

7 Rethinking Liveness in the Digital Age

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What is Liveness?

The concept of liveness first emerged about a century ago, in response to the introduction and growing use of various technologies for broadcasting, recording, amplifying and otherwise mediating musical (and other) communications.¹ A (newly termed) live musical experience was usually – and for many, still is – considered better, more authentic, more human than a recorded or broadcast experience (Auslander 2008, 3; Thornton 1995, 42). To perceive a musical experience as live, then, is to perceive its distinction from something (more highly) mediated. Liveness cannot exist, and has never existed, without also implicating its mediated Other.

The perception of liveness in a musical experience is typically formed in reference to what I will call a *traditional performance paradigm*. That is, some element of music as conventionally performed – performers communicating musically with an audience in a shared time and place – persists in the live musical experience. Some such instances, such as a live recital of Mozart piano sonatas in a concert hall, are simple and straightforward, conforming entirely to a traditional performance paradigm. In other instances, such as a live cinematic broadcast of a performance from the Metropolitan Opera, or a live recording of a rock band, elements of a traditional performance paradigm are perceived to persist in an otherwise electronically mediated experience.² Live broadcasts are live because they occur at the same time as the ‘actual’ performance; the embodied element of co-present performance is subverted, but the temporal element remains intact. Live recordings are live because they (supposedly) constitute an archival record of a performance exactly as it happened; the temporal and co-present links to a ‘real’ performance may be ruptured, but the recorded performance is still temporally whole in comparison to a multi-tracked and highly edited studio recording. Moreover, something of the acoustics, ambience and interactions between performers and audiences that were part of ‘real’ performances are often maintained (or simulated, and thus still perceived by many listeners) in live recordings. The central conflict of liveness, in these and many other instances, is that such persistent elements of a traditional performance paradigm are the same qualities potentially threatened by the technologies through which the musical experience

is mediated. That is, the technologies required for live broadcasts and live recordings have the ability, if used in a slightly different manner, to subvert the perception of liveness altogether.

Ruptures in the spatial and temporal groundedness of performance; transgressions of the physical, human origins of musical sound; infinite repeatability and mobility of an object within which or upon which performance is encoded (a vinyl record, a CD, an MP3 player) – these are the factors most often emphasised in debates about performance and the use of electronic technologies.³ Technologies of sound reproduction and manipulation are at the centre of these discussions, along with the capabilities of these technologies to make music something other than the performed art it was for the previous several centuries, or at the very least to alter and threaten the nature of that performance as a privileged site of musical meaning.⁴ Liveness discourse often goes a step further than merely noting distinctions between live and mediated forms of culture, and laments the supposed loss of authenticity created by extensive mediation which, especially in the digital age, seems to threaten the wholesale eradication of the live.⁵ Philip Auslander has pointed out that the purely live has in fact nearly ceased to exist (2008). Very little performance escapes some form of influence from electronic technologies. Auslander argues that even our interpretation of supposedly live performance is highly influenced by the extent to which cultural practice is now completely embedded in some form of electronic mediation – such as when an audience member at a rock concert constantly filters their appreciation of the live performance through their familiarity with the studio recordings of the songs being performed, or when someone attending a Broadway musical constantly compares the performance to the animated film upon which it is based.

However, Auslander's arguments rest largely on classifying the ontological make-up of such musical experiences – that is, their essential categories of being: as strictly performed acoustic sound, as pre-recorded and replayed sound, etc. In other words, his focus is primarily on the musical event itself (rather than on its reception), and on defining its liveness (or lack thereof) according to the extent to which electronic mediation has reconfigured the conditions inherent in a traditional performance paradigm. What this approach fails to consider, however, is the extent to which, despite the ontological deficiencies of many modern musical contexts with respect to a traditional performance paradigm, a great many listeners persist in attributing qualities of liveness to these very experiences – hence, the continued use of terms like live recording and live broadcast.

If liveness is not, then, functioning as a purely ontological signifier for modern listeners – if it continues to be used to describe experiences that

are not, in actual fact, purely unmediated – it must be functioning as a conceptual and a perceptual one. Live recordings carry meaning as a type of live event because, despite the fact that they present highly mediated musical experiences, their apparent fidelity to an actual live performance carries meaning for many listeners that is absent from a studio recording. They are *perceived* as in some way live, even though their connection to a traditional performance paradigm is often rather distant. When we talk about liveness, then, we are essentially talking about how performance is perceived, and about assigning at least some of the values and ideologies associated with traditional performance to the musical experience in question.

And so, despite the rapidly increasing extent to which electronically mediated musical experiences are displacing those that conform fully to a traditional performance paradigm, recent discourse (as discussed throughout this chapter) demonstrates that the concept of liveness continues to carry great meaning for many musickers, even in a cultural environment of extreme digital saturation. My purpose in this chapter is to investigate the persistent meaningfulness of liveness (wherever it might exist) in musical practices that are highly influenced by digital technologies and digital culture more broadly. I wish to offer some ideas that might help in understanding the ongoing conceptualisation of liveness in modern musical discourse, and how its definitions may have changed with the changing technologies involved in its formation.

Defining Liveness in Digital Culture

If, as I have just argued, the meaning of liveness has expanded along with the introduction of new technologies and the changing uses of these technologies,⁶ it remains for us to address the ways in which these changes may have reflected the increasing digitisation of music technologies.⁷ The relative affordability, portability and versatility of modern digital sound technologies, combined with their ability to connect via the Internet to similar technologies around the world (or across the room), and the ease with which their users can fragment, alter and recombine virtual objects of encoded musical sound before sending them back out into the physical realm, have exponentially increased the extent to which a traditional performance paradigm can be subverted in modern musical contexts. The rapidly growing ubiquity of digital technologies in most people's musical lives in recent years has only accelerated the changing ontological relationships between new understandings of liveness and a traditional performance paradigm. Common understandings of live performance

events now include, for instance, seated performers live coding music on their laptops;⁸ DJs creating a steady stream of dance music entirely from recorded samples; networks of performers scattered around the world, linked by the Internet, producing music collectively in real time. Does liveness in music, then, have a new definition? If an understanding of liveness no longer depends on the apparent avoidance of electronic mediation – if in fact musicking that is overtly enabled, and perhaps even defined, by the use of digital technologies is interpreted as live – what are the essential characteristics of this new definition?

In a phrase, highly variable. A current definition of liveness, I would argue – one informed by the logics of digital culture – is in fact many definitions, or perhaps many different permutations of a definition based on, but not confined or wholly defined by, reference to a traditional performance paradigm. This is not an entirely new development, of course; after all, what is a live broadcast if not an electronically mediated performance – a performance whose ontology is based on a traditional performance paradigm, but altered by the ability to subvert the spatial limitations of that context? What is new in a digital culture, I would argue, is the degree to which this traditional paradigm can be – and readily is – ruptured, fragmented and reconstituted according to the characteristics of digital technologies. Within a cultural environment characterised by, and increasingly comfortable with, logics of fragmentation, permutation and collage, many perceivers of liveness seem equally comfortable with the complete fragmentation of that traditional performance paradigm.

Moreover, as I hope to demonstrate, liveness in a digital culture has increasingly become a terrain of artistic interrogation to a degree not experienced before. That is, some artists have begun to make their music, at least in part, *about* liveness; the deliberate exploration of liveness has become an aesthetic goal. This aesthetic shift in how musickers have recently begun to approach liveness has occurred largely because digital technologies have afforded, if not an entirely new way of thinking about liveness, then at least a massive amplification of the variable qualities that concept has already demonstrated. I am not just referring to the ease with which sound objects can be manipulated with digital technologies, or the supposed de-corporealisation of sound as it has taken up residence in digital hard drives (more on this below). I am also referring to the extent to which digital technologies are employed more broadly in modern cultures, to circumvent previously entrenched temporal and spatial boundaries, and even boundaries between humans and machines. These ways of using, and thinking about, technologies in the twenty-first century are increasingly removed from the ways of using and thinking about technologies that surrounded the emergence of the traditional performance

paradigm several centuries ago, or even its definition as something intrinsically different from electronically mediated music one century ago.

Virtual Liveness and Posthuman Subjectivity

In my previous work, I have suggested several categories of liveness based on characteristics of traditional understandings of performance that inform the variable definitions of liveness I have been discussing (Sanden 2013, 11–12, 31–43).⁹ For instance, temporal liveness would be the liveness perceived in a live broadcast – a broadcast of something at the time of its happening. This is also the category of liveness most often implicated in discussions of liveness on the Internet (Auslander 2005, 8): live streaming, for instance, is arguably live broadcasting through a different technology (though the geographic range of this technology is far greater than any pre-digital broadcasting technologies). Corporeal liveness is the shading of liveness that so often concerns musicians working with new digital performance interfaces, when they want to ensure an understandable connection for their audience between their physical gestures and the electronic sounds that result from them.¹⁰ What concerns me most in this chapter, however, is what I have called virtual liveness. And while I have suggested various contexts in which virtual liveness might be a meaningful way of interpreting the concept of performance in highly mediated musical contexts (Sanden 2013, 113–58), this category remains for me still the most elusive in my attempts to explain or define it, and at the same time the most pressing to deal with in the context of digital culture. For while temporal liveness, corporeal liveness and other categories that I have proposed emerge largely from the logics of recording and broadcast media, virtual liveness seems defined largely by the logics, not just of digital technologies, but of digital culture more broadly.

To summarise the discussion thus far, the concept of liveness is inherently dialectical. Rather than functioning as a complete ontological negation of electronic mediation, it centres on a tension between those elements of a musical experience that invoke a traditional performance paradigm and those that arise from electronic mediation. Thus, a live recording is live in part because it is not as highly mediated as a studio recording – but it *is* still mediated. Human performance and technological mediation function together, albeit in tension with one another, to create this particular understanding of liveness. I propose that what I call virtual liveness functions within this dialectical tension more overtly than other, perhaps more straightforward, understandings of liveness (such as those I have already invoked in this chapter).

The word virtual is used, both in common parlance and in various fields of scholarship, to invoke a range of meanings, and I use it here to reflect many of those meanings, without restricting myself to any one of them.¹¹ In reference to the use of internet technologies, the word virtual often describes any kind of activity that takes place within online (virtual) space (and here, of course, we understand the word *space* metaphorically): virtual dating, virtual tours of restaurants or real-estate listings, etc. The computer's, tablet's or mobile phone's screen acts as our window into that virtual world, which in reality is just a projection of light that engages our imagination, intellect and/or emotions. Virtual reality technologies aim to create immersive environments for their users, perceived spaces within which virtual actions can be carried out.

Following Gilles Deleuze (1988), both Echard (2006, 8) and Shields (2003, 2) explain the virtual as something that is 'real but not actual'. This description neatly fits the perceptions of liveness that I call virtual, but here my connection to a Deleuzian sense of virtuality finds its limits. For Deleuze, the virtual is an ontological category; virtual objects are on the cusp of becoming actual (Echard 2006, 8). What I mean by the term virtual has more to do with perception than ontology. Thus, in *Liveness in Modern Music*, I offer the following explanation of virtual liveness: 'In some cases, music can be *live* in a virtual sense even when the conditions for its liveness (be they corporeal, interactive, etc.) do not *actually* exist. Virtual liveness, then, depends on the perception of a liveness that is largely created *through* mediatization' (Sanden 2013, 11). In other words, virtual liveness is a perception of liveness – a perception of performance – that embraces a musical experience's grounding in the various incursions of electronic sound technologies. It involves an extension of the whole concept of performance to include things like the synthesis, samples and simulations that characterise the logics of digital culture, and which would seem to conflict with traditional definitions of what performance is – and, more importantly, is not¹² – while at the same time making room (sometimes through simulation or technological enhancement) for certain elements of those traditional definitions to persist.

Finally, and most crucially, I wish also to invoke some of the meaning that N. Katherine Hayles assigns to virtuality, when she writes: 'Virtuality is the cultural perception that material objects are interpenetrated by information patterns' (Hayles 1999, 13–14). Hayles's definition is offered in the context of her account of the emergence of the posthuman subject, a construction that I believe can play a very significant role in understanding the new definitions of liveness and performance I am concerned with here. And although I observe a useful link between virtual liveness in digital music and Hayles's discussions of digital (i.e. binary) information, I believe

the arguments that both she and I are making about virtuality may also extend to a broader discussion about music and technology – one not necessarily confined strictly to digital technologies. That is, I wish to re-emphasise here that at least as far as the concept of liveness goes, digital technologies have not necessarily introduced entirely new tensions. Rather, they have drastically broadened the potential implications of the central tension between human and machine, by making the boundaries between the two more easily crossed.¹³

For Hayles, posthumanity involves a new model of subjectivity, one in which (among other things) information is conceived of as separate and separable from its materiality – thus enabling the idea that information or data can flow from one physical instantiation to another without being changed in the process. This allows for the creation of subjectivities not just in physical space, but also in virtual space: identities formed and, I would also argue, *performed* in the realm of virtual communications. As Hayles writes, ‘In the posthuman, there are no essential differences or absolute demarcations between bodily existence and computer simulation, cybernetic mechanism and biological organism . . . The posthuman self is an amalgam, a collection of heterogeneous components, a material-informational entity whose boundaries undergo continuous construction and reconstruction’ (Hayles 1999, 3). What Hayles is identifying as post-human is not the literal formation of cyborg entities, but a common cultural perception that ‘the ontological foundations of what counts as human’ (Hayles 1999, 24) have changed, and now include room for virtual selves, for identities that can be imagined as immaterial information. This is a decontextualisation of the human self, as imagined boundaries between human and machine are constantly erased, shifted and re-inscribed.

What I have outlined here about virtuality resonates strongly with common observations about how music often functions within digital culture – not only those musics made mostly or entirely with digital technologies, but also more traditional styles of music that are widely disseminated and heard through digital means. Of particular significance to many who write about the digitisation of music is the shift it has enacted from corporeal communication to disembodied data, from embodied acts to simulations encoded in 1s and 0s. With this lack of grounding or origin in a corporeal presence, digital music is often seen to eschew any origins or defining boundaries of its own, be they physical, historical, stylistic or otherwise. This ability to overcome these and other kinds of boundaries is what makes Hayles hopeful about the potential of the posthuman subject. However, she does raise a warning flag about ‘how *information lost its body*’ (Hayles 1999, 2) – how digitisation encouraged the further emphasis of a Cartesian split between mind/thought/data/information and its

corporeal host to the point where human subjectivity may become erased along with that body. What seems apparent, though, in much liveness discourse at least, is that disembodiment is often embraced as a way to more creatively and flexibly inscribe the human self within a highly technologised musical experience, by transcending the boundaries of identity created by conventionally embodied performance.

These transcended boundaries are the calling cards of mashup culture and mix culture: they are hypertextual models of music dependent on the types of synthesis, samples and simulations I referred to earlier, where complex networks of references across space, time and style are enacted between the various found and newly created sound objects that have been brought together in the mix. Moreover, discrete and autonomous musical objects are often almost impossible to extract from or identify within this mix. Few of them are any longer grounded in a single, original context; or, if they are, the identities of their locations are obliterated by seemingly infinite networks of multiple instantiations and references, as when (for example) a symphony is sampled in a pop song, which becomes remixed for the dance club, which becomes the soundtrack for an online advertisement, which becomes a ring-tone for a mobile phone, and so on into the seemingly infinite data-flow of music in digital culture that Jean-Yves Leloup (2010, 165–70) calls the ‘digital magma’. David Toop writes of this that

With digital audio, the objects of music – its recordings, performances, instruments, and even people – begin to disappear into an aether of intangible properties, a mist that enshrouds and disintegrates established structures with no regard for their traditions or values . . . This seems to me to be the object of digital magma: to chase the nothingness of electronic music to the point where meaning begins to emerge. (Leloup 2010, 8)

There are strong affinities, then, between these characterisations of digital music and Hayles’s characterisation of the posthuman subject: previously drawn boundaries are blurred, and previously defined and embodied entities become fragmented, decontextualised and dislocated within a new kind of heterogeneity. But what does this have to do with performance and, more specifically, the perception of liveness within the diverse terrain of digital music? Here it is important to recognise that within its constellation of meanings – and perhaps toward the centre of that constellation – liveness functions as an index of humanness; as a recognition of human creativity and production, and of our human selves, within the context of our constant negotiation with the technologies we create and employ. This performance of humanness is, in fact, the reason so many cling to a traditional performance paradigm; it is the reason

liveness has always mattered in a technological era, and arguably the reason performance has always mattered even before the emergence of the liveness concept. As the formation of human subjectivities has given way, increasingly commonly, to the formation of posthuman subjectivities – subjectivities in which the digital often forms an element of the self – the ways in which our (post)humanness is reflected in our cultural practices have similarly adapted. To return to my earlier argument: the dialectical negotiations between performed and recorded, human and machine, corporeal and disembodied, and any number of similar dualistic pairings, are often at the heart of what liveness means in digital culture.

Intermedial Performance and the Aesthetics of Liveness in Digital Culture

I would like to elaborate here on an expanded notion of what performance might constitute in digital culture, in order to expand on some concrete examples of the redefinitions of liveness I have been discussing thus far. In *Digital Performance*,¹⁴ Steve Dixon neatly summarises the idea that internet communication, at least as it is commonly practised, often involves a constant virtual performance of the self. He writes:

Theater is . . . created not only by those who consciously use computer networks for theatrical events, but also by millions of ‘ordinary’ individuals who develop e-friendships, use MOOs, IRC, and chatrooms, or create home pages and ‘blogs’ on the World Wide Web. Many home pages and blogs constitute digital palimpsests of Erving Goffman’s notions of performative presentations of the self, with the subject being progressively erased, redefined, and reinscribed as a persona/performer within the proscenium arch of the computer monitor. Personas are honed like characters for the new theatrical confessional box, where, like postmodern performance artists, individuals explore their autobiographies and enact intimate dialogues with their inner selves. (Dixon 2007, 3–4)

Here again we are reminded that modern human performance, in many artistic and social realms, increasingly embraces machineness. The ever-changeable nature of a digital remix culture, as alluded to by Dixon, is embedding itself in how people represent their own identities.¹⁵ Identity is exceptionally subjective in this context, and that subjectivity is ever-variable. Offering a related perspective, Paul D. Miller (aka DJ Spooky that Subliminal Kid) writes about the ‘identity reconstructions’ that characterise digital culture, with its approach to ‘information collage where everything from personal identity to the codes used to create art or music

are available for the mix' (Miller 2004, 64). In a culture where many people constantly perform their digital selves on the Internet, is it any wonder that a concept of live performance can also include the use of those same technologies? Is it not perhaps all a part of Leloup's digital magma, within which performing *human* is still a common and vitally important act? Live electronic music, digital gesture-based controllers creating synthesised sound, laptop performance – these things are no longer truly avant-garde, no longer at the furthest fringes of musical practice. They are informing common understandings of how music can be performed, and within that framework, the concept of liveness is still alive and well.

Christopher Balme (2008) proposes that the concept of intermediality is a useful way to approach such formations of performance, where the use of electronic technologies may in fact enrich the human qualities inherent in the experience. As a catalyst to his discussion, he summarises the influential arguments of Erika Fischer-Lichte (2008), which assert (*contra* Auslander) that even highly mediated performances are grounded in live performance and have resisted subjugation by wholly mediated formats: they are therefore still much more meaningful and impactful than a fully mediated experience (like watching a film) can possibly be. Balme replies to Fischer-Lichte (and those in sympathy with her): 'My question would be: why defend the one against the other? Why is it necessary to formulate the relationship between live performance and media technology in such confrontational terms as though media and performance were engaged in a kind of agon in which the winner takes all' (Balme 2008, 85). Characterising such performances as intermedial is a way of recognising a relationship between 'the live and the mediatized' that is 'entirely symbiotic; they are imbricated into one another like Siamese twins and cannot be prised apart without severe damage ensuing' (Balme 2008, 90).

Intermedial performance, in other words, is a performance experience in which virtual liveness can play a significant role in the audience's understanding of performative meaning. The manifestations this virtual liveness might take on are as numerous and diverse as the musical styles and practices within which they are found, and so I will not attempt to deal with them in any kind of comprehensive manner. I would, however, like to focus on two examples within which I perceive liveness not just as a marker of human performance, but also as a terrain of aesthetic play and negotiation. They are examples of intermedial musical performance within which the boundaries separating live from mediated are not just ambiguous but actively interrogated, and the traditional definitions of performance itself are transgressed.

The first of these examples engages directly with questions of digital representations of the self, and how the performance of music might

function within that context. In recent years virtual musicians have entered the digital music landscape/soundscape, a milieu defined by intermediality, and one such example is provided by real-time musical performances in virtual environments like Second Life. Ontologically speaking, online real-time performances are very similar in many ways to the live radio and television performances that remote audiences have enjoyed for decades. Their liveness is commonly understood, rather unproblematically, in a temporal sense – that is, so long as the performance is either lacking entirely in visual information (like a radio broadcast) or accompanied by actual real-time footage of the performer(s) (like a television broadcast). The terrain of liveness becomes more difficult to navigate, however, when the audio is ‘performed’ by an on-screen avatar, within a visual virtual space designated for that performance. Writing of such performances in Second Life, Karen Collins poses the questions they raise surrounding issues of liveness: ‘If players use an avatar as their visual representation, are they really performing for an audience? And if that audience is only virtually present, is it really an audience? When players are singing live in a bedroom but their avatar is performing prescribed moves to that music in the virtual world, is the players’ performance really live?’ (Collins 2013, 94).

Collins answers these questions in the affirmative, due in part to the notion that many users perceive such performances as live, no matter their intermediality. However, she also reverts to the idea of temporality, suggesting that the reason many users would accept an avatar’s performance as live would be its existence in real time, simultaneously with the ‘actual’ performance of the hypothetical Second Life user producing the performance ‘live in a bedroom’. Such an interpretation presumes, despite the highly intermedial nature of these types of performances, a rather traditional understanding of liveness based in a temporal ontology – a dependence, in other words, on reference to a traditional performance paradigm.

We might usefully expand on Collins’s arguments to suggest that the liveness in Second Life may be more than just temporal. Recent studies of musical activity in Second Life (Gagen and Cook 2016; Harvey 2016), in fact, point to users (virtual performers and virtual audiences alike) adopting something of the posthuman subjectivity I have been discussing throughout this chapter in their encounters with musical performances. Gagen and Cook report that while some users attempt to apply ‘real-world’ concepts of liveness to the virtual performances of Second Life (particularly notions of co-temporality), others have realised that the technological differences between Second Life and what gamers call Real Life make traditional concepts of liveness somewhat of an ill fit for the virtual environment. Instead, they find, ‘the most effective approach to creating

liveness within virtual reality is not to replicate the conditions of live music in the real world, but rather to recontextualise the signifiers of liveness' (Gagen and Cook 2016, 205). Once again, the traditional boundaries of liveness are actively negotiated in order to produce meaning within the contexts of these performances.

I will close with an example that is in some ways far more conservative and 'old-fashioned' than those I have addressed thus far, yet is still entirely dependent on digital technology. But it is an example that demonstrates very clearly some of the characteristics of this new aesthetic terrain of liveness. Since 2009, American composer Richard Beaudoin has been working with digitally measured microtimings of recorded performances as the foundation of his compositional style.¹⁶ With the aid of the Lucerne Audio Recording Analyzer (LARA; developed at the Hochschule Luzern in Switzerland), he analyses the onset time and amplitude of every sound event in a recording down to the millisecond. These data then inform the notated rhythms of Beaudoin's new composition. Often the sounds measured in this way are not just those the performer intended, but also various incidental sounds in the recording. For instance, the hums and chair creaks on a Glenn Gould recording have been transcribed into Beaudoin's *New York Mikrophon* for chamber quartet (2015), while the hiss on a 1931 recording by Alfred Cortot of Debussy's *La fille aux cheveux de lin* finds its way into the parts of a sextet playing Beaudoin's *La fille dérivée* (2014).¹⁷ In this way, Beaudoin brings the recorded performances that inspire each work back into the realm of live performance through his scores. What is more, as I will demonstrate, within the performances of at least some of these works we find a constant negotiation between live and mediated elements, which brings the aesthetic interrogation of liveness into the foreground.

Beaudoin's series of pieces *The Artist and his Model*, of which *La fille dérivée* is the last, is based on the microtiming of the same Cortot recording, which is essentially transcribed (at an augmented ratio) into Beaudoin's rhythms. As is Beaudoin's customary approach, Debussy's score provides one important framework for the new composition: elements of it, including easily recognised motivic fragments, remain within Beaudoin's piece. However, just as important a framework is provided by the hiss of the medium upon which Cortot made his recording: the phonograph disc and player. These hisses are represented not only rhythmically but also timbrally: at times throughout the composition Beaudoin has the pianist use sandpaper blocks, while the wind players blow through their instruments in rhythmically recurring patterns to create a sort of dilated echo of the cyclical hissing of the phonograph. This is a piece of music that refers not only to Debussy's iconic piano prelude, but also to its

specific instantiation as recorded by Cortot in London on 2 July 1931. *La fille aux cheveux de lin*, for piano, finds new life within *La fille dérivée* for mixed sextet. At the same time, Cortot's recording – not just his performance but also the medium itself and its sonic artefacts – is brought to life. The wind players literally breathe life into the hisses of the phonograph.

What emerges from this composition is an exploration, a dialogue, across history, across media, across musical style. Debussy's score, Cortot's performance and the medium of Cortot's performance are all embedded in Beaudoin's score, which then gives rise to a new live performance, and the subsequent digital recording and dissemination of that performance.¹⁸ From notated score (1910), to piano performance for phonograph recording (1931; reissued in digital format in 1991), to a newly composed notated score (composed in 2012), to live sextet performance captured on a digital recording (also in 2012), we are invited not just to enjoy this new composition, but to appreciate the boundaries it transgresses, between then and now, between analogue and digital, between live and recorded. Like the boundaries of the human within the posthuman subject, the boundaries of liveness within this work are in constant motion. Here they have been aestheticised; performers and listeners alike are invited to engage in the grey areas between live and mediated. Here, then, liveness is not just perceived. It is constructed as an entity within this work of musical art being performed – an entity that not only speaks out in performance, but is inscribed into the very score informing that performance. This imagined entity is set in dialogue with its recorded other, within a conceptually imbricated network of multiple performances and recordings.

In closing, I return finally to some words by Paul D. Miller in *Rhythm Science*. He poses the rhetorical question: 'Is it live? Or is it a sample? . . . The question remains just as powerful as ever' (Miller 2004, 28). I would argue that while the question may remain, the potential answers to that question are far more complex than they once were. One possible answer, to which I have been alluding throughout this chapter, is we cannot always distinguish one from the other; we do not always want to distinguish one from the other; and this ambiguity is at the heart of an aesthetic of musical performance in digital culture.

For Further Study

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Notes

- 1 Auslander (2002, 16–17) argues that while the technological conditions for liveness were put in place with the advent of recording technology at the end of the nineteenth century, the discursive use of the word live to describe performance as ‘not recorded’ did not emerge until the 1930s, when radio broadcasts made it difficult for listeners to determine whether they were hearing recordings or live (that is, real-time) performances. However, while the word live may not have been used before this time, the debates surrounding the relative values of recorded vs (what we would now call) live music appeared much earlier. See, for instance, John Philip Sousa’s 1906 essay, ‘The menace of mechanical music’ (Sousa 1906).
- 2 See Barker (2013) for an extensive study of livecasting (as the live broadcast of opera, theatre and other events is often known) and the issues of liveness surrounding its creation and reception; Aguilar (2014) examines the ‘live’ recordings by the London Symphony Orchestra released on their label *LSO Live*, and reveals the complex nuances of liveness inherent in their practices.
- 3 The extent to which amplification has factored in such debates seems to be largely dependent on musical genre, and the conventional practices within the traditions of those genres. While discourse on liveness in popular musical practices is rather silent on amplification, its use in classical music practices that don’t traditionally involve amplification has garnered more notice (though more in the popular press than in academic scholarship). Articles in *The New York Times* and London’s *The Daily Telegraph*, for instance – Anthony Tommasini’s ‘Enhancing sound in a hush-hush way’ (18 August 1999) and Brian Hunt’s ‘The silent conspiracy of electronic amplification’ (9 June 2001), respectively – both argue that the inconspicuous electro-acoustic enhancement of classical music concert halls and opera houses (to improve the resonant qualities of such spaces) threatens the liveness of the performances that take place in them.
- 4 In the interest of space, I will avoid here the extensive and very important debate on Western Art Music discourse’s longstanding privileging of musical works – representing (somewhat) tangible products of a composer’s genius – as the most privileged site of musical meaning, a discourse that at the same time often remained silent on the potential of performers and their performances to contribute significantly to such meaning. This debate is addressed in the work of Ashby (2010), Bowen (1993), Cook (2001, 2003, 2013), Goehr (1992, 1998) and many others.
- 5 In his defence of the cultural significance and democratising power of karaoke, Kevin Brown (2010) describes an elitist ‘liveness anxiety’ in much academic discourse. He argues that ‘the ontological claim to the efficacy of performance’ in such writing ‘can be seen as a power grab. Why should only live performers be allowed to change culture? . . . The biases against performances that are not “live” perpetuate the division of cultural production, and maintain the position of theatre as a primarily “highbrow” artform.’ (74).
- 6 Auslander (2002, 2005, 2008) has made this argument repeatedly about liveness as it pertains not specifically to music, but also to theatre, Internet use, etc.
- 7 Simon Emmerson’s work on liveness (1994, 2000, 2007, 2012) is one of the few (and certainly the most significant) bodies of musicology to extensively address liveness in digital music.
- 8 For practitioner perspectives on live coding, see Alan Blackwell and Sam Aaron’s and Alex McLean’s Personal Takes, this volume.
- 9 The full list of categories I propose (though I do not consider this to be a definitive nor an exhaustive list) is as follows: temporal liveness, spatial liveness, liveness of fidelity, liveness of spontaneity, corporeal liveness, interactive liveness and virtual liveness.
- 10 Croft (2007) is primarily concerned with this kind of liveness, as is some of Emmerson’s work (1994, 2000), though their arguments are not expressed with the same terminology that I use here.

- 11 Isabella van Elferen offers another approach to the definition of virtuality in Chapter 8 (this volume).
- 12 Perhaps most famously within performance scholarship, Peggy Phelan has argued strongly that an ontology of performance is defined by the complete avoidance of any technologies of reproduction; such electronic technologies, in her words, make a performance 'something other than performance' (Phelan 1993, 146).
- 13 An extensive discussion of posthumanism and digital music is provided by David Trippett in Chapter 9 (this volume).
- 14 By his own admission, Dixon's lengthy study does not directly address music, but many of his arguments about new modes of digital performance apply well to it.
- 15 See Sumanth Gopinath and Jason Stanyek (this volume, Chapter 4) for a discussion of identity construction in relation to the 'musical selfie'.
- 16 I am grateful to Richard Beaudoin not only for sharing with me his thoughts about his work, and his feedback on this chapter, but also for providing me with scores and links to recordings. The reader is encouraged to consult www.richardbeaudoin.com/microtiming/ for more detailed descriptions of Beaudoin's process. Many of Beaudoin's perspectives on his process, as well as details about that process, are also shared in Trottier (2013). Some of Beaudoin's microtiming compositions (though not the ones discussed here) can be heard on Mark Knoop and Kreutzer Quartet, *Richard Beaudoin: Microtimings*, New Focus Recordings B007C7FBEO (2012).
- 17 Reissued on Alfred Cortot, *Alfred Cortot plays Debussy and Ravel*, Biddulph LHW 006 (1991). Beaudoin based his microtiming on this CD reissue.
- 18 Jeffrey Means and Sound Icon, *The Artist and his Model VI – La fille dérivée*, rehearsal take from Sanders Theatre, Cambridge, MA, 29 November 2012. soundcloud.com/richard-beaudoin/beaudoin-la-fille-d-riv-e/s-mACUQ.