


10-8-2018

# Rising tides? Data capture, platform accumulation, and new monopolies in the digital music economy

Leslie M. Meier  
*University of Leeds*

Vincent R. Manzerolle  
*University of Windsor*

Follow this and additional works at: <https://scholar.uwindsor.ca/communicationspub>

 Part of the [Arts and Humanities Commons](#), [Communication Technology and New Media Commons](#), and the [Mass Communication Commons](#)

---

## Recommended Citation

Meier, Leslie M. and Manzerolle, Vincent R.. (2018). Rising tides? Data capture, platform accumulation, and new monopolies in the digital music economy. *New Media & Society*.  
<https://scholar.uwindsor.ca/communicationspub/18>

This Article is brought to you for free and open access by the Department of Communication, Media & Film at Scholarship at UWindsor. It has been accepted for inclusion in Communication, Media & Film Publications by an authorized administrator of Scholarship at UWindsor. For more information, please contact [scholarship@uwindsor.ca](mailto:scholarship@uwindsor.ca).

# **Rising tides? Data capture, platform accumulation, and new monopolies in the digital music economy**

*New Media & Society*

## **Authors**

Leslie M Meier, University of Leeds, UK (corresponding author, [l.meier@leeds.ac.uk](mailto:l.meier@leeds.ac.uk))

Vincent R Manzerolle, University of Windsor, Canada

## **Abstract**

This article examines the roles of platform-based distribution and user data in the digital music economy. Drawing on trade press, newspaper coverage, and a consumer privacy complaint, we offer a critical analysis of tech-music partnerships forged between Samsung and Jay-Z (2013), Apple iTunes Store and U2 (2014), Tidal and Kanye West (2016), and Apple Music and Drake (2017). In these cases, information technology (IT) companies supported album releases, and music was used to generate user data and attention: logics of data and attention capture were interwoven. The IT and music industries have adapted their business strategies to what we conceptualize as platform-based capital accumulation or ‘platform accumulation’, and models centred on controlling access and extracting rent have enabled the emergence of new monopolies and IT gatekeepers.

## **Keywords**

music industries; information technology; platforms; streaming; user data; data capture; promotion

## **Author biographies**

Leslie M Meier is a lecturer in Media and Communication at the University of Leeds. Her work focuses on the music industries, promotional culture, and digital media. She is the author of *Popular Music as Promotion: Music and Branding in the Digital Age* (Polity, 2017).

Vincent R Manzerolle is an assistant professor in the Department of Communication, Media & Film at the University of Windsor. He has published on financial technologies, consumer databases, apps, wireless telecommunications, mobile payment systems, and media theory. He is co-editor of *The Audience Commodity in a Digital Age* (Peter Lang, 2014) and *Mobile and Ubiquitous Media* (Peter Lang, 2018).

## **Introduction**

Media and information technology (IT) corporations' relentless drive to amass and monetize data about what users listen to, do, and purchase online has swiftly reconfigured the music industries. In the twenty-first century, after a brief embrace of the (authorized) digital download model, retail systems premised on selling and owning music have been eroded amid the rise of streaming. Today, transnational IT giants Amazon, Apple, and Google and specialist streaming services such as Spotify work with and compete alongside record companies and music publishers in the pursuit of users. The modes of monetization underpinning digital platforms, including the capture of user data, shape the terms on which music is exchanged, distributed, and consumed. The IT industries have propelled music industry change in the twenty-first century much as the consumer electronics industries played a defining role in the production, circulation, and consumption of music in the twentieth century (Hesmondhalgh and Meier, 2018).

In this article, we provide a critical evaluation of the evolution of tech-music business partnerships forged between 2013 and 2017, focusing on new IT gatekeepers. Drawing on trade press, newspaper coverage, and a consumer privacy complaint, we examine four cases that involved experiments in marketing and distributing music. Each promotional partnership featured a technology company supporting an album launch by a star recording artist with experience participating in extra-musical promotional and entrepreneurial ventures: Samsung and Jay-Z in 2013; Apple iTunes Store and U2 in 2014; Tidal and Kanye West in 2016; and Apple Music and Drake in 2017. These artist-brand deals were not simply used to grab audience attention and lend cultural legitimacy to the partnering companies, a now well-established practice (see Meier, 2017). These arrangements exemplify commercial and promotional logics driving an IT-led configuration of power in the music industries in which

platforms are pursuing forms of ‘digital enclosure’ (Andrejevic, 2007) centred on the creation and containment of user data. We characterize these release strategies as data and promotional ‘events’: music launches designed to spur interest, direct user traffic to specific platforms, and generate a torrent of data, thus serving the dual aims of attention and data capture. While capital accumulation strategies driven by the aggregation of digital data are relatively recent phenomena, we see these forms of platform-based accumulation as an intensification of logics described by Harvey (1990) as ‘flexible accumulation’ – a reorganization of capitalist processes whose origins can be traced back to the economic crises of the 1970s. What we term ‘platform accumulation’ is marked by the deepening of forms of privatization, marketization, and corporate consolidation associated with neoliberal capitalism more broadly.

### **Music, digital distribution, and platform accumulation**

#### *Platforms and cultural production*

‘Platform’ is a keyword that signals and links together the varied and profound effects of digitalization, working in concert with political economic shifts, on the mediation and monetization of information and culture. Digital platforms are software entities, and tight control over their operation, capabilities, and access can be ‘baked into’ the interface, enabling the commodification of ‘both the content and the technology which transmits content to consumers’ (Sullivan, 2016: 69). Platforms are not just software, however. They involve the ‘stacking’ (see Bratton, 2016) of hardware, software, infrastructure, goods and services, and interfaces into a user experience/marketplace ultimately controllable by one entity. Plantin et al. (2018) situate the study of platforms at the intersection of ‘platform studies’ and ‘infrastructure studies’, and observe that ‘the rise of ubiquitous, networked

computing and changing political sentiment have created an environment in which platforms can achieve enormous scales, co-exist with infrastructures, *and in some cases compete with or even supplant them*’ (p. 301; emphasis in original). Helmond (2015) describes ‘platformization’ as ‘the dominant infrastructural and economic model of the social web’, which involves ‘the extension of social media platforms into the rest of the web and their drive to make external web data “platform ready”’. Some use the term ‘platform capitalism’ – understood as a form of ‘advanced capitalism ... centred upon extracting and using a particular kind of raw material: data’ (Srnicsek, 2017: 39) – to underscore the role of platforms in driving a reorganization of capitalism itself. As Nieborg and Poell (2018) demonstrate, business studies helps explain the ‘winner-take-all effects’ and ‘network effects’ (described below) that accompany platformization, political economy interrogates commodification and corporate concentration, and software studies investigates questions regarding algorithmic logic.

The platform functions as a *productive* socio-technical form. As Bratton (2016) explains, ‘Platforms are generative mechanisms – engines that set the terms of participation according to fixed protocols... [P]latforms are not just technical models but institutional models as well’ (p. 44). Platforms offer ‘techniques that sustain interactions as well as offer an epistemological framework’ (Apperley and Parikka, 2018: 353) through their ability to collect, store, and process aggregate data. The technical and institutional architecture of the platform creates and mediates entire markets for digital products, linking users and interfaces together and reducing transaction costs. A common ‘intermediary logic’ unites platforms ranging from Amazon to YouTube to Kickstarter: these services bring together buyers and sellers (they act as ‘multi-sided markets’), and they coordinate ‘network effects’ (their value expands dramatically as the network grows, drawing in more users and those users’ networks,

thereby funnelling more user data into the platform's orbit) (Langley and Leyshon, 2017: 14-15).

The term 'platform' is a discursive construct that masks power structures and informational asymmetries through connotations of being 'open, neutral, egalitarian and progressive', as Gillespie (2010: 352) astutely argues. As the term gained currency in the post-Web 2.0 era, it helped blunt wider critiques or policy prescriptions that applied to traditional media or infrastructural capital formations (e.g. broadcasting, telecommunications, publishing) (Gillespie, 2010). Relatively unencumbered in terms of regulation, platforms entered into direct competition with more traditional cultural industries.

Platform companies are digital gatekeepers with tremendous reach, power, and capacity for user monitoring. In their analysis of the platformization of cultural production, Nieborg and Poell (2018) identify a worrying level of 'platform dependence', using the examples of news and games. Not only have platforms become a key point of access, but cultural commodities have become 'contingent' as a result of their circulation via platforms – increasingly 'malleable, modular in design, and informed by datafied user feedback' (Nieborg and Poell, 2018). Following Nieborg and Poell's (2018) call to develop case studies on the effects of platformization on other cultural industries, we turn to music platforms, and in so doing, bring platform studies into dialogue with music industries research.

### *Music industries, data, and market research*

The twentieth-century music business revolved around record sales, and live performances and music publishing provided complementary sources of revenue and cross-promotion. Record companies exercised considerable control over the production and circulation of music due to the centrality of the studio album. The tendency to equate music with the sound

recording is evident in the commonplace use of the term ‘music industry’ (in the singular) as a synonym for the recording industry, thereby obscuring the involvement of a much wider set of industries (see Sterne, 2014; Williamson and Cloonan, 2007). The entrance of the IT sector into the music industries has lent yet more complexity to an already complex matrix of interests. While mindful of the problem of perpetuating the ‘monetization-of-recordings construct’ (Sterne, 2014: 50), the business experiments of interest here have been driven precisely by the attempt to monetize digital recordings.

Today, the production of sound recordings remains a key starting point for capital accumulation, but music media (e.g., vinyl, compact discs) and content (e.g., songs) have become ‘increasingly delinked’ amid the rise of ‘a seemingly virtual (digital) format’ (Scherzinger, 2016). Music-related industries are increasingly focused on offering provisional *access* to catalogues of recorded music via streaming services (licenced from rights holders) rather than *ownership* of recordings (see Anderson, 2014; Burkart, 2014; Kjus, 2017; Marshall, 2015). Digitalization enabled the ‘disaggregation of albums into individual files’ and new forms of reaggregation and value creation, such as playlists (Morris, 2015b: 64). Music metadata (data that describe and contextualize music) play a role in the production of ‘musical experiences’, as ‘a digital file rarely exists in solitude and is instead accompanied and linked together with other types of data’ (Eriksson, 2016). Crucially, in addition to existing as a sound recording, ‘music has become data, and data in turn has become contextual material for user targeting at scale’ (Vonderau, 2017). Our focus is on the relationship between user data – a sought-after asset that has been likened to oil (Deutscher, 2013; *The Economist*, 2017) – and platform capital, whose accumulation strategy hinges on controlling this new music industry currency.

The rise of platforms marks the latest stage in a longer history of the intertwining of music, data, and market research. Beginning in the early 1990s, the use of SoundScan and Broadcast Data Systems (BDS) enabled detailed tracking and monitoring of sales and airplay, respectively, and SoundScan was ‘hailed for presenting hard data in an industry riddled with hype’ (McCourt and Rothenbuhler, 1997: 203). This point-of-purchase scanning technology could ‘precisely pinpoint markets where particular artists and genres are popular’, allowing music companies to mitigate risk (McCourt and Rothenbuhler, 1997: 208).

Another antecedent for platform-based models originated with music’s move away from retail models and its circulation instead in ‘grey/anti-market spaces’ (Morris, 2015a: 32). According to Morris (2015a: 41), taken together, unauthorized file sharing service Napster and music metrics company BigChampagne (whose audience measurement data included Napster use) served as ‘a prototypical template’ for streaming business models. By tracking the popularity of files traded, these companies helped transition the industry from ‘measurements of exposure and sales – what SoundScan or BDS typically measure’ to models that ‘promise insight into intimate mindsets such as “engagement,” “attention,” or “anticipation”’ (Morris, 2015a: 40).

The *promise* of the value of such insights is key; speculation regarding the potential value of user data stoked venture capitalist interest in streaming. Spotify is emblematic of this dynamic. Spotify’s ‘programmatic advertising’ business, under which media buying is automated, has not only enabled the company to ‘attempt to maximize ad sales in a short time’, but also to ‘sell the idea of “music streaming behavior as a new currency for advertisers” to the venture capital investment community’ (Vonderau, 2017). Vonderau (2017) characterizes Spotify as a ‘media company operating at the intersection of technology, advertising, finance, and music’, asserting that the ‘most important function’ of Spotify’s



automated online aggregation system ‘has been to establish the prospect of future income streams that would provide venture legitimacy in the present’. In the platform economy, we have not seen the replacement of ‘hype’ by hard data, but the explosion of hype *about* data.

The creation of new metrics and user behaviours to measure conferred power to *data producers*: platforms. At once an access point for listening, sales, and distribution, the platform promises various types of user data and opportunities for advertisers. Platforms function as levers of power in the cultural industries because of their ability to enclose user data, rendering data private property.

#### *Platform accumulation, digital enclosure, and monopoly rent*

We conceptualize what we term ‘platform accumulation’ as a continuation of, but also transformation within, what Harvey terms ‘flexible accumulation’. According to Harvey (1990),

flexible accumulation is marked by a direct confrontation with the rigidities of Fordism. It rests on flexibility with respect to labour processes, labour markets, products, and patterns of consumption. It is characterized by the emergence of entirely new sectors of production, new ways of providing financial services, new markets, and, above all, greatly intensified rates of commercial, technological, and organizational development ... It has also entailed a new round of ... ‘time-space compression’. (p. 147)

Digitalization set the stage for platform accumulation, ushering in new products and markets, enhancing the autonomy of technology vis-à-vis labour, and allowing for near instantaneous delivery of digital products across the globe. The speed of digital payments and use enabled an acceleration of the circulation of capital (Manzerolle and Kjøsén, 2015). Neoliberal

ideology and policies privileging privatization, marketization, commodification, and free trade, meanwhile, drove the commercial makeover of the internet. Platforms control ‘the surface on which the market exchange takes place’, with digital distribution and network effects enabling an ‘intensification of capitalism’ (Andersson Schwarz, 2016). Data about consumer transactions serve as ‘the property of private companies that can store, aggregate, sort, and, in many cases, sell the information to others’ (Andrejevic, 2007: 3), and lubricate the feedback loop between production and consumption, thus propelling a radical acceleration of time-space compression. There is something distinctive, then, about platform-based capital accumulation, even as it ought to be understood within this broader historical and political economic context.

Authorized digital music distribution is premised on platform-controlled access and monetization via direct sales (in digital media stores) or via advertising, subscription sales, or some combination of both (in streaming services). Varied approaches are united by a commercial interest in user data. Capital accumulation strategies centred on digital music encourage forms of ‘digital enclosure’ – a process Andrejevic (2007) understands as not only involving commercialization and privatization, but also as rendering ‘[a]ccess to goods and services ... increasingly tied to interactive monitoring as a condition of purchase’ (p. 110). While Andrejevic (2007: 109) suggests that iTunes and similar digital music stores ‘represent[ed] the beginnings of the digital enclosure of sound recording’, drawing on Andrejevic, Morris (2015a: 35) positions Napster as ‘a prototypical version of a digital enclosure’, given the value of its database.

The enclosure of user data within streaming platforms facilitates rent-based monetization, and the giants of the music and IT industries are able to marshal monopoly rents. As Harvey (2002) explains,

All rent is based on the monopoly power of private owners of certain portions of the globe. Monopoly rent arises because social actors can realize an enhanced income stream over an extended time by virtue of their exclusive control over some directly or indirectly tradable item which is in some crucial respects unique and non-replicable. (p. 94)

In the case of user data, it is not that this tradable resource is non-replicable per se, but that the capture of data within a proprietary structure allows the platform to control and limit access. User data ‘must be fenced in and kept artificially scarce in order to justify their price’ (Rigi and Prey, 2015: 398). Within social media and platform-based sectors, the ‘networking activities of audiences, the intensity of these activities, and the influences and affective relations that they produce’ are enclosed within the platform, and rent is extracted from advertisers ‘in exchange for the lease of (virtual) space’ (Rigi and Prey, 2015: 397). Historically, advertisers participated in ‘an exchange of rent for hope: the potential of generating greater future sales’ (Rigi and Prey, 2015: 396). With platforms, that hope is amplified and transformed into a belief in the predictive power of user data.

While music companies are not in the business of user data in the way that their IT competitors are, their dependency on platforms binds these sectors together through a system of rent. These more traditional media organizations sell music as copyrights to be licenced to streaming services, and as recording artists to be branded and merchandised. Although streaming service users rent access to a seemingly non-depletable resource (music), copyright regimes are used to (attempt to) maintain artificial scarcity, updating an industry tactic that was formerly more easily managed due to the materiality of physical music commodities. Past and present, celebrity status has also contributed to artificial scarcity, and IT companies’ interest in the promotional power of celebrity enables music companies to charge a premium

for star artists. There may be countless musicians and songs, but hits and stars receive the lion's share of promotion and, hence, attention – a dynamic underscored by the following four cases, which illuminate mutually reinforcing logics of data and attention capture.

### **An emerging currency and industry 'Holy Grail': Samsung, Jay-Z, and user data**

Our first case highlights problems posed by mandatory permissions that enable tech companies to aggregate as much data as possible in an effort to uncover *contextual user data* – a tech industry term that refers to meaningful and monetizable relationships and patterns found in data (Manzerolle and Kjosen, 2014: 146-155). The release of Jay-Z's *Magna Carta...Holy Grail* (2013) by Samsung mobile application offers a noteworthy experiment in the music industries' transition to platform models centred on data, illustrating the interwoven logics of data capture and promotion. Samsung and Jay-Z collaborated to release 'free' downloads of the album to one million owners of specific Samsung Galaxy devices in advance of the official launch – a deal costing Samsung an estimated \$20 million, with the price of purchasing one million albums totalling \$5 million (Forde, 2013). Through this pull-based distribution strategy (users elected to participate), Samsung attempted to weave its products into user listening practices, as the album app operated as a platform for music distribution and consumption. In exchange for the 'free' album, users were prompted to permit the app to collect what was at the time perceived as egregious quantities and types of data, ostensibly enabling the capture of contextual user data.

In a climate marked by growing public concern about online privacy (Edward Snowden's global surveillance disclosures circulated in 2013), the mobile app provoked public backlash and critical media commentary. The *New York Times*' Jon Pareles (2013) noted not only the troubling permissions requesting to read 'the phone's status and identity',

but also the more unusual demand for ‘a working log in to Facebook or Twitter and permission to post on the account’ – functionality used to ‘unlock’ lyrics and plug the album on user accounts by way of automated, pre-written messages (a requirement Pareles characterized as ‘forced speech’). ‘If Jay-Z wants to know about my phone calls and e-mail accounts’, he queried, ‘why doesn’t he join the National Security Agency?’ (Pareles, 2013). Disapproval was registered in headlines published by *Gawker*, *Apple Insider*, *The Guardian*, *New Musical Express*, and others (Chen, 2013; Dilger, 2013; Dredge, 2013; Renshaw, 2013), with *Gawker* proclaiming that ‘Jay-Z’s new album is basically a massive data-mining operation’.

Alarm over the potential violation of privacy rights motivated consumer advocacy. The Electronic Privacy Information Center (EPIC), a Washington, DC-based non-profit, submitted a complaint to the US Federal Trade Commission (FTC), charging that Samsung used ‘deceptive business practices’ to acquire ‘massive amounts of personal information’ and ‘deprived users of meaningful choice regarding the collection of their data’ (EPIC, 2013: 1). EPIC saw the data collection demanded by the Magna Carta app permissions as ‘unfairly overbroad’ insofar as it was ‘unnecessary to run the app’ (EPIC, 2013: 13). The app ‘collected users’ approximate location, precise location, unique device identifiers, phone numbers and phone numbers called, application usage information, log files, account information from other apps, and Wi-Fi network and connected device identifiers’ (EPIC, 2013: 13). It also collected ‘e-mail addresses and social-media user names connected to the phone’, and made signing into Facebook or Twitter a prerequisite for accessing the album (EPIC, 2013: 4-5) – conditions unrelated to the app’s use as a means of downloading the album. Citing decisions in comparable cases involving HTC and Google, the EPIC complaint argued that the Samsung app violated the principle of ‘Respect for Context’ outlined in the

Obama Administration's Consumer Privacy Bill of Rights (CPBR): 'Consumers have a right to expect companies will collect, use, and disclose personal data in ways that are consistent with the context in which consumers provide the data' (in EPIC, 2013: 7).

The outcome of the complaint is as of yet unclear. Privacy concerns about the Magna Carta app faded from the headlines not long after they appeared, and despite the negative publicity, the arrangement produced positive results for Jay-Z. *Magna Carta...Holy Grail* debuted at number one on *Billboard's* top 200 chart (Caulfield, 2013) – a guaranteed outcome due to Samsung's one million album purchase (Forde, 2013). Marketers touted the partnership as a success story and meaningful landmark in tech-music business collaboration (Forde, 2013; Hampp, 2013), and Kanye West claimed it set the stage for Apple's purchase of Dr Dre's Beats (McGregor, 2014).

The Samsung/Jay-Z case reveals the strings attached to free digital music: user data. Music was exchanged for compromised user privacy and forced, automated word-of-mouth promotion via social media. The promotional and data events tied to this release were mutually reinforcing: the star status of the recording artist heightened the promotional value of the release, amplifying user interest and, hence, the depth and breadth of data collected. The arrangement also supported Samsung's efforts to expand from its core business as a hardware company into software, using music for the purposes of app development and promotion. While the overall success of the strategy is debatable, it offered a decisive step towards embedding music within a platform logic driven by IT interests, testing data capture-based business models.

### **Forced gifts, digital opportunism: Apple and U2**

The highly publicized iPhone 6, Apple Watch, and Apple Pay launch in September 2014 concluded with the announcement that all iTunes users would find a free download of U2's album *Songs of Innocence* (2014) delivered to their music libraries. Under this push-based strategy (Apple opted users in by default), iTunes and U2 automatically 'gifted' the album to more than 500 million accounts (Apple, 2014). Apple paid U2 and their record company, Universal, 'an unspecified fee as a blanket royalty and committed to a marketing campaign for the band worth up to \$100 million' (Sisario, 2014). This was not a gesture of generosity but a strategy premised on self-interest and self-promotion – and judging by the response, transparently so.

While a formal complaint was not filed with the FTC, there was 'significant consumer backlash' to what was widely seen as an 'unwanted (or at least unasked for) intrusion' (Morris, 2015b: 187). Users took to Twitter to express their frustrations: 'Hi @tim\_cook. My iPhone has a virus called "U2" how do I uninstall it?' (in BBC, 2014); 'In other news, your ringtone has been changed to 'Beautiful Day' and Bono is now your friend on Facebook' (in NME Blog, 2014); and 'I'm gonna break into Bono's house and put my mixtape on his iPod' (in Jones, 2014). A *Wired* contributor likened the release to 'spam with forced downloads' (Assar, 2014). U2 and Apple contravened expectations regarding digital privacy and etiquette, and the critical response highlighted serious concerns about the security of cloud computing. As a *Recode* writer pointed out, 'If you're trying to convince me that the stuff I store in my cloud is safe, don't open up my cloud without permission' (Kafka, 2014). Indeed, according to Morris (2015b), user objections to U2's forced gift underscore a 'dwindling sense of control over one's own music library' amid the growing power of cloud-based services (p. 186).

This public relations gaffe prompted Apple to develop an album removal tool, and Bono issued an apology, characterizing the move as a ‘drop of megalomania, touch of generosity, [and] dash of self-promotion’ (in Grow, 2015). Interestingly, in a digital economy geared around generating and capturing user attention, media coverage – good or bad – encourages online traffic. According to industry analysts, by the end of January 2015, approximately 23 percent of iOS users had listened to U2 that month alone – more than doubling the numbers achieved by that month’s second most listened to artist, Taylor Swift (Wilner, 2015).

Notably, the release coincided with the launch of mobile payment service Apple Pay, and according to *Business Insider*’s Edwards (2014), this was no accident: ‘To use Apple Pay, you have to add a credit card to your iTunes account. To get the U2 album, you have to create an iTunes account... The dots don’t need a lot of joining. iTunes, and its credit-card database, is the heart of Apple’s new payment business’. Apple’s post-2003 business model has focused on ‘owning’ consumers by driving them into its ecosystem (e.g., platform) (Montgomerie and Roscoe, 2013). Beyond the drive to collect payment information, this release strategy underlines an objective of increasing the number of iTunes users, as suggested by Bono: ‘They have 885 million iTunes accounts, and we’re going to help them get that number to a billion’ (in Heisler, 2014). In the streaming era, the subscriber base – and, hence, database of users – has been a key driver of economic value, and in 2015, Apple launched its own streaming service: Apple Music.

The Samsung/Jay-Z and Apple/U2 cases bridged established digital download retail models with newer platform models through their shared focus on aggregating user data, ranging from personal to credit card information. While unsolicited digital content and one-sided software terms and conditions have since become increasingly normalized, these cases



provided instances where companies crossed perceived boundaries regarding how much promotion and data mining was too much. Departing from the above strategies of mass distribution, the next case centres on the promotional and commercial potential of restricted access.

### **Streaming platforms and exclusive content: Tidal and Kanye West**

By 2015, models premised on owning digital downloads had been eroded by cloud-based streaming services. As the number of services swelled, different platforms attempted to differentiate themselves via interface design, curatorial strategies, and distinctive branded musical experiences (Morris and Powers, 2015). Tidal, formerly WiMP, was rebranded and relaunched in March 2015, after Jay-Z's company Project Panther Bidco purchased Aspiro, Tidal's parent company (Taylor, 2015). Unlike services such as Spotify, Tidal does not offer a free, advertising-funded option, prompting a *Billboard* reporter to characterize its approach as a 'step in moving the music industry toward its "Netflix" inflection point: converting consumers who are used to streaming content for free to pay a monthly fee' (Hampp, 2015). Tidal has used an exclusive release strategy in an attempt to attract users. This case focuses on the firm's partnership with Kanye West.

Tidal is a 'majority artist-owned company' (Tidal, 2018) that positions itself as more artist-friendly than its competitors, reportedly paying rights holders (typically record labels and music publishers) a higher percentage of revenues generated than Spotify, for instance (Leonard, 2015). The service was launched amid mounting artist criticism regarding unfair streaming compensation rates (see Marshall, 2015). Under streaming models, tracks must be streamed in extremely high volumes before this revenue stream can sustain artist careers, with 152,094 Spotify subscriber streams reportedly generating \$100 for artists on average

(Bershidsky, 2017). Massive audiences are needed to generate generous profits, which has translated into a focus on hits and stars, intensifying logics that have long governed the music industries. Star power and exclusive access to music by top artists is the source of leverage wielded by Tidal vis-à-vis streaming competitors. The initial ownership group consisted of Jay-Z and Kanye West in addition to artists ranging from Nicki Minaj to Madonna to Arcade Fire (Flanagan and Hampp, 2015).

West, a master of provoking attention, teamed up with Tidal to release *The Life of Pablo* (TLOP) in February 2016. The release strategy was innovative not only due to its streaming-only format, but also because it was exclusive to one platform. West, then a shareholder and executive at Tidal, promoted Tidal and TLOP to his 27 million Twitter followers, encouraging them to download the app to access the album. On 15 February 2016, West tweeted: ‘My album will never never never be on Apple. And it will never be for sale... You can only get it on Tidal’ (in McCormick, 2016). This data and promotional event generated user interest and catapulted Tidal to number one in Apple’s App Store, albeit briefly (Koetsier, 2017).

This case sheds light on inherent tensions in music-related capital accumulation under platform models. While the logic of exclusivity helps draw users into closed, proprietary, and controlled platforms, thereby generating the user data on which monetization hinges, it undermines the strategies of audience maximization fundamental to the profitability of the music industries (and can strain relationships with labels and other streaming platforms). Because streaming-only releases rely on economics of scale (a large volume of low-margin streams), limiting West’s audience to Tidal users curtailed the album’s financial potential. The number of unauthorized downloads of the album spiked, with some estimates suggesting 500,000 downloads in the week after its release (Shepherd, 2016), and mounting pressure

motivated a wider album release on Apple Music, Spotify, and Google Play following the exclusive release. By the time TLOP was available on competing platforms, it reportedly had been streamed 400 million times by Tidal subscribers – the financial equivalent of approximately 267,000 albums sold (Coscarelli, 2016).

The broader release of TLOP spurred controversy that culminated in a class action lawsuit against both West and Tidal, which cited West’s emphatic tweets about TLOP’s exclusivity to Tidal. Justin Baker-Rhett initiated the suit on the grounds that West and Tidal ‘duped users into subscriptions based on the promise of being the exclusive outlet for West’s latest album’ (McCartney, 2016). This promise of exclusivity, the suit claimed, enabled Tidal to capture ‘users’ credit card information, music preferences and other personal information’ – user data Baker-Rhett requested that Tidal be required to delete (McCartney, 2016).

West’s response, whether sincere or strategic, reveals a changing disposition towards the studio recording in the platform era. West insisted that TLOP was a ‘living breathing changing creative expression’ (in Doyle, 2016) – a position that harmonizes with Nieborg and Poell’s (2018) notion of ‘contingent’ cultural commodities, which are ‘open to constant revision and recirculation’. The ‘first draft’ was released as exclusive to Tidal, and West engaged in multiple edits, including altering lyrical passages, after its release (Doyle, 2016). West’s record label, Def Jam (a Universal subsidiary), released a statement explaining that ‘[i]n the months to come, Kanye will release new updates, new versions and new iterations of the album’ (in Coscarelli, 2016), and West made a more comprehensive update of the entire album before it was released on competing platforms. Thus, West’s tweet about exclusivity was *technically* true. Since versions vary across platforms, with Tidal having its own ‘exclusive’ version, West’s legal team pushed for the lawsuit to be dismissed (Brandle,

2017). The merits of the lawsuit are debatable, and a judge recently dismissed some but not all aspects of the suit, characterizing West's argument as 'tenuous' (Stutz, 2018).

Significant here is how this case entails a type of 'versioning' – a term typically used to describe software updates – that enables a proliferation of content to be streamed, not only generating more streaming revenue but also more contextual user data across different platforms. Furthermore, it reveals the contradiction between exclusive release strategies designed to raise subscriber numbers and the economic importance of high stream volumes – an objective more readily achieved via broad releases across platforms. Recent accusations that the streaming numbers for TLOP (and Beyoncé's *Lemonade*) were grossly and deliberately inflated by Tidal (Ingham, 2018) highlight this tension, and also demonstrate how the reporting of massive streaming figures functions as a means of capturing media and user attention in the short-term. The claim in 2016 that West's release had been streamed '250 million times in 10 days' made numerous headlines, ranging from music and tech magazines to news publications. Given that mass distribution, not exclusivity, is the key to making streaming a viable source of revenue for artists, it is not surprising that experiments with exclusives have been limited.

### **Drake, Apple Music, and the playlist**

The platform is now firmly established as a central means of accessing music, and the streaming playlist – an epiphenomenon of platforms – reveals the continuing imbrication of digital music's commercial and promotional logics. Industry research suggests that playlists are challenging albums as a dominant model for aggregating songs (Fuller, 2017), with listeners reportedly 'spend[ing] about half their time on Spotify listening to playlists' (Pierce, 2017). The playlist renders digital music 'more modular, variable, and malleable but also

more contingent on the technologies of its playback and presentation' (Morris, 2015b: 17). Our final case centres on Drake's *More Life* (2017) release, which was positioned as a playlist, not an album, and examines the playlist format's use as an instrument of market research and user tracking. This promotional and data event brings together the star- and hit-driven economies of the music industries and the logics of platform accumulation.

Perhaps learning from criticism of its alignment with aging rockers U2 in 2014, Apple's 2015 launch event for streaming service Apple Music featured hip hop star Drake. Apple reportedly signed Drake to a \$19 million deal, encompassing promotion of Apple Music, use of his music in the streaming service's advertisements, and scope for exclusive releases (Reisinger, 2016). Drake's album *Views* (2016) debuted on Apple Music (Dredge, 2016), and became the first album to reach one billion streams on that platform (Josephs, 2016). Whereas *Views* was 'windowed' – it received a wider release across other services after its initial exclusive release on Apple Music (and iTunes) – the *More Life* release was coordinated with, but not exclusive to, Apple. Given that Drake's music has reportedly been streamed more than 10 billion times on Spotify (Jones, 2017), there was a strong rationale for opting for a broad release. *More Life* broke a Spotify record, achieving 76,355,041 plays on the first day of its release, and exceeded 250 million streams between Apple Music and Spotify in just two and a half days (Jones, 2017).

The *More Life* playlist approach highlights the links between marketing, user data, and the use of music *as* data. Drake called the release 'a body of work bridging the gap between major releases' (in Fuller, 2017). By disaggregating the album into individual tracks and offering the user 'a 20-song sprawl of genres encompassing Hip-Hop, Trap, R&B, Grime, Gospel, Dancehall, Tropical House and Afrobeat' (Fuller, 2017), the playlist underscores the flexibility of cultural commodities that circulate in platforms. Making extra

music available encourages more streams, and the playlist format reportedly enables a form of A/B testing (marketing research that involves comparison between different versions of websites), providing data regarding: the popularity of tracks and associated regions; which tracks are added to user playlists; and '[h]ow and when these tracks are listened to' (Fuller, 2017). By generating granular marketing insights, this ongoing data event promises to tighten the feedback loop between the moments of production, circulation, and consumption, a defining logic of platform accumulation.

*More Life* appears to have been a test case for the launch of Drake's 2018 album, *Scorpion*, which underscored the marketing function of playlists. The release reportedly became the first album to achieve one billion plays in a week (Rutherford, 2018), but incited user complaints that 'Spotify put [Drake's] photo on hundreds of playlists - including ones that didn't feature his music', resulting in demands for refunds from users with advertising-free premium accounts, who equated this practice with advertising (Savage, 2018). Affirming the increasingly malleable character of the cultural commodity, Drake placed an updated version of the album on streaming services days after its initial release, changing the mix on one track in response to fan feedback, for instance (Savage, 2018). At once a vehicle for promoting music releases, mode of distribution, generator of user data, and source of market research, the playlist format illustrates the dynamic and productive character of platform accumulation – even as platform companies court controversy. Data is generated, aggregated, and marketed within a contained system, which creates value even as hyperbolic speculation makes it difficult to ascertain exactly how and how much.

### **Coda: digital gatekeeping and platform power**

Commercial alliances between the music and IT industries have fuelled new hierarchies and forms of gatekeeping tied to access. Burkart (2014) characterizes music's migration to 'the cloud' as 'a new variety of property grab', suggesting that '[t]he digital sublime feeds users' fantasies of the perfect search, the ultimate discovery, and instantaneous and complete gratification through immersion in millions of intangible digital commodities' (p.405). The rise of platforms has not toppled the major label system; instead, these sectors are bound together through a system of rent. Interestingly, as Spotify, Pandora, and Tidal posted net losses, 'the oligopoly of record labels that control the intellectual property ... [reaped] profits from the boom' (Bershidsky, 2017), with Universal, Sony, and Warner combining to capture market shares of 72.6 percent, 71.7 percent, 61.7 percent, and 68.7 percent in global markets for downloads, streaming, physical, and total recorded music in 2016 (MIDiA, 2017). In order to make sense of the striking allure of IT companies in comparison to these music companies, one must understand how deeply a 'digital sublime' (Mosco, 2004) centred on user data has captured the imagination of the venture capitalist, the advertiser, and the would-be user of data.

The perception of the market value of data has led to huge valuations for platform companies, despite the difficulty in evaluating the actual value of data. The extraordinary \$26 billion valuation of Spotify upon its direct listing on the New York Stock Exchange underscores the perceived value of 'intangible assets', including user data. According to a *Bloomberg* columnist,

Net tangible assets correspond to less than one percent of [Spotify's] \$26.3 billion market value... Spotify owns plenty of valuable assets – its search algorithms, brand

and customer data, for example. But selling them separately might be challenging, and they mostly don't appear on its balance sheet. (Bryant, 2018)

The platform model maps onto a longer trend towards intangible assets as value generators. For instance, there has been a stark reversal in the balance of tangible and intangible assets of Standard and Poor's 500 (S&P 500) companies between 1975 and 2015, with the majority comprising intangibles by 1995 (Bryant, 2018). Intangible assets are less spatially and temporally 'fixed' or 'rigid', and are more flexible and liquid in their ability to be converted into value generating assets, serving as exemplars of flexible accumulation.

The power of platform companies is reinforced by the fact that platforms tend towards monopoly (Srnicsek, 2017: 95-97). While new entrants may enter the sector, platform accumulation is structurally biased to support already existing capital, particularly in the form of 'big tech' conglomerates Apple, Google, and Amazon. Music industry analyst Mulligan describes these three companies as the digital 'monopsony', an economic term that describes a situation in which 'a company ... is the only effective buyer and seller of a product and can thus dictate terms at both ends of the equation' (Mulligan, 2015) – a distinctive competitive advantage. Tidal's continued struggles to compete with Spotify and Apple demonstrates the difficulties new entrants face when challenging incumbents in an industry that privileges tech synergies and first mover advantages. Sprint's January 2017 acquisition of a 33 percent stake in Tidal (Rys, 2017) suggests the streaming service's attempt to tap into a wider user base that includes Sprint customers, and the telecom's attempt to capitalize on music streaming data.

Under platform accumulation, the latest frontier is data, and the monopolization of this currency is central to capital accumulation. The economics of streaming provide leverage for platform controllers by providing them with data about user habits, preferences, and



listening trends. This ‘monopoly of knowledge’ (Innis, 2007 [1950]) can be used to refine ad-placement, ‘push’ content, or drive users towards paid services. As the focus of value generation has shifted towards corralling users into particular platforms, these services have emerged as a choke point in the digital distribution of music. The user is governed by proprietary software and the conditions of the platform, whose transactional data can be paired with highly detailed user-profiles (e.g., iTunes’ credit card information, Spotify’s listener data, Google’s search and YouTube data). Entrenched commercial and promotional logics nevertheless persist insofar as the digital music economy remains a star-driven, winner-take-all marketplace, with business opportunities accruing to superstars such as Jay-Z, U2, Kanye West, and Drake. Platform accumulation is shaping new cultural forms and influencing how capital is accumulated (and vice versa), and thus far, these dynamics have enabled the streaming tidal wave to consolidate the fortunes of big media *and* big tech.

### **Acknowledgements**

The authors would like to acknowledge the generosity and care extended by David Hesmondhalgh and Bethany Klein in their feedback on prior drafts of this article, which enabled us to refine our argument. Aspects of this article were presented at the Data Power (University of Sheffield, 2015), Capitalism, Culture, and the Media (University of Leeds, 2015), and ECREA Digital Democracy (Södertörn University, 2017) conferences. The authors thank conference participants for the feedback provided. Finally, the authors are grateful to the anonymous reviewers, whose comments and suggestions helped us strengthen our analysis.

### **References**

- Anderson TJ (2014) *Popular Music in a Digital Music Economy: Problems and Practices for an Emerging Service Industry*. New York: Routledge.
- Andersson Schwarz J (2016) Mastering one’s domain: Some key principles of platform capitalism. *Medium*, 13 June. Available at: <https://medium.com/future-platforms-for-independent-journalism/mastering-ones-domain-some-key-principles-of-platform-capitalism-47c2adc94bde> (accessed 15 July 2016).

- Andrejevic M (2007) *iSpy: Surveillance and Power in the Interactive Era*. Lawrence, KS: University Press of Kansas.
- Apperley T and Parikka J (2018) Platform studies' epistemic threshold. *Games and Culture* 13(4): 349-369.
- Apple (2014) Apple & U2 release 'Songs of Innocence' exclusively for iTunes Store customers. Press Release, 9 September. Available at: <https://www.apple.com/newsroom/2014/09/09Apple-U2-Release-Songs-of-Innocence-Exclusively-for-iTunes-Store-Customers/> (accessed 20 July 2017).
- Assar V (2014) Apple's devious U2 album giveaway is even worse than spam. *Wired*, 16 September. Available at: <http://www.wired.com/2014/09/apples-devious-u2-album-giveaway-even-worse-spam/> (accessed 18 June 2015).
- BBC (2014) Got iTunes? You got a U2 album. Here's how to delete it. *BBC Newsbeat*, 11 September. Available at: <http://www.bbc.co.uk/newsbeat/article/29157217/got-itunes-you-got-a-u2-album-heres-how-to-delete-it> (accessed 25 July 2017).
- Bershidsky L (2017) The music business is more unfair than ever. *Bloomberg View*, 25 September. Available at: [https://www.bloomberg.com/view/articles/2017-09-25/the-music-business-is-more-unfair-than-ever?cmpid=socialflow-facebook-business&utm\\_content=business&utm\\_campaign=socialflow-organic&utm\\_source=facebook&utm\\_medium=social](https://www.bloomberg.com/view/articles/2017-09-25/the-music-business-is-more-unfair-than-ever?cmpid=socialflow-facebook-business&utm_content=business&utm_campaign=socialflow-organic&utm_source=facebook&utm_medium=social) (accessed 27 September 2017).
- Brandle L (2017) Kanye West returns fire in lawsuit over 'The Life of Pablo' exclusivity. *Billboard*, 19 July. Available at: <http://www.billboard.com/articles/columns/hip-hop/7873023/kanye-west-lawsuit-life-of-pablo> (accessed 27 July 2017).
- Bratton BH (2016) *The Stack: On Software and Sovereignty*. Cambridge, MA: MIT Press.
- Bryant C (2018) Spotify \$26 billion value is hard to put your finger on. *Bloomberg Opinion*, 9 April. Available at: <https://www.bloomberg.com/gadfly/articles/2018-04-09/spotify-s-26-billion-value-is-hard-to-put-your-finger-on> (accessed 15 June 2018).
- Burkart P (2014) Music in the cloud and the digital sublime. *Popular Music and Society* 37(4): 393-407.
- Caulfield K (2013) Jay Z's 'Magna Carta' debuts at no. 1 on Billboard 200 chart. *Billboard*, 16 July. Available at: <http://www.billboard.com/articles/news/1924866/jay-zs-magna-carta-debuts-at-no-1-on-billboard-200-chart> (accessed 20 July 2017).
- Chen A (2013) Jay-Z's new album is basically a massive data-mining operation. In: Gawker, 3 July. Available at: <http://gawker.com/jay-zs-new-album-is-basically-a-massive-data-mining-op-661499440> (accessed 18 June 2015).

- Coscarelli J (2016) 400 million streams later, Kanye West's 'Pablo' gets a wider release. *The New York Times*, 31 March. Available at: <https://www.nytimes.com/2016/04/02/arts/music/kanye-west-life-pablo-tidal-streams.html> (accessed 27 July 2017).
- Deutscher M (2013) IBM's CEO says big data is like oil, enterprises need help extracting the value. *Silicon Angle*, 11 March. Available at: <http://siliconangle.com/blog/2013/03/11/ibms-ceo-says-big-data-is-like-oil-enterprises-need-help-extracting-the-value/> (accessed 15 May 2014).
- Dilger DE (2013) Samsung's 'free' Jay Z album delivered via Android spyware app. *Apple Insider*, 5 July. Available at: <http://appleinsider.com/articles/13/07/05/samsungs-free-jay-z-album-delivered-via-android-spyware-app> (accessed 14 July 2017).
- Doyle W (2016) Kanye West is updating his album live - an exciting prospect for art. *The Guardian*, 18 March. Available at: <https://www.theguardian.com/music/musicblog/2016/mar/18/kanye-west-album-the-life-of-pablo-william-doyle-east-india-youth> (accessed 27 July 2017).
- Dredge S (2013) Jay-Z Magna Carta Holy Grail Android app sparks privacy concerns. *The Guardian*, 8 July. Available at: <https://www.theguardian.com/technology/appsblog/2013/jul/08/jay-z-android-app-privacy> (accessed 27 July 2017).
- Dredge S (2016) Seven things we've learned from the first year of Apple Music. *The Guardian*, 30 June. Available at: <https://www.theguardian.com/technology/2016/jun/30/apple-music-first-year-streaming-spotify-youtube> (accessed 27 September 2017).
- The Economist* (2017) Data is giving rise to a new economy. *The Economist*, 6 May. Available at: <https://www.economist.com/news/briefing/21721634-how-it-shaping-up-data-giving-rise-new-economy> (accessed 27 July 2017).
- Edwards J (2014) The \$40 billion reason Apple is giving away that U2 album for free. *Business Insider*, 10 September. Available at: <http://www.businessinsider.com/apple-gives-away-u2-album-for-free-to-get-credit-cards-launch-apple-pay-2014-9#ixzz3dHdMzX9f> (accessed 18 June 2015).
- EPIC (2013) Complaint, request for investigation, injunction, and other relief submitted by the Electronic Privacy Information Center. Before the Federal Trade Commission in the matter of Samsung Electronics Co., Ltd., 12 July. Available at: [https://epic.org/samsung\\_jay-z\\_magna\\_carta\\_app.html](https://epic.org/samsung_jay-z_magna_carta_app.html) (accessed 14 January 2015).
- Eriksson M (2016) Close reading big data: The Echo Nest and the production of (rotten) music metadata. *First Monday* 21. DOI: 10.5210/fm.v21i7.6303.

- Flanagan A and Hampp A (2015) It's official: Jay Z's historic Tidal launches with 16 artist stakeholders. *Billboard*, 30 March. Available at: <http://www.billboard.com/articles/news/6509498/jay-z-tidal-launch-artist-stakeholders> (accessed 24 August 2015).
- Forde E (2013) Jay-Z's Samsung deal signals a musical future where the rich get richer. *The Guardian*, 4 July. Available at: <http://www.theguardian.com/music/musicblog/2013/jul/04/jay-z-samsung-music-future> (accessed 16 June 2015).
- Fuller Z (2017) Why Drake's More Life is the new normal in streaming. In: Music Industry Blog, 23 March. Available at: <https://musicindustryblog.wordpress.com/2017/03/23/why-drakes-more-life-is-the-new-normal-in-streaming/> (accessed 1 May 2017).
- Gillespie T (2010) The politics of 'platforms'. *New Media & Society* 12(3): 347-364.
- Grow K (2014) Bono apologizes for forcing U2's 'Songs of Innocence' on iTunes users. *Rolling Stone*, 15 October. Available at: <http://www.rollingstone.com/music/news/bono-apologizes-for-forcing-u2s-songs-of-innocence-on-itunes-users-20141015> (accessed 18 June 2015).
- Hampp A (2013) Samsung's Todd Pendleton on that game-changing Jay Z deal. *Billboard*, 12 December. Available at: <http://www.billboard.com/biz/articles/news/branding/5827366/samsungs-todd-pendleton-on-that-game-changing-jay-z-deal> (accessed 27 July 2017).
- Hampp A (2015) What Tidal means for the freemium vs. premium debate: the industry weighs in. *Billboard*, 30 March. Available at: <http://www.billboard.com/articles/business/6516938/tidal-analysis-jay-z> (accessed 24 August 2015).
- Harvey D (1990) *The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change*. Oxford: Blackwell.
- Harvey D (2002) The art of rent: globalisation, monopoly and the commodification of culture. *Socialist Register* 38: 93-110.
- Heisler Y (2014) Bono talks 885 million iTunes accounts, new music format, and 'haters'. In: Engadget, 22 September. Available at: <https://www.engadget.com/2014/09/22/bono-talks-885-million-itunes-accounts-new-music-format-and-sa/> (accessed 15 June 2018).
- Helmond A (2015) The platformization of the web: Making web data platform ready. *Social Media + Society* 1. DOI: 10.1177/2056305115603080.

- Hesmondhalgh D and Meier LM (2018) What the digitalisation of music tells us about capitalism, culture and the power of the information technology sector. *Information, Communication & Society* 21(11): 1555-1570.
- Ingham T (2018) Tidal accused of deliberately faking Kanye West and Beyoncé streaming numbers. *Music Business Worldwide*, 9 May. Available at: <https://www.musicbusinessworldwide.com/did-tidal-falsify-streams-to-bulk-up-kanye-west-and-beyonce-numbers/> (accessed 21 June 2018).
- Innis HA ([1950] 2007) *Empire and Communications*. Toronto, ON: Dundurn Press.
- Jones B (2014) Twitter responds to Apple giving iOS users the new U2 album. *Social News Daily*, 18 September. Available at: <http://socialnewsdaily.com/43366/twitter-responds-to-apple-giving-ios-users-the-new-u2-album/> (accessed 14 July 2017).
- Jones R (2017) Drake's More Life tops 250M streams across Apple Music and Spotify in two-and-a-half days. *Music Business Worldwide*, 22 March. Available at: <https://www.musicbusinessworldwide.com/drakes-more-life-tops-250m-streams-across-apple-music-and-spotify-in-two-and-a-half-days/> (accessed 25 March 2017).
- Josephs B (2016) Drake's Views is the first album to earn 1 billion Apple Music streams. *Spin*, 26 September. Available at: <http://www.spin.com/2016/09/drakes-views-1-billion-apple-music/> (accessed 30 July 2017).
- Kafka P (2014) The internet wants to know where to return Apple's gift. *Recode*, 11 September. Available at: <https://www.recode.net/2014/9/11/11630802/the-internet-wants-to-know-where-to-return-apples-gift> (accessed 25 July 2017).
- Kjus Y (2016) Musical exploration via streaming services: the Norwegian experience. *Popular Communication* 16(3): 127-136.
- Koetsier J (2017) How one accidental Kanye West tweet led to 150m app installs. *Forbes*, 3 April. Available at: <https://www.forbes.com/sites/johnkoetsier/2017/04/03/how-one-accidental-kanye-west-tweet-led-to-150m-app-installs/#4f7f1b4b3700> (accessed 27 July 2017).
- Langley P and Leyshon A (2017) Platform capitalism: the intermediation and capitalisation of digital economic circulation. *Finance and Society* 3(1): 11-31.
- Leonard D (2015) That's business, man: why Jay Z's Tidal is a complete disaster. *Bloomberg Businessweek*, 28 May. Available at: [https://www.bloomberg.com/news/features/2015-05-28/why-jay-z-s-tidal-streaming-music-service-has-been-a-disaster\\_](https://www.bloomberg.com/news/features/2015-05-28/why-jay-z-s-tidal-streaming-music-service-has-been-a-disaster_) (accessed 24 August 2015).
- McCartney A (2016) Man sues Kanye West, Tidal, over new album. *Associated Press*, 18 April. Available at: <https://apnews.com/cfb7a6c6406c4a5690a94016b7004572/apnewsbreak-man-sues-kanye-west-tidal-over-new-album> (accessed 27 July 2017).

- McCormick R (2016) Kanye West's The Life of Pablo is now on Spotify, Apple Music, and Google Play. *The Verge*, 1 April. Available at: <https://www.theverge.com/2016/4/1/11343526/kanye-west-life-of-pablo-spotify-itunes> (accessed 27 July 2017).
- McCourt T and Rothenbuhler E (1997) SoundScan and the consolidation of control in the popular music industry. *Media, Culture & Society* 19: 201-218.
- McGregor J (2014) Did the Samsung and Jay Z partnership pave the way for Beats-Apple deal? Kanye West thinks so. *Forbes*, 18 June. Available at: <http://www.forbes.com/sites/jaymcgregor/2014/06/18/did-the-samsung-and-jay-z-partnership-pave-the-way-for-dr-dre-apple-deal-kanye-west-thinks-so/> (accessed 18 June 2015).
- Manzerolle V and Kjøsén A (2014) Dare et capere: virtuous mesh and a targeting diagram. In: Miller PD and Matviyenko S (eds) *The Imaginary App*. Cambridge, MA: MIT Press, pp. 143-162.
- Manzerolle V and Kjøsén A (2015) Digital media and capital's logic of acceleration. In: Fuchs C and Mosco V (eds) *Marx in the Age of Digital Capitalism*. Leiden: Brill, pp. 151-179.
- Marshall L (2015) 'Let's keep music special. F-- Spotify': on-demand streaming and the controversy over artist royalties. *Creative Industries Journal* 8(2): 177-189.
- Meier LM (2017) *Popular Music as Promotion: Music and Branding in the Digital Age*. Cambridge: Polity.
- MIDiA (2017) Global recorded market music market shares 2016. In: Music Industry Blog, 26 February 2017. Available at: <https://musicindustryblog.wordpress.com/2017/02/26/global-recorded-market-music-market-shares-2016/> (accessed 27 September 2017).
- Montgomerie J and Roscoe S (2013) Owning the consumer – getting to the core of the Apple business model. *Accounting Forum* 37: 290-299.
- Morris JW (2015a) Anti-market research: piracy, new media metrics, and commodity communities. *Popular Communication* 13(1): 32-44.
- Morris JW (2015b) *Selling Digital Music, Formatting Culture*. Oakland, CA: University of California Press.
- Morris JW and Powers D (2015) Control, curation and musical experience in streaming music services. *Creative Industries Journal* 8(2): 106-122.
- Mosco V (2004) *The Digital Sublime: Myth, Power, and Cyberspace*. Cambridge, MA: MIT Press.

- Mulligan M (2015) Apple, the Indies and the rise of the digital monopsony. In: Music Industry Blog, 19 June. Available at: <https://musicindustryblog.wordpress.com/2015/06/19/apple-the-indies-and-the-rise-of-the-digital-monospony/> (accessed 2 September 2015).
- Nieborg DB and Poell T (2018) The platformization of cultural production: theorizing the contingent cultural commodity. *New Media & Society*. Epub ahead of print 25 April. DOI: 10.1177/1461444818769694.
- NME Blog (2014) 10 of the most amusing reactions to U2's free album. In: New Musical Express, 10 September. Available at: <http://www.nme.com/blogs/nme-blogs/10-of-the-most-amusing-reactions-to-u2s-free-album-19320> (accessed 14 July 2017).
- Pareles J (2013) Jay-Z is watching, and he knows your friends. *The New York Times*, 14 July. Available at: <http://www.nytimes.com/2013/07/05/arts/music/jay-z-is-watching-and-he-knows-your-friends.html> (accessed 14 July 2017).
- Pierce D (2017) The secret hit-making power of the Spotify playlist. *Wired*, 3 May. Available at: <https://www.wired.com/2017/05/secret-hit-making-power-spotify-playlist/> (accessed 30 July 2017).
- Plantin JC, Lagoze C, Edwards PN and Sandvig C (2018) Infrastructure studies meets platform studies in the age of Google and Facebook. *New Media & Society* 20(1): 293-310.
- Reisinger D (2016) Drake's Apple Music partnership is a blockbuster. *Fortune*, 9 May. Available at: <http://fortune.com/2016/05/09/drake-apple-music/> (accessed 30 July 2017).
- Renshaw D (2013) Privacy issues raised over terms and conditions of Jay-Z's Samsung app. *New Musical Express*, 3 July. Available at: <http://www.nme.com/news/music/jay-z-40-1262549> (accessed 13 July 2017).
- Rigi J and Prey R (2015) Value, rent, and the political economy of social media. *The Information Society* 31: 392-406.
- Rutherford, K (2018) Drake's 'Scorpion' is the first album to hit 1 billion global streams in a single week. *Billboard*, 6 July. Available at: <https://www.billboard.com/articles/columns/chart-beat/8464292/drake-scorpion-first-album-1-billion-global-streams-one-week> (accessed 17 August 2018).
- Rys D (2017) Sprint purchases 33 percent stake in Tidal. *Billboard*, 23 January. Available at: <http://www.billboard.com/articles/business/7662653/sprint-jay-z-tidal-33-percent-stake-purchase> (accessed 5 September 2017).
- Savage, M (2018) Spotify users demand refunds over Drake promotion. *BBC News*, 3 July. Available at: <https://www.bbc.co.uk/news/entertainment-arts-44695062> (accessed 3 July 2018).

- Scherzinger M (2016) From torrent to stream: economies of digital music. *Transposition* 6. DOI: 10.4000/transposition.1632.
- Shepherd J (2016) Kanye West: Life of Pablo ‘pirated 500,000 times’ in less than a week. *The Independent*, 17 February. Available at: <http://www.independent.co.uk/arts-entertainment/music/news/kanye-west-life-of-pablo-illegally-downloaded-500000-times-already-a6878741.html> (accessed 27 July 2017).
- Sisario B (2014) For U2 and Apple, a shrewd marketing partnership. *The New York Times*, 9 September. Available at: <https://www.nytimes.com/2014/09/10/business/media/u2-appears-at-apple-event-and-songs-of-innocence-appears-free-on-itunes.html> (accessed 20 July 2017).
- Srnicek N (2017) *Platform Capitalism*. Cambridge: Polity.
- Sterne J (2014) There is no music industry. *Media Industries* 1(1): 50-55.
- Stutz, C (2018) Kanye West & Tidal must face fraud suit over ‘The Life of Pablo’ exclusivity claims. *Billboard*, 25 June. Available at: <https://www.billboard.com/articles/columns/hip-hop/8462809/kanye-west-tidal-life-of-pablo-exclusivity-lawsuit-continue> (accessed 17 August 2018).
- Sullivan JL (2016) Software and artificial scarcity in digital media. *The Political Economy of Communication* 4(1): 66-84.
- Taylor C (2015) 99 problems: why Jay Z’s Tidal streaming service became a train wreck. *Mashable*, 24 April. Available at: <http://mashable.com/2015/04/24/tidal-jay-z-decline/> (accessed 24 August 2015).
- Tidal (2018) What is TIDAL? *TIDAL*. Available at: <http://tidal.com/whatistidal/> (accessed 17 August 2018).
- Vonderau P (2017) The Spotify effect: digital distribution and financial growth. *Television & New Media*. Epub ahead of print 21 November. DOI: 10.1177/1527476417741200.
- Williamson J and Cloonan M (2007) Rethinking the music industry. *Popular Music* 26(2): 305-322.
- Wilner E (2015) U2’s bet on Apple still ‘paying’ off. Kantar US, 23 February. Available at: <http://us.kantar.com/tech/mobile/2015/kantar-data-on-free-u2-album-usage/> (accessed 27 July 2017).