

Introduction: The Continuous Significance of Live Music

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Most of the literature about live music (as well as other types of live art, such as theatre) begins with an acknowledgement that ‘live’ is a complex concept. This means that only a relatively small proportion of music phenomena can be described as ‘live’ without any qualifications (Auslander 2008; Sanden 2013; Meyer-Dinkgräfe 2015). This was not always the case. Hundreds of years ago, it was easy to establish what live music is. Before the invention of sound recording and its reproduction, live performance provided the only means of listening to music. Karl Marx commented prior to the invention of the phonograph that ‘the service a singer performs for me, satisfies my aesthetic need, but what I consume exists only in an action inseparable from the singer, and as soon as the singing is over, so too is my consumption’ (quoted in Katz 2010: 13). This clearly articulates the opinion that a musical performance could only exist at a specific and unique moment in time and space. The subsequent ability to capture sound resulted in the detachment of the artist from a performance and its listener. Its location on a tangible medium for conveyance and reproduction has made it possible for a listener to choose when, where and how he or she engages with a musical work, and leading to an aesthetic regime that varies significantly from that pertaining to live experience.

Whilst it is widely considered that the first practical device for sound reproduction was the Mechanical Phonograph Cylinder dating back to the 1870s and invented by Thomas Edison, we do not know for certain when the first recording of music took place. However, most likely the first major composer participating in recorded performance was Johannes Brahms. This happened in 1889, when a representative of Edison, Theo Vangemann, visited the composer in Vienna and recorded Brahms’ performance on piano of his Hungarian dance, with a short, spoken introduction (Berger and Nichols 1994). We know little of this event, but can assume that the aim of the recording was to immortalise something from Brahms’ music – to be as close as possible to the live event. This was also the case in the first two decades or so in the history of recorded music, which Jacques Attali describes as a stage of ‘repeating’, which followed ‘sacrificing’, when music persisted solely in the memory of people, and ‘representing’, which refers to the time of printed music, roughly 1500 to 1900 AD (Attali 2014). After these early decades, the relationship between live and recorded music started to

change. The recordings stopped merely capturing live events; they tried to improve on them, create their perfect versions or different versions altogether, which live performance was unable to recreate. Moreover, recordings affected live music. Rather than ‘shadowing’ live events, now live music started to imitate or at least reflect recorded music. Jazz is seen as the first genre which was affected by developments in recording. As Brian Eno observes,

Around about the 1920s or maybe that’s too early, perhaps around the ‘30s composers started thinking that their work was recordable, and they started making use of the special liberty of being recorded. I think the first place that this had a real effect was in jazz. Jazz is an improvised form, primarily, and the interesting thing about improvisations is that they become more interesting as you listen to them more times. What seemed like an almost arbitrary collision of events comes to seem very meaningful on relistening... So they were listening to things that were once only improvisations for many hundreds of times, and they were hearing these details as being compositionally significant. (Eno 2004: 127-28)

In a similar vein, Mark Katz notes:

In jazz, the repeatability of sound recording has had many and varied consequences. For one, it has aided the close study of the repertoire. It has also had a complex effect on jazz improvisation. Although recording may foster improvisatory skills by allowing musicians to analyse and extrapolate from solos, it can also inhibit experimentation and encourage the reproduction of once-improvised solos in live performance. (Katz 2010: 90)

Subsequently, electronic music became an epitome of music that cannot exist and develop without recording techniques (Eco 2004; Katz 2010: 124-76). Terms such as ‘sampling’, ‘synthesis’, ‘delay’, ‘echo’, capture the need to pre-record and store fragments of music to be able to play them live. Developments in technology, especially recording technology, has had somewhat contradictory effects on live music. On one hand, it has affected the balance of power between live and ‘non-live’ music, limiting the social, cultural, aesthetic and economic significance of the former. On the other hand, it has allowed live music to develop, integrate with non-live music and attract an even larger audiences. These two influences led to the development of two paradigms concerning live-non-live relations, which we describe as ‘rivalry’ and ‘symbiosis’.

Live and recorded music: rivalry or symbiosis

While before Brahms' recording, all music was live, with the development of recording technology live music had to compete with recorded music for the listener's attention and his or her disposable income. In 1986, Dave Laing proclaimed:

The recording has now established a hegemonic position within popular music as a whole... Today, in technical, aesthetic and technological terms, recorded music is autonomous. In economic terms, the bulk of the music industry's income derives from the use of recordings: from direct sales in shops, from payment by radio and television stations for the right to broadcast recordings and from the public performance of records in discos, shops and hotels. As a result, the dominant institutions of the music industry are now the recording companies. (Laing 1986: 332)

Writing in 1999, Philip Auslander reiterated this view, proclaiming that non-live media, such as film and television, dominated over the live ones, such as theatre and live music (Auslander 2008: 1). Simon Frith explains the domination of recorded music over live by the fact that 'live music can achieve neither the economies of scale nor the reduction of labour costs to compete with mass entertainment media' (Frith 2007: 1). 'In 1780 four quartet players required forty minutes to play a Mozart composition; today forty minutes of labour are still required' (Cowen, cited in Frith 2007: 1). Frith further observes that as a consequence of the development of recording technologies, job opportunities for live musicians have declined, while musical activity has been increasingly domesticated. 'Cinema organists were made redundant by talking pictures; pit orchestras were replaced by pre-recorded tapes, pub singers by juke boxes, dance halls with dance bands by discos with DJs. As people spent more time listening to music at home (on record, radio and television) so they spent less time going to hear live performers in bar rooms and public halls. At the same time, the domestic use of music has been personalised: family entertainment moved from the piano to the phonogram, from the living room radiogram to the bedroom transistor, from the hi-fi system as household furniture to the walkman and the iPod as personal music accessories. For socio-cultural as well as economic reasons, then, the live music sector seemed doomed to extinction, surviving only as the result of state-subsidised conservation' (Frith 2007: 2).

This balance of power between live and recorded music, which by the end of the last century was tipped towards recorded music, is also reflected in the state of research on the respective media. Studies of popular music are dominated by analyses of the recording

industry. There are numerous books on popular music which ignore live music altogether. It is telling that the previously quoted article by Frith, published in 2007, is titled 'Live music matters'. By giving such a title, Frith suggested that live music indeed mattered little in comparison with recorded or non-live music. Moreover, as Martin Cloonan noted, when live music mattered, it was usually researched from the perspective of cultural and economic policy (Cloonan 2011); much less attention was granted to aesthetic issues of live music, its history and theory and its relationship to technology.

The situation started to change around 2000. This has been affected by two interrelated factors. One is the growing importance of live music in the economy of popular music, resulting from a dramatic drop in the income of the recording music industry, caused by piracy, free sharing and, most importantly, the low cost of accessing music legally via the internet, through downloading and streaming. In other words, the crisis of the recording industry, which started around the turn of the twenty-first century, has helped live music to gain in prominence (Kusek and Leonhard 2006: 114-17; Frith 2007; Holt 2010; Laing 2012; Marshall 2012; Wikström 2013: 58-60; Leyshon 2014: 110-37; Mulligan 2015: 179-86; Sanchez 2018). The rise of live music manifests itself in the sheer number of live music events, available to the public, in the form of free-standing concerts with highly efficient touring teams and the touring geography, which be compared to big wandering exhibitions (Holt 2010: 249) and in festivals, where a large number of performers present their works in one place, over several days, often around a specific genre and theme, as well as such phenomena as live streaming. These phenomena reflect the successes in overcoming the problem of non-scalability of performance (Holt 2010: 249). The consequence is dramatic growth in revenue created by live music. According to PriceWaterhouseCoopers, global live music revenues, including ticket sales and sponsorship, will reach thirty-one billion USD in 2022, growing at a rate of 3,3% annually (Sanchez 2018). The situation in the UK confirms this trend, as noted by Arno van der Hoeven and Erik Hitters, who in a chapter included in this collection, observe that in 2017 popular music performance events made a £ 4.5 billion annual contribution to UK economy, of which £ 991 million was from live performance. Live performance is by far the fastest growing part of the music industry, increasing by 37% overall between 2011-2015 (90% growth in exports) with a 26% increase in employment in this area. The total audience count for 2017 was 29.1 million, with 10.9 millions of these (compared to 6.5 million in 2013) being tourists. This significant growth outpaces the general UK economy and there is now general recognition by UK government that popular music

makes a large financial benefit. Many other countries across the globe experience the same trend; hence the proliferation of music festivals, as well as mega and lifestyle festivals, in which music is an important component, as exemplified by Bug Jam Festival, which presents itself as a celebration of a VW car, but which includes concerts and DJ sets (BugJam website).

However, these positive figures obscure many problems suffered by the live music sector, of which the most serious is its uneven development, uncertainty or even volatility. Quoting the famous Abba song, we can describe the current situation as developing according to the rule that ‘the winner takes it all’. This means that the bulk of the income from live music is created by large festivals and a small number of dominant companies which thwart the smaller actors, such as niche, independent festivals and venues, through having larger and from the perspective of the mainstream audience, more attractive programmes and larger budgets, including for promotion, as well as the power to reduce the competition from independent organisations through signing exclusivity deals with artists. In fact, although live music at large is thriving, in the UK the number of smaller venues is reducing. This often results from the pressure on accommodation, including from students and the local authorities’ inability or unwillingness to protect spaces of culture, such as music clubs. Also, the smaller the venue, the more vulnerable it is to competition from developers, often offshore ones (Clarke-Billings 2015; Harris 2019). Moreover, the majority of ‘ordinary’ (Perrenoud and Bataille 2017: 593) touring (‘live’) musicians are struggling due to low income, precarity, working in social hours, leading to insomnia and vulnerability to mental problems (Morgan Britton 2015). Even the most successful festivals rely on precarious, poorly paid, or unpaid labour, a feature of the neoliberal economy which reflects and adds to global economic and social inequalities. In this respect we can also observe a parallel between developments in live and recorded music, with the leading mainstream festivals such as Glastonbury and Coachella operating in a similar way as online streaming platforms such Spotify, by presenting large numbers of popular acts and artists in one location, offering consumers convenience and value. Inevitably, the most streamed artists are also those who front and attract the largest crowds at festivals. In a larger sense, the dominance of the sector by the largest (literal, in the case of venues and metaphorical, in the case of musicians) players, reflects the pyramid-like structure of neoliberalism, with the constantly widening gap between the rich and the poor.

Whilst in the times of Brahms, the only ‘other’ of live music was recorded music, and vice versa, nowadays each of the two, recorded and live music, have many others, mostly hybrid forms of each. Examples are artists singing from playback, karaoke, DJing, live streaming, network performance, travelling holograms or even performing cyborgs; some of which will be discussed in this collection. This throws into focus what live music means today and how the dynamics of live-non-live music is likely to develop. One observation we can make is that the old opposition of live and recorded (or otherwise represented) music is no longer valid because there is an element of recorded music in the majority, if not all live music performances. Non-live technologies are also required to ‘enhance the perception of liveness... in the ability of those technologies to simulate or augment some recognizable characteristics of live performance’ (Sanden 2013: 7; the chapter by Steven Kerry in this collection), and technologies of mediation are needed to increase the capacity of the audience’ attendance at live events, as exemplified by live streaming and the use of social media in their promotion and preservation. Not only are non-live technologies necessary for touring musicians to achieve success, but live events are needed to fill the media platforms. This is exemplified by the broadcast of live events first by television and later the internet, and the use of live events to sell records.

Different types of liveness

This entanglement of live and non-live (or not quite live) music requires us to differentiate between two types of liveness. One can be described as classic liveness. This type of liveness is absolute, namely not sensitive to historical shifts. According to Peggy Phelan, a researcher focusing on acting and the leading defender of absolute liveness as the only type of liveness deserving the name, it signifies the corporal, spatial and temporal co-presence of the performer and the audience, necessary for the production of a unique event. She states:

Performance’s only life is in the present. Performance cannot be saved, recorded, documented, or otherwise participate in the circulation of representations *of* representations: once it does so, it becomes something other than performance. To the degree that performance attempts to enter the economy of reproduction it betrays and lessens the promise of its own ontology. Performance’s being... becomes itself through disappearance. (Phelan 1993: 146)

The other kind of liveness, which is limited to only one of these types of co-presence, for example be temporal but not spatial, as in the case of live streaming, can be described as ‘relative’ or ‘mediated’ liveness (Auslander 2007; Sanden 2013). Sanden observes that

conceptualisation of liveness rests on perception, not actuality and it emerges from the dialectical tensions inherent between this perception and the perceived encroachment of electronic technologies into the terrain of fully human performance. In this sense, the concept of liveness usually represents authenticity and other musical values that are associated with performance to protect against claims of inauthenticity that are often associated with the musical use of electronic technologies (Sanden 2013: 6-7; see also Jones and Bennett 2015).

If liveness is a matter of perception rather than objective reality (if such reality exists at all), then 'live music' is a historical and cultural concept (Auslander 2008: 3). What 'live' means for one generation, does not necessarily mean 'live' for another generation or in another culture. One of the main aims of this collection is to chart the changing meanings and connotations of 'live', speculate how they will develop in the years to come and how they will affect the understanding of what is not live, namely recorded or mediated music. This means that the type of liveness which is of specific interest to the authors is relative liveness. Practically all of them proclaim that the future of live music will lie in artists and other musickers moving further and further away from absolute liveness. What is of interest, however, is what vehicles of transforming 'old live music' into 'new live music' will be regarded as technically feasible, morally acceptable and financially profitable. This question is particularly pertinent in the light of the fact, to which many of the contributors allude, that there has never been more music in the world than now and music became like water – something taken for granted, ubiquitous, omnipresent, a service rather than a product (Kusek and Leonhard 2006: 1-18). While the current level of creativity is to be celebrated, it also brings the danger of reaching a saturation point, when the market cannot absorb more music and the income from the production and performance of music is not growing, but stagnating or falling.

Specificity of live music research

Live music brings its own set of problems. One of them, as we already indicated, concerns delineating its boundaries. While the studies of recorded music do not delve into what 'recording' means, authors of practically all studies of 'live music' (including in this collection) feel obliged to include long introductions about the character of liveness. The answers to the question 'what is live music?' are most interesting, when the authors consider examples which are not obvious candidates, such as live performance of electronic music.

Simon Emmerson, in a book-long study on this topic, lists some interesting questions which haunt the consumers of electronic concerts:

How do I know you're not just miming on stage? What clues are there? It's only a laptop and a mouse. You claim you are taking decisions and acting on the result – even based on how I (a listener) am 'responding to you. Can I hear that?

Does it matter how you got there or how the music got there? Did you make it? Or did the machine? Based on what?...

Do I have any real evidence that you are not a complete fraud? If icons work and give the audience a buzz, a sense of occasion... does it matter providing I enjoyed the experience? (Emmerson 2007: xv-xvi).

As Emmerson maintains, there are no categorical answers to these questions. Moreover, 'it is precisely this ambiguity between "live" and "studio-created" which is increasingly highlighted in contemporary practice' (ibid.: xvi).

As liveness is a matter of degree rather than binary choices, and perception or experience, linked to time, place and culture, rather than hard reality, it is worth mentioning those characteristics of liveness which need to be taken into account in any discussion of liveness. One concerns the aspects of performance which are 'live' and those which are 'mediated' and their significance for the performers and the audience, in relation to different genres. For example, in club music, the mediation of music through technology, such as turntables, synthesisers and vinyl records, has a little effect on the perception of liveness by the audience. What makes the event live for the listener is being in the same room with the musicians and other audience. On the other hand, such an abundance of electronic equipment at the rock concert may put off the audience, making them think that the music they are listening to is not really live.

In the studies of live music the concrete audience experience is given more attention than in studies of recorded music (Burland and Pitts 2014). It also goes without saying that the experience of live music is valued higher than listening to recordings. Even the authors of academic work boast about visiting this or that festival and keeping programmes from them for many years as precious mementoes (McKay 2015: 1). By contrast, it is unlikely to find testimonies about listening to a specific record in a specific time and place. A sign of the superiority of live music over other types of music experiences is, paradoxically, their special

attraction to those who want to preserve them for posterity. There is a special type of documentary film known as a ‘concert film’ (Cohen 2012), while there are no subgenres of documentaries, known as ‘recording films’ or ‘working in the studio films’. Some of the most famous music documentary films are concert films, as exemplified by *Woodstock* (1970) (Mulholland 2011: 97-103), while there are few famous films about music which is not performed live.

The high value attached to attending live events can be attributed to their ephemeral character. This means that if one misses a concert, one will be unable to ever make up for this loss. It is assumed that each concert is different, while each act of listening to the recording is the same or very similar to another act of listening to the same recording. Moreover, participating in a live event is seen as a communal experience in a double sense. First, the performers commune with their fans and vice versa. Second, the audience commune with each other (Burland and Pitts 2014; McKay 2015). In recent times, this value is reflected in sales of commemorative merchandise, which constitutes a significant percentage of the earnings of musicians, on many occasions exceeding income from selling records (see Valerie Soe’s chapter in this collection). Another sign of the high value of live events for their audience is making videos and taking selfies from such events, used both as a private souvenir and, increasingly, as a source of cultural capital, acquired by sharing it on social media, such as Instagram (Bennett 2014).

Live performances have a power of building communities, therefore commentators often attribute them a utopian character, as was the case with famous festivals such as Woodstock and Glastonbury (McKay 2015: 4). Live music events are a particularly appropriate material to investigate the relationship between music and individual and group identity (Tjora 2016). Consequently, discussions about live music frequently touch on issues of drug consumption and their role in creating subcultural identities (Melechi 1993; Redhead 1993). Live music also forms a part of discourse about music and politics (Redhead 1993), as well as music and the everyday and its opposite – the exceptional and carnivalesque (Tjora 2016). The continuing relevance of live music to a wider cultural and social life requires to revisit the concept of aura, introduced by Walter Benjamin, understood as a way to maintain the superiority of the upper classes in their access to art (Benjamin 1992: 299). This raises a question of how to square the positive (from the perspective of egalitarian ideologies) appraisal of live events, especially festivals, with a sense that their value is based largely on

the sense that they have an aura of an original piece of art and often convey a sense of exclusivity (see Beate Peter's chapter in this collection).

Both the researchers of recorded and live music try to locate them in a wider social context, but the latter particularly lends itself to interdisciplinary inquiry. Moreover, while the focus of research about recorded music is on copyright, studies of live music typically concern the legal framework of organising concerts and festivals (Cloonan 2001: 406; van der Hoeven & Hitters's chapter in this collection). This includes choosing appropriate venues which conform to health and safety regulations and ensure a low risk of violent behaviour or any trouble during the event. Consequently, a large part of discussions about live music is about their venues: their architecture as a means to overcome the problem of capacity, and the relationship between the venues and the wider environment in which music events take place, such as regions, cities and rural areas (Nye and Hitzler 2015: 115; Kronenburg 2014; the chapters by Kronenburg, van der Hoeven & Hitters and Mazierska in this collection). Often the question posed by authors concerns the role of live events, especially large festivals, in reviving the economy and rebranding neglected areas (Dvinge 2015: 183; Conell and Gibson 2005: 210-61). Hence, research on live music contributes to the study of urbanism, tourism and food consumption, as well on drawing on the histories and theories of these disciplines.

Until recently, technology did not play a major role in the investigation of live music. However, the situation is changing, with new work illuminating the role of technology in different stages of live music events, from marketing live music (O'Reilly, Larsen and Kubacki 2014), through setting up a show to its recording (Long 2014). This also leads us to the question of different roles played by staff employed in the live music sector, such as technicians, promoters, club managers, bookers and recorders, as well as the audience, and the character of their work, especially in the context of the exploitative character of neoliberal economy. It appears that while for the bulk of researchers interested in non-live music the term 'musician' suffices, for those examining live music much more useful terms are 'musickers' and 'musicking', introduced by Christopher Small (Small 1998: 14).

Due to the crisis of the recording industry, an important aspect of research on live music is its role in propping up its ailing 'sister'. As we have already mentioned, the relationship between touring and recording has changed in the last two decades, with recording being regarded as a means to have material for a new performance and a reason to

return to the same place. This has affected the costs of live music in proportion to recorded music. Almost everywhere the ticket prices increase more than the rate of inflation, because nowadays they provide the main source of income for the touring artists, unlike in the 'golden age' of recording industry, when tickets for concerts were usually rather cheap, as their main function was to promote the artists' records. Because touring and its associated revenue opportunities are now such an important stream of revenue, we also observe attempts to integrate recording with touring, for example by offering successful artists 360 degree contracts (Marshall 2012). It is an interesting question whether this integration will continue, for example, whether successful music platforms such as Spotify will move into the live music sector and how it will affect the relationship between the centre and the peripheries of the popular music industry.

Structure and chapter description

This collection aims to engage with the current debates about the character of live music and the direction it is taking. The first part deals with the dominant approaches to live music. It consists of two chapters. The first, authored by Arno van der Hoeven, Erik Hitters, Pauwke Berkers, Martijn Mulder and Rick Everts, provides an overview of different theoretical perspectives that have been developed to enable researchers to understand the social context in which live music is produced and consumed, such as music worlds, fields, subcultures, scenes, networks and ecologies. These perspectives include work that is grounded in sociology, popular music studies and cultural studies. The authors note that these approaches were often used to examine music phenomena which are not 'live', but they particularly lend themselves to live music, as these theories help to understand the social relationships that both shape and are constituted by live music performances. They also examine which of these approaches provide answers to vital questions, posed by live music and which issues they fail to resolve. Implicitly, this chapter poses the question of whether there is something like 'live music methodology'.

The next chapter by Arno van der Hoeven and Erik Hitters examines the main challenges of the live music sector, based on a qualitative content analysis of 21 music reports and policy document from Australia, the United States, South Africa, Canada, Ireland, the United Kingdom and the Netherlands. This chapter includes challenges in terms of the planning and policy context of live music, the economics of the live music industry, audience

trends, and the position of musicians. Van der Hoeven and Hitters also point to the tensions between the interests of musickers and the wider community where live events take place and discuss ways in which these challenges could be addressed. In doing so, their chapter helps researchers and policy makers to gain insight into the most pressing issues in the music sector. It also acts as a test of usefulness of those approaches outlined in the previous chapter. In particular, it demonstrates the need to apply holistic or 'ecological' approaches to understand the current position of the music business.

The second part of the book discusses the changes in technology affecting the situation of live musicians, their fans and other musickers, as well as the very concept of 'live music.' It begins with a chapter by Steven Kerry, who considers the 'silent stage', namely a combination of technical devices whose purpose is to remove elements of sound which negatively affect the musician's performance and the experience of the audience from the stage environment. Kerry assesses the advantages and disadvantages of the silent stage, looking at issues such as convenience and cost to the touring musicians and sound engineers and the experience of authenticity or its lack on the part of the audience. Kerry does not limit himself to describing what people think 'here and now', but he tries to establish if there is a difference between the opinion of performers of different generations in regard to on stage audio requirements, seeing it as a litmus test of the changing attitudes to what counts as 'live music'.

The following chapter, authored by Duncan Gallagher, examines networked and distributed performance, in which several artists collaborate using the internet as a vehicle, which allows them to transcend geographical barriers in production and performance of music. Gallagher observes that multi-localised performance over the internet came into existence with the birth of the internet, but remained a minority and technically esoteric activity. By this point, there are no examples of high-calibre, popularly accessible musical content mediated in this way, which in part is due to technological problems, such as latency and in part due to a distrust of certain hybrid forms of live music. However, Gallagher argues that with careful development and implementation, networked performance could be combined with a more traditional concert format to allow musicians to perform publicly in multiple music venues simultaneously, allowing for an extension of the concept of live music.

The next chapter in this part explores another type of live performance, which became possible thanks to the internet: live streaming. Its author, Mark Daman Thomas, presents its advantages and disadvantages, drawing in part on his own experience of using this device, as well as several cases of musicians who thanks to live streaming achieved a stable income, significantly exceeding their earnings from touring. Daman Thomas mentions the context in which live streaming became an alternative to the traditional live performance: market saturation and, with it, a particularly precarious situation for upcoming musicians to gain access to physical spaces of performance, given that the number of small venues is diminishing. Live streaming is also convenient for musicians, like himself, who live in remote locations. Daman Thomas notes musicians' slow adoption and apparent resistance to live streaming, resulting to a large extent from their concerns about the perceived authenticity or even liveness of such performance. He recognizes the fact that live streaming lacks one important marker of live performance, namely spatial co-presence, but compensates for it by the intensity of the connection between the artist and their audience.

In the third part we consider the changing ontological status of live performers, focusing on two examples of performers who can be described as not-quite live and even human. The first example is cellF: a collaborative project at the cutting edge of experimental art and music that brings together artists, musicians, designers and scientists to create the world's first neuron-driven synthesiser. Building upon the innovations of David Tudor's neural synthesiser, cellF moves away from mimicking neural synthesis in computer chips towards an analogue solution comprised of a bioengineered neural networks or a 'brain' reprogrammed from skin cells, using induced pluripotent stem cell (iPSC) technology that are housed in a custom built modular synthesiser 'body'. CellF is discussed by its creators, Guy Ben-Ary, Darren Moore and Nathan Thompson, who present its working mechanism, as well as the ethical and practical challenges their project poses to our thinking about who performs on stage when cellF is 'playing' and what live music means in the context of this invention. In particular, is it moral to put such a 'musician' in front of the audience? And if so, what will the future of live music will bring? Will it be possible to harvest tissue from famous stars and use it in future concerts, including after their death, to prove that they are in a way still performing live, even when their bodies are decomposing?

Alan Hughes follows in the footsteps of Ben-Ary, Moore and Thompson, by considering holographic performances as live music. Such performances are increasingly

popular, largely as a means to bring back to life deceased musicians, such as Michael Jackson and Tupac Shakur, encompassing a growing number of genres and types of artists, not only those who died young, but also those who enjoyed a long career. Hughes examines the reasons for their popularity, the ethical and ontological issues surrounding both marketing narratives and stage exhibition(s) which ostensibly present a dead musician as a living entity and the potential legal issues of commercial copyright that may arise. He asserts that rather than being an inauthentic or artificial pastiche capturing, at best, some of the essence of a dead musician, holographic performances as 'live music' are equitable with or even superior to a range of other contemporary live music exhibitions.

After examining changes in the status of music performers, we move to the spaces where live events take place, their value for the audiences and ways to increase them. This part opens with a chapter by Robert Kronenburg, who charts the architectural development of settings and stages for live music festival performance, focusing on the situation in the UK and in the United States. He notes the shift towards urban festivals and examines their impact on the way the host city is perceived and used, drawing attention to the many functions which festivals play in the life of cities and the value they add to their economy and culture. In particular, he argues that such events can become a catalyst in urban revitalisation, temporarily and permanently, thereby improving the character, image and development of places, space and city life. He concludes that urban festivals are likely to expand and diversify, despite the many challenges that they encounter, some of those mentioned in the chapter by van der Hoeven and Hitters.

While Kronenburg offers an examination of music spaces and places, Les Gillon examines the future of music venues through a case study of The Puzzle Hall, a very small but significant live music venue, which operated in Sowerby Bridge, a small town in the North of England. The venue was one of a number owned by a pub company or 'pubco', which made the decision to close it down some years ago. Recently, however, the venue has been purchased through a crowdfunding campaign, by a group made up of former customers and so is owned by the audience it once served. The group plans to reopen The Puzzle Hall as a not-for-profit community music venue. The project has involved a large number of participants willing not only to contribute funds for the purchase of the venue, but also prepared to commit to work on the project without pay. This case study opens up questions about the different ways in which such free labour can be characterised; as indicative of the

exploitative nature of the live music industry or as an example of non-hierarchical mutualism in action.

While Kronenburg and Gillon 'look west', Mazierska 'looks east', examining the festival culture in postcommunist Poland. She singles out three coastal festivals, Open'er in Gdynia, Audioriver in Płock and Jazz na Molo (Jazz on the Pier) in Sopot, representing different genres and scales, yet being similar in embracing a neoliberal ethos by relying largely on private sponsors and poorly paid or unpaid labour. Mazierska suggests that thanks to underdevelopment of music festival culture and infrastructure, the relative weakness of Polish currency and the fact that Poland is amongst the safest countries in the world, the future of Polish music festivals is most likely bright, at least until Poland catches up with the more advanced countries (in terms of development of live music) and hits the wall of market saturation.

The last three chapters take issue with the specific values of live performance, namely spontaneity and authenticity, as a means to attract audiences and increase the status of the performer. Beate Peter analyses Skepta's concert at Manchester International Festival, which took place in 2019. She argues that it drew on the tradition of raves, illegal parties in the rural areas, popular in Britain in the late 1980s and the early 1990s, and the wider DIY and PLUR (Peace, Love, Unity, Respect) ethos. She notes that like the 'proper raves', which were marked by a tension between collectivism and individualism, entrepreneurship and community values, these new raves also present themselves as authentic events, while trying to be economically successful. Peter also addresses the role of social media in both strengthening and undermining the communal character of the new raves and offer some advice regarding organisation of future rave-like events.

Michael Tsangaris presents opinions about the sense of live music coming from the audience of the Arctic Monkeys concert at the Rockwave Festival of Athens in July 2018. He asserts that the arguments of the group's fans reflected spontaneously previous academic assessments on the issue. Although at great extent authenticity seems to be connected to classic liveness, the denotations of live music change from generation to generation. He concludes that while technology of the spectacle entraps pure corporal communication, the term live music changes meanings following the requirements of the constantly evolving social media culture.

Finally, Valerie Soe discusses the case of live performances of one of the most successful South Korean bands, CNBLUE, as a means to provide the band with an aura of authenticity, characteristic of rock bands (as opposed to pop performers), widen its fan base, especially beyond the borders of South Korea and Asia, and create a cohesive community among their dedicated fans. Soe argues that CNBLUE's success as live musicians also have repercussions beyond the band's career, as their live shows played a major role in legitimising rock music in South Korea, a country where this type of music for a long time had a lower status than in the Anglo-American world. CNBLUE's live performances have also facilitated the South Korean government's use of *hallyu*, or the Korean Wave, as soft power strategy to increase South Korea's global profile and influence.

All authors of this part make the point that authenticity is not a matter of objective reality, but perception. This perception is shaped by such factors as the audience's prior knowledge about the performers and the events, their interaction with other musickers and the use of technology, by both performers and the consumers of music.

Together, the chapters attest to the continuous vitality of live music, understood both as a concept and as a practice. It is ensured by the constantly developing technology, which renders live music more accessible and attractive to the audience, who implicitly or explicitly reject any pure or absolute definitions of live music and allows enjoyment of live events irrespective of whether the artists in front of them (or the screen of their computers) enhance their performance by various technical devices or even whether these artists are human beings. Moreover, live music will continue to develop, because it is currently the best way to ensure a stable income for musicians and other music professionals, as well as accrue a certain type of social and cultural capital by the attendees of live music events. At the same time, the authors point to numerous challenges encountered by the live music sector. They include the lonely and physically straining existence of touring musicians (in comparison with studio musicians), market saturation with live events, the tension or even antagonism between musickers engaged in live music and a wider society, in particular those living near the music venues. They also point to the dominant model of neoliberal capitalism, which has the shape of a pyramid, with a small number of top musicians and biggest events taking the biggest rewards and squeezing the small and the middle-sized players and venues and grassroots initiatives. The authors also draw attention to the constant expectation of novel and authentic experiences on the part of the audience, which the organisers of live events have to

meet in order not to turn off their potential consumers. One aspect which barely appears in the chapters, but is worth mentioning in this context, is the ageing of the population, especially in the ‘old world’, namely in Europe, North America and parts of Asia, which might lead both to a diminished appetite for participating in demanding outdoor events, such as music festivals and an increased intolerance of noise pollution. If such a factor will not kill live music, it will require its adjustment.

In summary, we predict that live music will remain strong and develop, but at the cost of extensive labour of musicians and other music professionals, perhaps resulting in a diminished social status of musicians, returning them to the times before the advent of capitalism, when they had to adopt one of two principal roles: that of vagabond or domestic (Attali 1985: 14-18), in which they were completely dependent on their patrons. Moreover, unlike the musicians of the old era, they will have to compete with non-human musicians. But before it happens, let’s enjoy the present of live music, with its utopian potential.

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