



Is music streaming bad for musicians? Problems of evidence and argument

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Abstract

Great controversy has surrounded the growth of the music streaming services that are now central to the music industries internationally. One important set of criticisms concerns the amount of money that music creators receive for the recorded music that is distributed on these services. Many claim that music streaming has made it harder than before for musicians to make a living from music. This article identifies and discusses some significant problems of argument and evidence surrounding these criticisms, as follows: (a) a dubious focus on ‘per-stream’ rates offered by music streaming services, (b) a failure to see streaming services as part of wider systems of music and ownership, (c) tendencies towards simplification when systemic problems are taken into account, and (d) the limited evidence provided when commentators claim, imply or assume that the system has become notably less just. It then discusses debates concerning what might be done to improve the system, especially whether ‘user-centric’ systems of payment might be adopted, instead of the current ‘pro-rata’ system. The article suggests that more musicians rather than fewer might now be able to earn money from recorded music than in preceding recorded-music systems. But it also proposes that the current system retains the striking inequalities and generally poor working conditions that characterised its predecessors, and that better debate requires greater transparency about usage and payment on the part of streaming services and music businesses.

Keywords

Creative and cultural labour, digitalisation of music, music industries, musical labour, music streaming services, musicians

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Context and significance

With the growth and spread of digital communication technologies and the world wide web in the late-20th and early-21st centuries, many commentators predicted a more democratic future for cultural production and consumption. Music was in the forefront of the digitalisation of culture, partly because individual music files required far less digital capacity than video. Musicians were among the most vocal advocates and prophets of change (see Pareles, 2002 for one prominent intervention, by David Bowie).

In the period of chaotic transition from 2000 to 2015, however, public debates paid little attention to questions concerning how musicians would actually make money in the still-forming digital era, from what sources, and how musical careers might be sustained, beyond speculations about the new opportunities offered by 'disintermediation' and new possibilities such as 'crowdfunding'. Even the wave of book-length accounts that eventually appeared paid little concrete and sustained attention to such issues. Popular versions portrayed the majors as dinosaurs caught out by technological change (Knopper, 2010) while early critical academic studies emphasised the continuing power of the record companies and new forms of restriction and control introduced by beleaguered record companies in the digital environment (Burkart and McCourt, 2006). Eventually, something of a flood of academic contributions appeared, which sought to make retrospective sense of the transformations that had been taking place in the music industries and in music distribution technologies (among them Anderson, 2014; Arditi, 2015; Leyshon, 2014; Morris, 2015; Rogers, 2013). Some authors such as Arditi (2015: chapters 5 and 6) sought to conceptualise changes and continuities in musical labour during this period of transition, though with little attention to actual income. In fact, there was rather more focus on the unpaid labour of *users*. Anderson (2014), for example, traced the role of new kinds of music users in shaping the evolution of the music industries, and Morris (2015) tracked their role in the emergence of the 'digital music commodity'.

From around the time that this first major wave of academic publications began to appear in 2013–2015 – inevitably based on earlier research because of the usual academic time-lags – record industry revenues began to recover, and issues of just payment and reward for musicians began to feature more prominently in public debate. The recovery of revenues was almost entirely driven by increasing use, across much of the world, of 'legal' music streaming services (MSS) – 'legal' in that they used content licensed by recording and publishing companies, by contrast with 'pirate' streaming services. 'MSS', sometimes called 'digital music service providers' or variants on that term, are services that offer on-demand access, whether by internet or mobile telephony, to large catalogues of audio or audio-visual content centred on music, either paid for by subscription, or available 'free' on an advertising-supported basis, or some hybrid of the two. As subscriptions to these services began to grow rapidly from 2015 onwards, along with some increases in advertising revenue, the music recording industry and publishing industry began to recover from the crisis it had faced. As the money began to flow again, there was increasing interest in media coverage, social media discussion and public debate in where it was going. One set of concerns came from the music recording and publishing industries, who complained about a 'value gap' between large amounts of musical consumption, and relatively small payouts to rights holders (i.e. themselves), especially on the part of YouTube (Arditi, 2019). Another set of concerns was expressed by music

creators (recording artists, session musicians, songwriters, composers) and those advocating on their behalf, who, as we shall see, complained about the small amounts of money coming to them. This latter set of concerns is the main topic of this article, and I outline my approach and distinctive contribution in the next section. An important context here is the longstanding precariousness of most music creators.

Although my focus here is on the music industries, I hope the discussion here will also illuminate processes and dynamics in other cultural industries, such as television, film, games and book publishing, concerning issues such as the increasing presence of firms from the information technology sector in the realm of cultural production, the unfolding impacts of shifts from sales of individual goods to streaming services, and the consequences of the new dominance of such services for the remuneration of creators.

The rise of music streaming services – and criticisms of them

Having declined for 14 continuous years from 2001 to 2014, the recorded music industry began to grow again, from US\$14.3 billion in the latter year to US\$20.2 billion in 2019. This growth was driven entirely by MSS, which brought in US\$1.9 billion in 2014, and US\$11.4 billion in 2019.

The MSS are mainly run by technology companies. The services with the largest numbers of paid subscriptions in Europe and the Americas are, at time of writing, Spotify and Apple Music, and the platform most widely used internationally for streaming music is YouTube's advertising-supported service, which is especially important among younger consumers (Mulligan, 2018). Amazon is publicising and marketing its streaming services vigorously, including bundling music streaming with its Prime subscription package, with considerable recent take-up. Spotify and the US tech giants are seeking to spread their services, especially in South Asia and Africa, but face stiff competition from local providers, such as JioSaavn in India. In China, the services offered by tech giant Tencent dominate. A key difference from the 'western' services increasingly used in Europe and the Americas is that Chinese streaming is much more integrated with social media. Across the world, there are also smaller services that seek to cater for specialist niches, such as IDAGIO for classical music, and streaming services that emphasise the free uploading of music and other audio content, such as SoundCloud (Hesmondhalgh et al., 2019). MSS have so far rarely been profitable but are sustained either by finance capital (e.g. Spotify) and/or subsidy from a powerful parent company, whether tech companies such as Apple, Amazon and Alphabet/Google or telecoms companies such as Sprint (TIDAL) and Orange (Deezer). The main exceptions are Chinese services that combine advertising with 'tipping' artists.

A new wave of critical research has appeared since the consolidation and relative stabilisation of musical production and consumption around MSS.¹ Important strands of research focus on ways in which MSS recommend, playlist and 'curate' music (Barna, 2017; Bonini and Gandini, 2019; Drott, 2018; Prey et al., 2020), and on changing ways in which musicians, intermediaries and musical communities negotiate new ways of relating to audiences and achieving their aesthetic and political goals, including, of course, the important role of social media (Powers, 2015; Baym, 2018). Some of this research places the new system in historical and industrial context, often emphasising

change and continuity in political-economic control and power (Hesmondhalgh and Meier, 2018; Meier and Manzerolle, 2019; Negus, 2019). A number of studies focus on new dynamics of music consumption (Johansson et al., 2017), especially emerging forms of exploration and discovery (Hagen and Lüders, 2017; Hanrahan, 2019; McCourt and Zuberi, 2016). Some contributions span production and consumption (Hracs et al., 2016; Nowak and Whelan, 2016) including new relations between live and recorded music (Kjus, 2018) and how to understand technological change in relation to other types of change (Prior, 2018). Other studies address MSS as examples of digital platforms, and are less oriented towards implications for music (Eriksson et al., 2018).

Crucially for this article, this new system for the production, circulation and consumption of recorded music, centred on MSS (from now on, I refer to this as ‘the new musical system’ or simply ‘the new system’) has also generated a huge amount of commentary, debate and controversy beyond academia. Such debates are taking place across a range of established online outlets, including major sites of journalism focused on general news, business, music or the music business. In addition, there is a huge amount of discourse on social media, blogs, industry analysis and various other sites concerned with ‘the future of music’. Contributors come from a wide range of professional backgrounds (musicians, journalists, bloggers, fans, academics). In this world of online commentary, as I show below, the new MSS-based system has been very strongly criticised, especially for its supposedly poor rates of payment to music creators (performers, composers and lyricists – whom I refer to collectively as ‘musicians’ here).² In spite of such public controversy, even the recent wave of research on the new musical system has rarely addressed, in any sustained way, the increasingly controversial question of how income is distributed by MSS to rights holders and then by rights holding companies to musicians. Even the most notable examples of such sustained attention (Marshall, 2015; Sinnreich, 2016) are now beginning to show their age. The aim of this article is *not* to provide statistical evidence comparing rewards for music creators (performers, composers and lyricists) between, the older retail and radio models of distribution, on the one hand, and newer models, on the other hand, as Sinnreich (2016) did in the US 2014 context. Instead, this article contributes to understanding of the new system of recorded music centred on MSS by categorising, addressing and analysing the criticisms that have emerged in online debates.³ I build on existing research by paying much greater attention than before to *formulation* of criticisms of the MSS-based musical system, and to *problems* concerning the evidence being offered to support them. I categorise these criticisms into the following three sets of claims:

- The first is that the new system is damaging to musicians and others involved in musical production and circulation, especially in financial terms, because of various problems associated with MSS;
- The second is that the new system tends to reproduce unjust systems of industrial power, in particular the domination of major record companies and the elite group of musical superstars closely associated with them;
- A third set of claims concerns change in the distribution of rewards for music: that they have become *increasingly* unfair, and that it is now *harder* for musicians to earn a decent living from recorded music than before the advent of MSS, often with the very strong implication that MSS are responsible for this.

Among the issues cutting across these claims are the particular ways in which money flows from consumers through MSS to rights holders and to musicians; the use by MSS of recommendation systems; and the complex and opaque mixture of human and algorithmic curation to be found on MSS.

These claims have had the welcome effect of drawing public attention to, and encouraging public debate about, issues of fairness and justice in musical labour, and problems concerning the music industries more broadly.⁴ In what follows, I identify some important and valuable ways in which these criticisms have been made. However, there are numerous problems concerning the formulation of key claims, and the evidence provided (or not) to support them. I identify and explain four sets of problems with the above criticisms, as follows:

1. The way in which the apparently very small ‘per-stream’ rates offered by MSS are used as part of arguments about unfair systems of reward for musicians.
2. That arguments are often expressed as though the MSS are more or less entirely responsible for the issue of how musicians might make a sustainable living from music, rather than seeing the MSS as part of a problematic wider system of music and ownership under contemporary capitalism.
3. That, even in those cases where efforts are made to address the musical system as a whole, there are tendencies towards simplification.
4. The very limited evidence provided when commentators claim, imply or seem to assume, that the system has become notably less fair or just, and that it is harder now for musicians to earn a living than under previous systems. Crucial here, and to any consideration of the fairness or otherwise of the new system in terms of rewards for musicians, is the question of the distribution of rewards across all musicians (and other contributors to music), i.e. whether these are ‘winner take all’ systems, where most of the money goes to a select few.

I want to emphasise that my approach here is based on the view that imprecise, inaccurate and under-supported criticisms may hinder efforts at transformation, rather than a belief that the current musical system functions in a just way.

A further controversy that arises from the debates I analyse is what might be done to address the problems that critics have identified, in particular whether better systems of payment and support for musicians might be adopted, instead of the ‘pro-rata’ system that currently prevails on MSS. For this reason, my final section discusses some of the issues of argument and evidence that emerge from discussions of potential alternatives to the existing pro-rata system, an issue that has only rarely been addressed in academic research (notably Maasø, 2014’s early contribution).

Problems concerning claims about low ‘per-stream’ rates

A welcome development in recent years has been the willingness of musicians to share information about royalties, in a way that has helped to penetrate the fog of opacity that often surrounds discussion of musical labour. A notable and very widely cited example is the contemporary music cellist Zoe Keating, who has regularly posted her earnings from

2,252,293 Spotify streams -	\$12,231
1,448,186 Pandora listens -	\$2,818
127,313 Amazon Prime -	\$427
62,426 Amazon Music Service -	\$716
23,636 Deezer -	\$151.85
16,838 WiMP -	\$253
9,453 Napster -	\$71
5,812 GooglePlay -	\$109
3,936 Youtube Music -	\$15
3,443 Tidal -	\$47
673,000 Apple Music streams -	amount, don't know yet, around \$3,900*?

Figure 1. Zoe Keating's earnings from music streaming services in a year (Source: Keating, 2019. The figures do not correspond exactly to the calendar year 2018 because of a lag between streams and payment).

streaming on her Tumblr page (Keating, 2019). Figure 1 shows Keating's earnings for (most of) 2018, broken down by MSS.

Keating's interventions are regularly cited by commentators in relation to claims that '[t]he fact that Spotify and other services offer paltry payouts to artists is widely known' (e.g. Luckerson, 2019), and often the arguments rest on the tiny 'penny fractions' (also the name of a prominent newsletter critical of MSS, by David Turner) that each stream provides, often by explicit or implicit comparison with money earned from record sales or downloads. Luckerson (2019) for example comments that on Spotify, Keating earns 'half a penny' a stream.

Low per-stream payment rates on MSS were first highlighted in 2009, when it was widely reported that Lady Gaga had earned only US\$167 from over a million Spotify streams of her recording 'Poker face'. However, Marshall (2015: 186) rightly cautions that this striking figure referred only to Gaga's share of the Swedish (songwriting) publishing royalty, not the income from the rest of the world, or from the recording itself (where royalty rates are higher). Nevertheless, reporting of low per-stream payment rates became more prevalent as it became apparent that, with the rise of music streaming, significant revenue was once again being generated by recordings and their underlying compositions. Spotify, in particular, came in for opprobrium, partly because they early on established themselves as market leaders in music streaming, but also perhaps because their interface displays the streams of many tracks and other metrics such as the number of subscribers following an artist.

One prominent way in which 'penny fractions'-based claims tend to be relayed are through rankings or lists comparing the average streaming rate that different MSS pay. For example, the musician David Lowery, who has achieved some renown as an activist critic of MSS, including a class-action lawsuit against some of them (Beaumont-Thomas, 2018), regularly publishes on his *Trichordist* website lists of the different MSS and what they pay out to one 'medium-sized independent record company' (see Sanchez, 2019 for another such list). Figure 2 reproduces one of Lowery's inventories.

	DSP / STORE	PER STREAM	STREAMS PER SONG	STREAMS PER ALBUM	MARKET SHARE STREAMS	MARKETSHARE DOLLARS	TOP
1	Spotify	\$0.00331	184	1,842	29.22%	48.93%	
2	iTunes/Apples	\$0.00495	123	1,229	9.95%	24.97%	
3	YouTube Content ID	\$0.00028	2,145	21,447	48.58%	6.99%	
4	Amazon Unlimited	\$0.01175	52	518	0.68%	4.04%	
5	Google Play	\$0.00543	112	1,122	1.12%	3.08%	
6	Pandora	\$0.00155	393	3,925	3.86%	3.03%	
7	Deezer	\$0.00567	107	1,074	0.91%	2.60%	
8	Amazon Digital Services Inc.	\$0.00395	154	1,540	0.95%	1.90%	
9	TIDAL	\$0.00927	66	657	0.21%	0.98%	
10	Napster / Rhapsody	\$0.01110	55	549	0.14%	0.80%	97.32%
11	YouTube Red	\$0.00948	64	642	0.12%	0.56%	
12	Yandex LLC	\$0.00051	1,199	11,992	1.23%	0.32%	
13	LOEN	\$0.00205	297	2,972	0.25%	0.26%	
14	VEVO	\$0.00109	559	5,591	0.38%	0.21%	
15	KKBOX	\$0.00435	140	1,402	0.06%	0.13%	
16	24/7 Entertainment GmbH	\$0.01050	58	580	0.02%	0.12%	
17	Qobuz	\$0.04390	14	139	0.01%	0.12%	
18	UMA	\$0.00013	4,811	48,110	1.82%	0.12%	
19	iHeartRadio (Reporting Only)	\$0.01426	43	427	0.01%	0.10%	
20	Peloton	\$0.04036	15	151	0.00%	0.09%	99.35%

Figure 2. Income for an independent record company from 20 music streaming services and other digital music providers. Source: *The Trichordist* (2019).

By far, the most prominent feature of this list is the ‘per-stream’ rate for each MSS, even though the list is not ranked by that rate, but by ‘marketshare dollars’, which seems to refer to what percentage of the company’s streaming revenues come from which service. As Lowery (*The Trichordist*, 2019) points out, the marketshare dollars suggests the dominance of the main five or six MSS. But what does it tell us about ‘per-stream’ rates and fairness to musicians?

One striking feature of this and other similar lists is that companies such as TIDAL and Napster look rather generous compared with Spotify. In Figure 2, observe that TIDAL pay nearly three times as much as Spotify per stream; Napster nearly four times. However, such comparisons can be misleading, as Mechanics (2019) points out. What really matters for the welfare of musicians is the *total money paid out to them*, not the ‘per-stream rate’. In any case, it is important to be clear that MSS do not actually pay according to a per-stream rate. This ‘rate’ is an analytical construct, an average produced by taking the income generated by an individual recording, by an artist, or by a label, and dividing that income by number of streams achieved by that recording, artist or label. In fact, it is quite feasible that music creators might receive more money even in situations where the (retrospectively calculated) per-stream rate has fallen. This is because there are a number of determinants of music creator income from MSS under the current ‘pro-rata’ system. The main ones are as follows:

- The total size of the pot being shared out – how much income is generated by MSS out of subscriptions and advertising;
- How much of that pot goes to rights holders, which is determined by licensing deals between the MSS and rights holders (mainly music record companies and

music publishing companies) and by the share of total streams that is achieved by each recording;

- (c) How much of the money going to rights holders is then passed on to musicians, which is mainly dependent on contracts between rights holders and musicians.

The main ways in which music creators might gain greater income, under the pro-rata system, is therefore (a) for the total pot to grow, through increased revenue; (b) for the MSS to pay more out to rights holders; and (c) for rights holders to provide better contractual terms to musicians.

This situation arises because of the way MSS currently collect revenue and distribute it to rights holders, which I will now explain. For most MSS, the biggest pot of revenue comes from subscriptions. If an MSS offers a 'free' service, in addition to its subscription version, then another pot will be formed by revenues from advertising (and there may also be other revenue from sponsorship). Different MSS have different rates and rules for paying out revenue to rights holders from the subscription pot and the advertising pot, but MSS apparently take a cut of the two pots' total revenue of between 25% and 35%.⁵

Importantly, the remaining 65%–75% (or at least the generally much bigger pot of revenue from subscriptions; things are more complex when it comes to the smaller pots achieved by advertising revenue) is divided among rights holders according to the proportion of total streams achieved by each uploaded audio file. This is where the term 'pro-rata' comes from. So, to give a simplified example for the sake of explanation, if a service records 100 billion streams in, say, a year, and one particular recording receives 500 million streams in that same period (i.e. 0.5% of 100 billion) then the owners of the rights to that recording will receive 0.5% of the pot.

This means that there are at least three important complicating factors to consider here when assessing implicit claims that seemingly *lower per-stream rates* mean that MSS are unfair to musicians.

First, the per-stream rate actually provides very little information about income and fairness, whether in comparing the 'generosity' of different streaming services, or in terms of assessing MSS in general. In Figure 2, for example, TIDAL's per-stream rate is three times that of Spotify, but that tells us very little about the total payouts from each service, which matters far more in comparing their ability to support musicians. Per-stream rates, under the existing 'pro-rata' system just explained, may in fact fall the more users a service has. (See below for discussion of the fairness of the pro-rata system as a whole). Yet, more users mean more income, and so as long as the musician still gains the same proportion of total streams on the same contractual terms, they will gain more revenue. This means that, paradoxically, it is quite possible for rights holders (and ultimately music creators) *to increase their total income in a situation where their per-stream rates fall*.

The nature of the system also means that comparing per-stream rates between services is more or less irrelevant in terms of which service pays best. For example, if a recording achieves 30 times as many streams on Spotify than on TIDAL (which is not at all unlikely given how many more users Spotify has than TIDAL, and how many streams it attracts), then even if Spotify only pays one-third as much per stream as TIDAL (as Figure 2 suggests they do), then the owners of the rights to the recording will still, other things being

equal, receive 10 times as much money from Spotify than from TIDAL. Anecdotally, musicians often report that they gain more total money from Spotify than from other services, and indeed, this is the case with Zoe Keating's figures (see Figure 1) and the Lowery 'bible' list (Figure 2), which reports 48% of the record company's income as coming from Spotify.⁶

Second, it is potentially misleading to claim, as numerous commentators have, that MSS are unfair on the basis of comparing streaming payments with what musicians might receive from their share of revenues from CDs (e.g. Sanchez, 2019) or vinyl records. One widely shared graphic from the early years of streaming (Information is Beautiful, 2010), for example, reckoned that it would take only 143 sales of a self-pressed CD to achieve a month's equivalent of the federal minimum wage versus over 4 million plays on Spotify. But this seems to have assumed zero marketing and promotion costs for selling CDs and was based on the much lower payment rates of Spotify in its early years. Any assumption that a stream should be understood as equivalent to a sale of a vinyl record or CD (or in cases where there were 12 tracks on a CD, with one-twelfth of the part of the price of a CD that would go to rights holders and thence to musicians) is surely questionable. A CD or a vinyl record can be played many times – so a more meaningful comparison with an individual stream would be with the cost of a CD or vinyl record *divided by the number of times it is played* (though of course this would almost always be unknown). There is a further factor too: that many people, including many musicians and policy-makers, felt that CDs were wildly over-priced for consumers – as indeed were the individual downloaded files sold on digital stores such as iTunes in the era immediately before streaming. It could even be argued that the 'price' of a stream may much more accurately reflect the value that many casual music users (of whom there are far more than heavy music users) actually attach to music.

Third, arguments for unfairness derived from per-stream rates may rely excessively on the implication or assumption that a musician's income will come from just one MSS, or from MSS alone, when what is most at stake in terms of questions of justice is the total income available from a variety of sources within a particular musical system in relation to the efforts expended by musicians. Even successful musicians will make money from a variety of musical sources, not only individual MSS where their music is available but also from live music performance, the sale of merchandise, and, for the relatively successful, use of their recordings on other media, including advertising and marketing.⁷ Most professional musicians now make their music available on pretty much all the major MSS and are aided in doing so by fairly accessible software and/or intermediaries. Moreover, there are now numerous other ways in which musicians can raise money, including crowdfunding sites and direct audience-to-musician subscription sites, such as Patreon. For grassroots and independent musicians, these are really as much elements of the contemporary musical system as MSS. As a number of commentators have pointed out (e.g. Baym, 2018; Powers, 2015) crowdfunding-style systems involve considerable extra labour on the part of musicians, and this is an essential point to consider when considering fairness and justice in contemporary musical labour. My point here is the narrower one that it is not sufficient to make arguments about musical fairness and justice in the current musical eco-system based on one MSS alone, or even all MSS put together, for in practice a great many musicians have the opportunity to make money

from various other musical sources. While musicians have of course always cobbled together income from multiple sources, it is not yet clear that, in the new musical system dominated by streaming, it is harder for musicians to make a living than before (see problem 3 below). That *may* be the case, but *per-stream rates do not really even provide more than a small step towards answering this broader question*. And low per-stream rates are not a sufficient basis for arguing that MSS are unfair to musicians.

Excessive focus on music streaming services, neglect of system as a whole

A further point arises from the discussion in the previous sub-section. MSS are undoubtedly important, but they are not everything in the current system: the problem of how many musicians can gain a living in the new musical world needs to be understood by seeing MSS as embedded in a wider system of cultural production and consumption (driven by the specific nature of cultural markets, as opposed to other kinds of markets for goods and services) and of cultural labour (including the copyright and contract laws and practices that play a large part in determining monetary rewards). Among the systemic issues to which even commentators not fundamentally concerned with justice and fairness, such as centrist mainstream economists (most recently Krueger, 2019), have drawn attention, along with more radical critics, is that the cultural industries as a whole, and the music industries in particular, tend towards ‘winner-take-all’ markets, in which rewards are greatly skewed towards the most successful participants. In such cultural markets, a vast reserve army of cultural workers exists alongside a rather small group of professionals, a very select few of which gain huge financial rewards and fame. Workers in this reserve army seem surprisingly willing to face insecure working conditions in the hope of achieving success, or even entry into a world where they can be paid for doing what they (ambivalently) love, and various commentators have sought to understand why this might be the case (for these and other issues concerning justice in cultural work see Banks, 2017 and Hesmondhalgh and Baker, 2011).

This labour market or system is sustained, like nearly all markets in modern societies, by a set of property laws and contracts. One of the many interesting aspects of the digital utopianism of the 1990s and 2000s was that a lay critique of the very idea of owning music emerged, in the form of assertions of the kind that ‘music should be free’, and in the platforms of anti-copyright activists such as the pirate parties that briefly appeared in Europe in the early-21st century (Burkart, 2014). The most developed academic critiques (e.g. Stahl, 2013; Toynbee, 2004) have analysed the ways in which the music copyright-contract system produces alienation and exploitation. In more practical terms, how much a musician gets will depend on the nature of the recording and/or publishing (i.e. composition) contract they signed, the nature of the deal between the musician’s label and the streaming service, and geographical location (Mulligan, 2015: 152). In other words, in determining rewards for musicians, the broader system of deals between recording and publishing companies and musicians is as important as what MSS themselves do – a fact only very occasionally acknowledged in commentary. Historically, the amount paid to musicians in royalties has been very low – 5% of the suggested retail price was standard for much of the US music history, for example, and even prominent artists would not get more than 10 (Stahl, 2013: 121). There were also very many examples of underpayment

and non-payment, and, because of racism, such examples disproportionately involved non-White musicians (Stahl, 2013: 255). In fact, it seems that the percentage of money coming to musicians from revenue earned by MSS is somewhat higher than under previous systems – around 25% (Ingham, 2019a). It might well still be valid to critique the music industries for paying too little to musicians and other creatives in royalties, but this is an issue of the copyright-contract system, and not MSS per se, a point many debates fail sufficiently to acknowledge.

To implicitly criticise commentators for not taking into account fundamental questions concerning music under capitalism, and whether and how the existing situation might be transformed, may seem harsh. A broad vision of this kind is a lot to ask of any individual commentator seeking to point to particular instances of unfairness – and it may even be harsh when demanded of academics who might devote years of study to the topic! Nevertheless, the lack of any reference to or consideration of such systemic issues in the field of commentary on MSS and the digitalisation of music as a whole is striking. The problem is that a great deal of coverage of controversies about MSS has the (no doubt unintended) consequence of *obscuring* the systemic difficulties surrounding music under capitalism. This has been true, for example, of the extensive media coverage given to the public pronouncements of various prominent musicians on MSS, which undoubtedly fed into public debate about the rights and wrongs of the new system. Take for example a *Wall Street Journal* op-ed that gained a great deal of publicity, in which the pop superstar Taylor Swift proclaimed that music should not be ‘given away’ (Swift, 2014). Swift’s position was not, however, a version of the by-then familiar complaints by prominent musicians, perhaps most famously Metallica, about ‘pirate’ or peer-to-peer services ‘stealing’ their music (Marshall, 2002), which could be understood at least in principle as a vague defence of poorer musicians’ intellectual property as well as their own. Her objections were directed at a rather more specific target, a new trend for MSS to with-hold payments during exclusives or promotions. This was followed by her withdrawal of some and later all of her recordings from Spotify, and criticisms of Apple for not paying royalties on streams undertaken during free trials of the service.⁸ Swift made no reference, at least in this early intervention, to systemic inequality between music superstars such as herself and the vast majority of musicians (this is not to deny that Taylor’s intentions may have been to draw attention to poor rewards for musicians more generally). Similarly, it became conventional for a while for superstar musicians to temporarily keep their music off MSS, but this often turned out to be an effort to encourage greater sales of CDs and downloads. It was rarely if ever a protest against low rates of payment for the vast majority of musicians.

It was in this context that when the MSS TIDAL relaunched in 2015, following its part-purchase by Jay-Z, Beyonce and other prominent musicians, the company and various owners claimed that its ownership by artists would mean ‘less profit for our bottom line, more money for the artist’, in Jay-Z’s words (Turner, 2018). What this really meant, it seems, was a somewhat higher proportion of streaming revenues going to rights holders – 75% rather than the 70% commonly cited as the share that Spotify pays, and with no ‘free’ advertising-supported tier (which usually pay less to rights-holders than subscription tiers). For the superstars who mainly owned TIDAL, this might make a difference, because they might receive a higher proportion of that

75%, but for less well-known and successful artists, this change would be unlikely to make much difference, because TIDAL would be paying out quite small amounts in total, given that it has struggled to achieve a large number of subscribers.⁹ Coverage of TIDAL added to a sense that most MSS were unjust – but paid little or no sustained attention to problems in the musical system as a whole.

The lack of attention to such systemic features of music production and consumption has had two major consequences for the debates about MSS. First of all, there is too much focus on the MSS themselves, and not enough on other players within the system. Second, there has been a lack of attention to the issue of what might constitute better systems of musical production and consumption. I return to this latter issue in the final section of this article but before then I consider the two remaining problems of argument and evidence I wish to address.

Simplifications in attempts to address systemic issues

There are some notable exceptions to the above lack of address of what I am calling ‘systemic issues’, and in particular, critical contributions that seek to place MSS within the wider context of the music industries, including the domination of the major record companies. Even here there are simplifications however. For example, it is common to read news items about Spotify that make claims along the lines that ‘87 per cent of the content on the platform last year was from the top four music labels’ or that ‘the big labels provide Spotify with the music that makes up 87 percent of the company’s streams’ (Kafka, 2018). That figure of 87% is taken from Spotify’s F-1 document filing when it became available on the New York Stock Exchange in 2018, but as the second but not the first quote recognises, it refers to the proportion of *streams*, not the proportion of *content* (i.e. audio files uploaded and available) and one of the four entities involved is Merlin, which is not a label, but a digital rights agency representing the interests of thousands of smaller record companies across the world, on a membership basis. The three major record companies are undoubtedly dominant on MSS and in the music industries more generally, but that they are not as dominant as quotations such as this suggest. Moreover, such claims are often accompanied by reference to the fact that the three major labels, and in fact Merlin too, have had ownership shares in Spotify (granted to them as part of the initial licencing deals struck with Spotify).

A number of critics go into greater depth, in claiming that the domination of major record companies and superstars in musical culture is being reproduced by specific features of MSS, the idea being that the recommendation systems used by MSS constantly push the repertoires of the majors and the artists signed to them above those of other sources. Central to these recommendation systems are *playlists* – not those put together by ordinary users, but those created automatically or by human editorial intervention (or some mix of the two). A prominent critic of the new musical system, journalist Liz Pelly, for example, argues that ‘the major label mainstream status quo comprises largely the same world that Spotify bolsters in its biggest, most visible playlists’ (Pelly, 2018a). Playlists on Spotify, and to a lesser extent other MSS, are an essential way in which MSS seek to offer experiences distinctive to their own services, and to guide audiences’ musical discovery. Placement on influential playlists, especially towards the beginning of the playlist (as many users listen to playlists in

the order that they are presented) can have a major effect on recordings' and musicians' chances of success. RapCaviar, for example, an influential Spotify playlist, currently has nearly 12 million followers, and is widely believed to have significant influence on hip-hop culture. For Pelly (2018a), the logic is clear: 'the most popular tracks on Spotify get featured in more playlists and become even more popular as a result'.

Such criticisms connect with long-standing concerns and debates among some musicians and fans – and within academic disciplines such as media studies, cultural sociology and music studies – about the domination of media corporations over independent and do-it-yourself (DIY) producers (Hesmondhalgh, 1999; Bennett and Strange, 2014), and about the problems of celebrity culture (Pelly, 2018b). There are real reasons to be concerned about the effects of large cultural-industry corporations on music and culture more generally. They have provided occasional wonders and considerable exploitation, alienation and inequalities of success (Hesmondhalgh, 2019). But inaccurate and generalised depictions of the role of the majors in the new musical system do not advance such critique. For example, attributions of features of MSS to the ownership by major record companies of Spotify (e.g. Eriksson et al., 2018: 3–5) are compromised by the fact that these companies (and Merlin, the key digital rights agency for independent record companies) have largely divested themselves of ownership since Spotify's stock exchange listing (or initial public offering (IPO)) in 2018. In any case, the majors do not own shares in other MSS, where they are probably just as dominant in terms of streams. Most importantly, the ties between the majors and MSS are arguably no more intimate than those that have existed between the majors and radio stations, or that once existed between the majors and the big music retailers. It is certainly valid to criticise the MSS for being dominated by the majors, and to question the musical system dominated by MSS for involving close synergies and complementarities between the big streaming companies and the majors. But such critique would benefit from being clear that there is nothing novel about major dominance, and there is scant evidence that MSS has increased that domination in the musical system as a whole. Moreover, that dominance needs to be weighed against the increasing possibilities for musicians to work independently of the major-dominated recording industry system, and to retain ownership of their own rights. Probably, the most discussed example of this in the Anglophone sphere in the 2010s was Chicago artist Chance the Rapper. Such successes remain relatively rare, but the provision of independent distribution by firms such as Ditto undoubtedly offers new opportunities to bypass the majors (Wang, 2018) and this should not be ignored in assessing the new musical system centred on MSS.

A more substantial criticism than the MSS's connections with major record companies points to how the new musical system continues the precariousness and insecurity that have long been features of musical labour markets (Stahl, 2013). Indeed, these and other features of musical labour are harbingers of some of the problems of contemporary working conditions, as implied by the popular phrase, 'gig economy' (Baym, 2018). But such critique is on shakier ground when it is linked to under-developed claims that the MSS 'have undercut an industry that once provided some semblance of an organic support system' (Pelly, 2018b). It is not at all clear that there was even a semblance of such a support system for all but a relatively small group of successful musicians – an issue I address in the next section.

Are things really getting worse for the majority?

Another way in which criticisms might be formulated in a way that better serves the interests of musicians would be if more of the commentary on the above issues placed MSS in a wider historical perspective. That might allow consideration of whether it is harder now, in an era of MSS, for musicians to earn a living, than under previous systems, such as the 'pre-digital' world of the 1990s when sales of CDs were the main source of revenue in many countries. Often, it is merely *asserted* that it is harder now than ever for musicians to make a living. For example, David Lowery has claimed that 'if you're below a certain threshold of popularity, playing for 200 people a night, that and record sales used to be a middle-class living, but with streaming I'm not sure' (Levine, 2018).¹⁰ A headline on *The Ringer* website gives a typical indication of the claims: 'Is Spotify wiping out music's middle class?' (Luckerson, 2019). The consensus about the answer is shown by David Turner's reaction, when providing a link to that article: 'Yes. Thank u. Next.' (Turner, 2019a). But the 'case closed' humour here potentially obscures real problems of historical comparison.

Is it really true that once, where many thousands of musicians below the established level thrived, or at least got by, now those same musicians, or their contemporary equivalents, struggle to maintain a career? There appears to be very little historical data comparing how much revenue goes to rights holders and therefore eventually to musicians, compared with how much in the past. A rare exception was offered by Mulligan (2014). He provided figures suggesting that, contrary to predictions that with the rise of digitalisation, superstar artists and large corporations would dominate cultural markets less than before, as a result of digital services making easily available products from the 'long tail', in fact that domination increased. Although his report provided only scanty details of methodology, it illustrated changes in 'creator music income' from 2000 to 2013 (see Figure 3). Figure 3 shows total income diminishing significantly as a result of the crisis created mainly by digitalisation, but that figure begins to recover from 2010, as MSS start to become established. Note however that the proportion of income gained by the top 1% of artists declines much less precipitously than the proportion gained by the other 99%. In 2000, the bottom 99% gained 29% of revenues, by 2013 that figure had declined to 23%. These figures, then, support the idea that below the top 1% of 'superstar artists' (though that 1% would include quite a number of artists who are not exactly superstars) it is increasingly difficult to gain a living. However, it is clear that, since 2014, there has been a rapid increase in global revenue from recorded music, now almost back to 2006 amounts, at least in absolute rather than real terms. It would be extremely interesting to see whether there has been any change in distribution between the top 1% and the rest since the recovery in revenues brought about MSS.

Other research on the distribution of income across musicians might provide some indications of the kind of work that might investigate these issues of longitudinal comparison in greater depth in future studies. Using data provided for Spotify in the Finnish market, Muikku (2017), for Digital Media Finland, took a random sample of 10,000 audio files, involving 4493 different artists, which were, during the period covered by the data, streamed 22,496 times by 8051 different users. Figure 4 shows the distribution of streams across the 'artists' or musicians. A total of 0.4% of the 4493 'artists' were

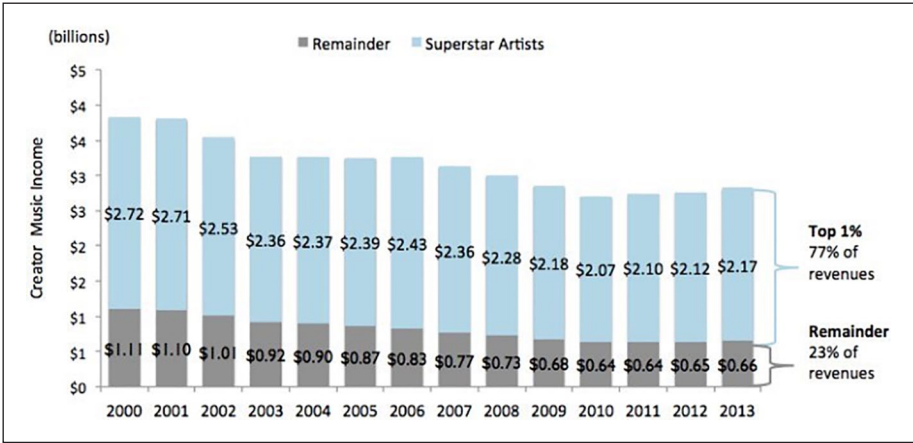


Figure 3. Digitalisation was associated with increasing dominance of top 1% of artists, with streaming came recovery of revenues. Source: Mulligan (2014).

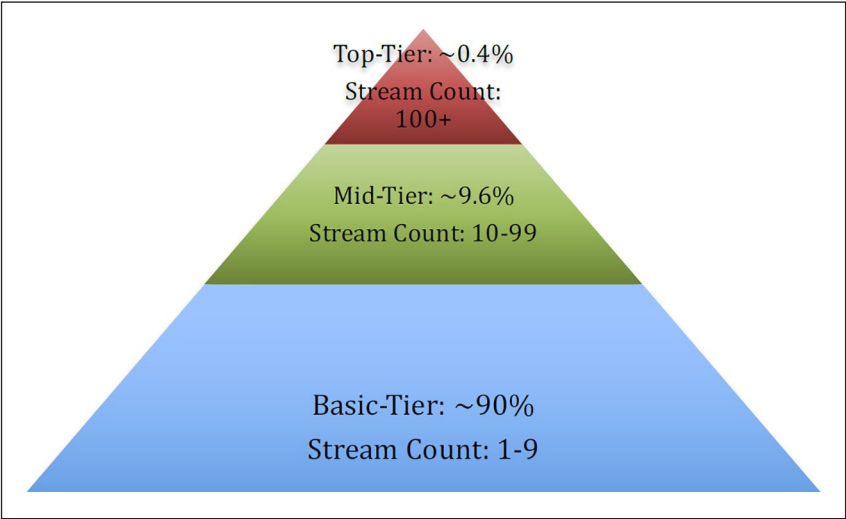


Figure 4. Distribution across a random sample of 10,000 streams. Source: Muikku (2017: 9).

streamed more than 100 times; a further 9.6% were streamed between 10 and 99 times, and the vast majority of artists (90% of the 4493) were streamed between 1 and 10 times. (Many tracks on MSS are apparently not streamed at all, but only tracks that actually were streamed were included in the random sample).

Digital Media Finland’s research indicates the kind of distribution of success we can expect from MSS, and helpfully differentiates ‘artists’ or musicians into three plausible categories, helpfully extending rather basic distinctions between 1% of superstars versus

all the rest. It may well be that the most crucial group in assessing the sustainability of careers might be the middle group, gaining between 10 and 99 streams in the sample. These perhaps correspond to Luckerson's (2019) musical 'middle class', referred to earlier. We might be able to assume that the top 0.4% will earn enough to live on, and that the bottom 90% will struggle. But how many of the 9.6% *between* them can sustain a living based on music? And in historical terms, how is this changing, if at all, in the era of MSS? If more such (anonymised) data can be obtained from the MSS, it might be possible in coming years to gain a better sense of change *over time*, though comparisons with a pre-digital era will be much more challenging. In fact, the purpose of Muikku's research for Digital Media Finland was to compare different ways of paying artists in the present or near future, and this takes us to an important issue that has been valuably raised in some of the debates about MSS, with potential lessons for other industries: whether there might be measures available in the digital era to ensure a more equitable distribution of money between cultural workers.

What can be done? Is the user-centric system a solution?

In order to build a more substantial set of criticisms of the new musical system centred on music streaming, I have critically considered some of the ways in which arguments and evidence have been presented and understood in a wide range of online sites. I want to reiterate that my goal here is to sharpen critique of existing systems, rather than to defend them. But *how* might the system be reformed? There have been moves towards establishing streaming services on a co-operatively owned and managed basis (Morrison, 2018). But these initiatives have so far struggled to compete against the might and network effects of the major tech corporations. Moreover, some commentators have expressed scepticism about whether reform of streaming is even feasible. David Turner (2019b), for example, comments, 'The question of how to best support artists [. . .] is the wrong question. There is no good music streaming service for artists'. Others turn to long-term and problematic technological fixes such as blockchain (O'Dair, 2019). There is no space to address these ideas in detail here, but one very widely discussed and debated notion cries out for assessment in this final section: the idea of shifting from the current 'pro-rata' system, discussed earlier, to a 'user-centric' system of payment. Might this alternative system be fairer?

Under this user-centric system, if 10% of an individual user's streams were of recordings by a certain artist, 10% of the subscription fee (once the MSS's fee had been deducted) would go to the owners of the rights to those recordings and their underlying compositions, and then money would be distributed to music creators, according to their contracts. In the present 'pro-rata' system, even if that user never played a single recording by superstars such as Drake or Taylor Swift, a proportion of that user's subscription fee would go to the owners of rights to those superstars' recordings and underlying compositions, split according to terms agreed in various contracts and agreements that vary between countries on how rights revenues are divided.

The user-centric model has a number of potential benefits. First, it may be more equitable, in that, compared with the pro-rata model, it potentially pays less to superstars, and more to less streamed artists. The report by Muikku (2017) for Digital Media Finland,

cited above, was commissioned to test the different models, and it found that when hypothetically using the 'pro-rata' system, the tracks by the top 0.4% of artists, in terms of number of streams, would receive 9.9% of the money, but when the 'user-centric' system was hypothetically applied, the tracks by the top 0.4% would receive only 5.6% of the total cash. That difference between 9.9 and 5.6 is very considerable proportionally, and importantly the extra 4.3% (9.9 minus 5.6) of total revenue would have gone to the 'non-superstar' 99.6% of rights holders. What is more, the further down the long tail one goes, the more likely are musicians to own the rights to their recordings and underlying compositions, so they would keep a bigger proportion of whatever was paid out to rights holders. In other words, the user-centric model appears to favour less successful musicians.

Second, and relatedly, the user-centric model may favour 'local' musicians. Previous tests, using data provided by Norwegian streaming company, WIMP (which was bought out as part of the deals that created TIDAL), were conducted by Maasø (2014) and Pedersen (2014). These studies showed that 'local' musicians, respectively, Norwegian artists in the Norwegian market, and Danish musicians in that market, stood to gain significantly from a shift to the user-centric system. Third, the user-centric model is arguably more transparent in that it allows users to have a better sense of how their use translates into payment for rights holders.

Other commentators have pointed to some potential problems and complexities involved in comparing the two systems, and in advocating a move to user-centric payment. First, there is likely to be substantial variation in the effects of user-centric models on equity, depending on market segments, and in some cases, the effect will be to redistribute upwards, in the direction of the most successful artists. As Muikku (2017) observes, 'results depend on the cumulative effects of both individual and user groups' listening habits', and as Mulligan warns, the user-centric model could penalise indie labels, for example, because indie fans tend to be music aficionados and to listen more heavily and to a greater number of artists, resulting in the effective per-stream rate for those fans being relatively low. By contrast, Mulligan (2017) writes, 'a superstar pop act might have a large number of light listeners and therefore higher effective per stream rates'.

Second, there are the costs of creating a system providing the data necessary to ensure sufficient accuracy to allow a user-centric system to operate. In Page and Safir's (2018) words, this involves 'the need to create a unique account per listener, such that each of over 3 million artistes is linked financially to each individual subscriber' (p. 26). Page and Safir argue that these costs would reduce the amount of revenue to be distributed. However, they provide no plausible evidence that such costs would so high as to cancel out the benefits of greater equity and transparency.

Third, Page and Safir (2018) claim that in 'a scenario where one rights holder (or aggregator) advocates a user-centric model of distribution while others retain the pro-rata model, key players are forced to trade off one party's equity for another's efficiency' and they point to the ease and low costs with which key players (not just users but also rights holders) can transfer from one streaming service to another. So if successful musicians left MSS that shifted to a user-centric model from a pro-rata model, on the basis that this would reduce their income (because they are superstars, and benefit from the pro-rata model), then this would decrease usage of the user-centric based service, because users

might migrate away from services where they cannot find the most popular artists. This would in turn lead to lower payouts as a whole, as subscription revenues fall.

However, some of these issues could be fixed if it governments introduced regulation, compelling MSS to employ user-centric systems to avoid these problems. While some would say that such regulation is unlikely or impossible, there has undoubtedly been a move towards stricter regulation of tech-driven media, in the European Union and beyond, and indeed policy-makers in the UK, France and elsewhere are now considering, and even advocating, such a shift.

The user-centric debate is not the only game in the MSS redistribution town. In what appears to have been an effort to respond to the kinds of criticisms that are discussed earlier, regarding musician welfare, Spotify made a commitment in 2018 to allow a million musicians to make a living out of revenue from the platform. Putting aside for now the question about whether this move was motivated by public relations concerns, or genuine interest in musician well-being, and about whether such a target is actually feasible, interesting evidence has emerged that there has been some redistribution of popularity and, therefore, payment down the long tail. An industry report found that, to quote *Music Business International*, ‘in 2017, the USA’s top 500,000 tracks racked up 14.6-times as many audio streams as every other piece of music. In 2018, however, this multiple had fallen significantly, down to 12.2’ (Ingham, 2019b). It is almost impossible to imagine such a marked shift as having been brought about by anything other than adjustments to Spotify’s algorithms. This likelihood is backed up by publicly available academic papers by Spotify research scientists (e.g. Mehrotra et al., 2018) discussing how to achieve greater levels of ‘supplier fairness’, that is, distributing plays more evenly across ‘suppliers’, which in this context means rights holders, mainly the major recording and publishing companies, rather than musicians per se (see the above comments on the copyright-contract system). Nevertheless, assuming steady royalty rates, this would mean more payment to musicians and others involved in the production of music. If Spotify really has taken action to redistribute income across a wider swathe of rights holders and musicians, then it shows that MSS do not need to merely reproduce existing taste (a common accusation levelled against them, as I explore in another, related article), instead they can make choices, and that industry insiders recognise tensions and trade-offs between so-called user satisfaction and fairness. But such a move would also demonstrate the enormous power that MSS have, especially market leaders such as Spotify, to influence the lives and careers of musicians, through adjustments to their algorithms. This returns us to the need, discussed earlier, to think about the problems of MSS in more *systemic* terms.

Is music streaming bad for musicians? It may well be the case that more musicians rather than fewer can now earn money from recorded music. But it seems clear that the current system retains the striking inequalities and generally poor working conditions that characterised its predecessors. Public debate would benefit from more careful formulation of critique and consideration of evidence – which might well depend upon MSS and music-industry businesses being more open and transparent about usage and payments. Nevertheless, it is surely a good thing that issues of justice and fairness regarding musicians are now so widely aired, and reform is being actively discussed.

While the music industries, and the MSS that now play a central role in music production and consumption, have their own specific dynamics, there are various lessons for

understanding other cultural industries that might be drawn from the problems of argument and evidence I have identified in this article. First, there is a need to be cautious about attention-grabbing media coverage concerning fractional payments, and to pay closer attention when analysing questions of cultural justice (Banks, 2017) to a variety of factors, including the increasingly complex (and still exploitative) ways in which many cultural workers put together income from a variety of sources in order to make a living, and details of payment systems: hence my focus on whether the pro-rata system itself might be a major problem. Second, analysis needs to move beyond an excessive focus on new players, such as the MSS themselves (or video streaming services such as Netflix) to the cultural-industry and political-economic contexts in which those organisations are embedded, seeking new critiques of power that do not rely on forms of analysis derived from older versions of the system – as when some analysts overstate the admittedly still substantial power of the majors in discussing new musical systems. Third, discussions of whether things have got better or worse for cultural workers in any particular industry, or across different industries, would benefit from much more systematic historical comparison – though the challenges of obtaining access to sufficiently robust industry data will be considerable.

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Notes

1. There is no space here to summarise research on MSS from other disciplines and fields beyond critical social science and humanities, such as computer science and marketing – though I discuss some such research below. I should also note the more recent and very welcome emergence of research on MSS beyond North America and Europe, which I address elsewhere.
2. It is worth noting, however, that these criticisms may have begun to become more muted, as the income derived from music has increased, at least until the COVID-19 crisis of 2020. Greater critical academic attention is now being paid to issues such as the opacity with which playlists work (Morgan, 2020).
3. I deal with questions concerning what music creators actually earn in other research, currently in progress; the focus here is on *debates* about this question. In a separate article, I address debates about effects of MSS on musical culture.
4. It is striking that these debates about fair pay for musicians, and about how algorithms shape user behaviour with respect to types of supplier, are seemingly much more advanced in music than in video. A prominent exception is recent debate about how YouTube creators have been affected by changes in YouTube's terms of trade (Caplan and Gillespie, 2020).
5. In total, roughly 32% or 33% of all US revenue is retained by 'wholesalers' – streaming services, retailers and download stores (Ingham, 2019a).

6. I should clarify that this is not to accuse Lowery or other sources quoting 'per-stream rates' of deliberate distortion. Lowery's figures have been a valuable source of transparency, but some sources have focused excessively on his 'per-stream rates' and extrapolated dubiously from them.
7. Obviously, many musicians supplement their income through non-musical income, but the issue under consideration is musical labour, and it seems clear that in many cases, musicians would prefer to make their living from musical labour alone, so the need to turn to other sources can in my view be reasonably understood as an unjust compulsion.
8. By 2017, Swift's music was to be found on multiple MSS (see Tiffany, 2017).
9. Indeed, there were credible accusations that TIDAL was falsifying streaming numbers for its superstar artists (Ingham, 2018), with the effect that this would mean the service would pay out proportionally more of their revenues to the rights owners of those recordings and underlying compositions, and therefore, more to the privileged musicians behind them, depending on royalty rates.
10. The use of the term 'middle class' in these contributions is striking. This has somewhat different meanings in the United States than in the United Kingdom: it suggests ordinariness in the former, relative privilege in the latter.

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