorized as temporal projects that depend on constructions of temporal and teleological continuities,<sup>126</sup> Spotify's mediations of these genres suspend constructions of the past for mediations of genres as extended presents, directed towards the future. These mediations call for further analyses of temporality as a central logic in digital media, which not only address the relationship between the present and the future,<sup>127</sup> but also examine disconnected and ahistorical mediations of genres within the broader context of processes of archiving and canon formation in contemporary cultural production and reception. Similarly, we found place to be an additional central dimension in Spotify's construction of genre and identity, remediating earlier constructions of genres surrounding localized scenes and industry structures; constructions of genres as national through mappings of language, place, artist biographies, and national/colonial pasts; and rearticulating (unmarked) normative ideas surrounding centre and periphery in popular music culture.

As John Frow asserts, 'far from being merely "stylistic" devices, genres create effects of reality and truth, authority, and plausibility, which are central to the different ways the world is

<sup>126</sup> Brackett, Categorizing Sound.

<sup>127</sup> Coleman, 'Theorizing the Present'.

understood'.<sup>128</sup> Spotify's genre metadata includes thousands of genres, rearticulating, intensifying or newly shaping how genre is co-constituted with constructions of identity and difference. The multiplication of categories and the intricate coded network of Spotify's genre metadata makes it easier for music and listening to *seem* genrefluid – an idea that ties in with the rhetoric of multiplicity, diversity, and individuality in neoliberalism and conceals rearticulations of power imbalances along the lines of gender, race, class, and other social identity factors. In this way, formations of genre as mediated by Spotify act as remediations of twentieth-century genre systems, including in popular music. Simultaneously, as we have shown in this article through the example of Spotify, the algotorial processes of streaming technology, which include users' contributions, renegotiate the stylistic and sociocultural aspects of music categorization, and organize genre in ways that intensify differentiation and individualization. Spotify's mediation of genre thereby shapes how identity and difference are understood and valued in contemporary (popular) music cultures.

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<sup>128</sup> John Frow, Genre (London: Routledge, 2006), 2.

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