Deconstructing the electroacoustic metamodern: An examination of contemporary music technology from a post-postmodern perspective

Introduction

This paper examines firstly the nature and function of technology in the context of 21st-century art music, with emphasis placed on live electroacoustic formats where digital technology is in use alongside acoustic elements, as well as purely acoustic formats of 21st-century new music – many covered topics will also be equally relevant to fixed-media electronic formats. We examine the concept of "technology" and what exactly the term entails, and we discuss how technology's role(s) has evolved as we transition out of the postmodern era into what is being described as the "metamodern". Finally, we attempt to build a picture of said metamodern era, describing its most salient characteristics and comparing it to the preceding postmodern movement, asking "what exactly is metamodern electroacoustic art music?"

Re-appropriation of technology

Out of necessity we begin on a semantic note by defining what is meant by the term "technology". On the surface most would assume some kind of electronic circuitry in either analogue or digital form being involved, but this is not necessarily the case. Futurist Alan Key pithily points out that "technology is only 'technology' for those born before it was invented" (Key in Williams, 2015). To elaborate, consider that at some point in history a simple mute inserted into the bell of a brass instrument would be considered "technology" – a new item enabling music-making in a previously impossible way – but brass players today typically perceive their mutes as "equipment" or "gear". A similar view can be taken for the increasingly complicated keywork on woodwind instruments (allowing previously impossible trills, intervalic transitions etc.), or the double-escapement action on the piano (allowing for rapidly repeated notes). In short, what we consider "technology" today will quickly go from radical and revolutionary to essential and everyday, leaving us to question what exactly is meant by the term "technology" as applied to music-making. I propose that we must take a far broader view of the term than is regularly accepted; that is, to consider all music-making tools as varying forms of technology: Technology is simply the mechanical means through which a musician realises their work. Technology is a musical instrument alongside the violin, flute etc., and for that reason both acoustic and electronic technologies must be considered as a singular concept.

Even without this more inclusive definition however, we still find a plethora of contemporary examples where digital technology is being used in innovative ways. Percussionist-composer Parker Meek uses music-notation software to create often hilarious fixed-media works that are clearly not intended to be realised by a human performer (taking advantage of the software's midi playback engine to request for instance percussive notes repeated so quickly that they transform into a pitched tone); this is in spite of and anathema to the fact that music-notation software is designed primarily to produce scores. As a more specific example, percussionist Matthias Schack-Arnott in his work *Fault traces* uses a motorised table with various percussion instruments placed upon it, selectively removing or hand-muting certain instruments whilst controlling the table's vibration via a digital patch. Both cases clearly demonstrate an unusual use of technology (Meek and music-notation software, Schack-Arnott and the motorised table)...

... We can also extend this thought to artists making heavy use of extended techniques on acoustic instruments: Scott Tinkler in *Duet for fingers and bell end* removes several slides from his trumpet, alternating rapidly between bell and slide sounds; Matthias Ziegler in *Maschad* sends explosive jets of air into his bass flute whilst aggressively hammering the keys; Jacques Emery in an untitled improvisation (Australian Art Orchestra) lays his double bass on its back and strikes the strings with a pair of drum sticks. These are old instruments, old technologies,

being used in relatively new ways, but at this point we should note that the use of extended techniques is itself not new – in fact they have been heavily called for in postmodern works such as Lachenmann's *Guero* or Globokar's *?Corporel*. However, the use of them in a non-prescribed format, where the performer approaches them as a regular part of their musical palette, rather than being instructed by notation to do so, is certainly a more recent development. Similar to our earlier discussion on technology, extended techniques go quickly from being unusual to familiar, from an arcane compositional curiosity to a fixture of the metamodern musician's arsenal (at one point even pizzicato was an "extended technique"!). Thus recalling now our inclusion of acoustic instruments and their accompanying extended techniques under the umbrella of "technology", we can say ultimately that in all contemporary cases presented the technology or techniques themselves are not new, but the ways in which they are being used is; in brief, a re-appropriation of technology is characteristic of the metamodern era.

Technological and Cultural determinism

But why are we so determined to use technology in ways that it was not designed for? We turn our attention back to the use of extended techniques in postmodern composition (specifically, late-serialism). For composers like Boulez, extended techniques ("peripheral effects" in his words, or "technology" for our purposes) were supplementary tools that could be used in their post-war search for music beyond pitches and rhythms (Emmerson, 2017). The desire for unnatural sounds might be seen as the primary factor driving composers to bend music-making technologies to serve their compositional whims, the zenith of which was perhaps reached in works like the aforementioned *Guero* (scraping piano strings) or *?Corporel* (body percussion). Similar sentiments can be had for early postmodern electronic music e.g. Varèse, Schaeffer et al: here the radical new technology was not extended techniques but magnetic tape, allowing the development of *musique concrète*. In both acoustic and electronic postmodern composition, a similar approach can be seen: technology progressively allowing for radical new sounds, and composers taking advantage of this to create radical new works. Therefore, it can be said that the musical output of the postmodern was determined by the available technology (i.e. technologically deterministic).

Fast-forward to the 21st-century however, and scraping piano strings, body percussion and machine-made tape music are not so radical anymore. Technologically-derived sounds in whatever form are now an expected part of any musician's toolkit in the wake of digital technology, as it is easier than ever to generate such sounds (Truax, 2015): real-time signal processing or synthesis etc. are all possible on a personal laptop, with the work of Peter Knight (live-sampled trumpet) or Seth Thorn (violin and wearable electronics) being prime examples. Elsewhere, again consider the work of Tinkler (prepared trumpet) or Ziegler (flute jet tones). At first glance it is tempting to label all of these as examples of technological determinism. After all, none of these technologies (even Thorn's wearables) are especially revolutionary, and the artists appear to simply be responding to what their technologies can do. Note however that in each case they are using whatever is idiomatic and easily executed given the technology, digital or otherwise, to arrive at a musical work, rather than attempting to realise some preconceived notion of sound or prescribed compositional objective à la postmodernism. To clarify, take a further example: Christopher Redgate and his work *Multiphonia*, a five-minute unbroken multiphonic tremolo on a specially-designed oboe (Redgate, 2012). Observing the performance, it is clear that he does not target specific pitches, but rather simply uses whatever fingerings are convenient in that moment, accepting the resulting pitches as they come – the technological component (i.e. the fingered multiphonics) is more important to the work than the pitch content. Redgate, as well as the previous examples, demonstrates that technology need not be groundbreaking (today we already expect technology to be highly capable anyways); knowing *how to use* the existing technology fluently and coherently is more important than simply having access to the best of it. In other words, it is what the artist

chooses to do with their technology, rather than the technology itself, that determines the musical results. Hence we can say that the metamodern, through its rejection of a compositional objective, is characterised by a shift towards a culturally deterministic approach to music-making.

Democratisation and DIY musicking

With less emphasis today on active, prescribed composition, Truax additionally observes a contemporary phenomenon which he describes as the "end of the literate composer" (Truax, 2015). In none of the given examples can there be found any sensible benefit to notating the work, at least in traditional methods (on staves and barlines) and for traditional purposes (the distribution of scores); we can thus easily extend this concept to include also the "end of repertoire and notation". As elaborated upon above, the idiomaticness and executability of each individual artist's work, as a gateway to new and original forms of musicking, matters more than creating repeatable results that can be realised by any performer (Seth Thorn would know his violin-electronics system far better than any other person – it is a bespoke technology designed by Thorn to be performed on by Thorn). This does not necessarily mean the end of composition as a primary means of music-making, but it does suggest the end of repertoire as a concept: we may still compose, but only for ourselves. This is especially true in the case of live electroacoustic music involving bespoke technologies, and true to a certain degree in extended techniques-based acoustic new music where performer and composer are one and the same person (e.g. Redgate, Tinkler). Thus we arrive at the uniquely metamodern concept of the DIY musician, free from organised ensembles, free from repertoire.

There is yet another route leading to the rise of DIY musicking: the "democratisation of music-making" (Williams, 2015) (Emmerson, 2017). Emmerson describes three historically significant events over the past five decades contributing to this: 1) the miniaturisation of circuitry (modular synthesis and recording technology); 2) the invention of midi and the computer (real-time event processing i.e. sequencing); 3) the quantum leap in processing power (real-time signal processing e.g. live sampling). The result of these technological developments is that practically anybody with a computer today has unlimited access to sophisticated music-making tools; effectively, a musical instrument that they could learn to play with minimal effort or training. Armed with this technology, DIY musicians bring with them their own backgrounds, experiences, cultures, and intuitions to a metamodern melting pot of inclusivity, in place of the instilled dogma of a formalised music education, whilst the tradition of the virtuoso slowly recedes and the artistic elite along with it – surely there is an obvious correlation between the rise of the DIY approach and the aforementioned "end of repertoire" (why write for other musicians when technology allows you to write for yourself?). The net result of all this is a public that "increasingly accepts different mixes of expression" (Rudi & Spowage, 2018); for electroacoustic musicians who combine acoustic technologies with digital technologies, and combine formalised training on an acoustic instrument with a DIY attitude towards new music (an accurate descriptor for e.g. Thorn, Schack-Arnott, Ziegler), the deregulated metamodern environment can be especially beneficial and conducive: outside the world of academia there are no hard rules, no criteria; absolutely anything can be art the moment one chooses to accept it as such. More so than any other characteristic described thus far, the democratisation of music-making and the rejection of institutionalised doctrine is a truly metamodern phenomenon.

Transmediality and Acousmatic listening

Just as how anybody can make music today, so too can anybody share music. The 21st-century age of "transmediality" (Rudi & Spowage, 2018) is enabled by the pervasive use of social media and streaming platforms, further eroding the relevance of repertoire, and giving a theoretically global audience unlimited access to music of every imaginable kind – this holds true for all strains of music-making, artistic/academic or commercial/popular. Perhaps in light of this, a common desire amongst metamodern musicians to share their work and a legitimate

concern for public exposure has emerged, much unlike the elitist insularity and irreverence for public opinion in the preceding postmodern era; all this is quite succinctly summarised by the concept of "participatory culture", describing the "(embracement of) creating and sharing... with relatively low barriers to artistic expression and civic engagement" (Kouvaras, 2013) (Williams, 2015). With musicians of all backgrounds now capable of performing on a virtual stage for a supposedly global audience, what follows naturally is the presumed blurring of postmodernism's high- and low-art distinction. Hugill however asserts that it is overly simplistic to describe metamodernism as a genre-blurred mashup of incongruity, as electroacoustic musicians in particular are highly selective of what sounds they choose to use (Hugill, 2016). Regardless, it seems universally accepted that certain musics (electroacoustic or not) require a certain kind of listening that is perhaps incompatible with commercial music: "acousmatic listening", where the listener perceives the techniques and technologies at play rather than the music itself (Hugill, 2016) (Kouvaras, 2013) – this is as opposed to the "ubiquitous listening" prevalent in commercial music, where music listening accompanies some everyday activity (driving, household chores etc.): here no distinction can be made between environment and music; "everything becomes an installation..., with everyone a curator" (Truax, 2015).

What exactly then is this fabled "acousmatic listening"? It originates as the now familiar concept of reduced listening, extended and applied to fixed-media electronic composition by Schaeffer et al, the essence of which is that we do not necessarily perceive a direct cause and effect relationship regarding the source of sounds. This is equally applicable for electronic fixed-media as it is for the electronic aspects of live electroacoustic music, and by extension, for re-appropriated acoustic technologies as well. In acousmatic listening the listener acknowledges the inherent disconnect between role and identity whenever sounds pass between digital and acoustic realms (are we hearing a flute, or the sound of a flute?), redirecting their focus to its technological construction, rather than its timbral characteristics. The emphasis therefore is on the technology in use, i.e., *how* technology is being used, rather than *what* the technology is... Recalling now our prior discussion on Boulez and "peripheral effects" on how technology for postmodernists was a deterministic supplement to a compositional directive, we see now that an emphasis on acousmatic listening is a decidedly metamodern notion – this is well supported by Kouvaras who considers it an integral part of the "metamodern ethos" (Kouvaras, 2013). Recall also our prior discourse regarding extended techniques being a form of technology, and we find that metamodernism can additionally be seen as an extension of postmodernism: surely music such as Globokar's *?Corporel*, or the most intricate Messiaen concoctions, require something similar to acousmatic listening to make sense of – a perception of the compositional techniques at play rather than the music itself, perhaps? Ultimately, it should be apparent that while all musics can be listened to acousmatically, not all actually *require* it in order to be musically coherent... thus I contend that while the high- and low-art barriers have certainly eroded in the face of democratisation and transmediality, it has been replaced by the necessity of distinguishing between musics requiring acousmatic listening, and those that do not.

Closing thoughts

We have at this point sufficient information to build a fairly detailed picture of the "electroacoustic metamodern". The electroacoustic musician, firstly, is not simply "acoustic plus electronic"; rather they are a singular music-making system of technology-focussed practitioners operating in a democratised DIY culture sans repertoire, and wielding an array of re-appropriated bespoke technologies ranging from state-of-the-art digital to technically-augmented acoustic – on the latter point I offer the term "techno-acoustic" as being perhaps more inclusive. They are musicians who explore what can be done given self-limited technology and ability, rather than ask what technology can do for their music. They reject a compositional ultimatum and hold in its place the technological lingua franca of the metamodern, thus insisting on the imperative for acousmatic listening, and they foster a

legitimate desire to share their work beyond the walls of academia or institutionalised organisation. Admittedly, the 21st-century is young enough that significant changes could still occur, but what is already apparent is how metamodernism has evolved on both technological and cultural fronts to, in a way, outgrow its parent movement.

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