Editorial: Commercial music and the electronic music studio – influence, borrowings and language

The genesis of this issue of *Organised Sound* was a June 2020 article on how an electronica duo created an entire album, designing 'beats, bass, pads and all' with the EMS Synthi 100 unit #30 (Trew 2020) that was borrowed from the Institute for Psychoacoustics and Electronic Music (IPEM). At the same time, the United States was undergoing a racial reckoning, decades in the making, ignited by the killing of George Floyd in police custody on 25 May 2020 in Minneapolis. This killing and the subsequent protests prompted institutions to examine how they have failed diverse populations. When thinking about how to increase diversity in electroacoustic music, the guest editors concluded that we can take an electroacoustic approach to music that is not traditionally considered academic. We asked questions such as: As we strive for inclusive practices among these disciplines, how have limitations and powers of oppression affected electroacoustic and popular media? What does an approach to the study of electroacoustic music and commercial media production that is informed and invigorated by social justice look like? How can education/training in both areas strive towards diversity? Stated otherwise, are there any stigmas/limiting factors for the hip hop artist to break into electroacoustic music or vice versa? Do we need to reconfigure our definition of electroacoustic in order to recognise people with similar creative instincts, much as George Lewis, who is a leading voice in both jazz and electroacoustic music, has highlighted in the case of black experimental artistry through his history of the Association for the Advancement of Creative Musicians (Lewis, 2000, 2008)?

The guest editors of this issue found that the unusual case study of the EMS Synthi, and its partnership – at the same time crossing academic and commercial, as well as 'vernacular' and 'art' music boundaries – has offered an approach that can be adapted to serve the deep mixing of other arenas. Specifically in 2016, sibling duo David and Stephen Dewaele, aka 2manydjs (also known as the prog-rock electronica band Soulwax) embarked on a remarkable collaboration with the IPEM in their hometown of Ghent, Belgium. The commercial music duo, whose music appeared on the soundtrack of *Grand Theft Auto V*, convinced IPEM to let them house the institute's legendary EMS Synthi 100 for a year while the 'research center in systematic musicology' underwent restoration. Somehow this extremely academic institution[1] worked with a band who won the Red Bull Elektropedia Awards for their reinvention of Robyn's 'Ever Again'. The result of this collaboration was a 'highly collectible package' with a vinyl record and 48-page pamphlet titled 'EMS Synthi 100 – DEEWEE Sessions Vol.1'. IPEM is credited as a collaborator, and the pamphlet includes an interview with Ivan Schepers, the IPEM technician who has been the synthesiser's long-term custodian. This was not just a casual borrowing of gear or a rehousing solution, it was a deep mixing of two mutually exclusive worlds: electroacoustic academia and commercial music. Though the collaborators under discussion were all male Europeans (not a population we typically examine when promoting diversity initiatives), their partnership was successful in navigating across demographic and aesthetic boundaries. The structure of their partnership may offer an approach that can be adapted to serve the deep mixing of other arenas that heretofore have excluded a more diverse range of artists.

In the 20 years since *Organised Sound* first dedicated an issue to investigating relationships between music technology and popular music (issue 5/2, 2000), critical interdisciplinary research and practice has uncovered ample cross-pollinations between electroacoustic and commercial media. When we consider and document these influences, we draw on a variety of approaches to analysis that layers the semiotics of music in general with elements particular to electronic music that have emerged and developed in parallel within communities producing electroacoustic music, popular music, audio pedagogy and sound design for film, television and games. This issue explores those points of crossover and in this editorial, we suggest areas where future development is still needed.

Naturally, each audio subfield has its own vocabulary and canonical references, and there are

[1]The current IPEM director, Marc Leman, wrote a book that was reviewed by Peter Nelson in issue 14/1 of *Organised Sound* in 2009.

meaningful differences in the underlying conceptualisations and models of sound and technology and their intersections. For example, the underlying concept of space in recordings demonstrates how different subfields can deploy different models or abstractions in pursuit of sonic creation, and how underlying assumptions and models for creating the illusion of space in recordings vary widely. In traditional music production, we find a common reference to spatial relationships established by the European Art Music tradition: Moylan's concept of the soundstage (Moylan 2015: 54) and Alan Moore's sound box (Dockwray and Moore 2010: 1) both rely on the idea that a stereophonic recording presents a stage containing sound sources that the listener relates to as an audience member. Of course, this idea directly connects to the way that we hear instruments of an acoustic ensemble recorded in stereo using traditional stereo microphone technique. When one records or creates separate tracks of a multitrack recording, it seems natural from this perspective to focus on arranging those tracks as if they were sound sources physically situated on a soundstage in some relation to the listener. The soundstage is defined by the perspective of the listener.

In film, a tradition with nearly as long a history in use of audio, the concept of space is very different, with special needs created using multi-shot editing. Something as simple as arranging each element in a stereo mix according to the spatial location on screen becomes an obvious problem when we watch the fast-paced editing of today's film and television. Sound sources would be jumping around the sound stage in a way that would likely distract a viewer and hurt the storytelling of the film. Instead, the audio is used in contrast to the film cuts, providing a sense of continuity through the use of backgrounds/atmospheres that do not follow the picture edits but rather play consistently through the entire scene. All dialogue and Foley, regardless of the location of the actor, are commonly panned to the centre channel throughout the scene. Intelligibility of speech is prized over accurate spatialisation, with the sense of proximity to the speaker remaining consistent in the audio throughout a scene, though the camera (and the viewer seeing through the camera) moves and cuts closer and farther away. In fact in film, the approach of trying to create and match elements that more accurately reflect the experience of a listener is of primary concern to the audio specialist (Holman 2010: 58).

Alternatively, a music producer in the hip-hop world may inherit the spatialisation of various recordings that they have sampled, with little consideration to the location of individual sound sources. Other artists may conceive of their sound sources in terms of a more direct mode of embodiment, with little

reference to an imagined listener; all spatial references may be based on the way in which they might play the instrument. Others may be working in binaural audio to put sounds between the listeners ears in a way that lacks a sense of external space. It is easy to take these deep abstractions for granted until we find ourselves working with a collaborator that has a very different understanding of fundamentals within creative production. A notable example of this differing vocabulary is articulated in Adam Scott Neal's article in this issue 'Lo-fi Today', where he serves as an interlocutor for the popular genre as opposed to an audio qualitative descriptor of low fidelity. Still, while these individual subfields are all under the same umbrella of sonic production, it would be natural to assume collaboration across genres/fields within audio technology requires some mediation and accommodation between the different models and abstractions. However, the point where collaborators find a meaningful overlap can be something entirely new and not easily predicted by either of the previous abstractions.

A locus of research that traverses traditional boundaries in novel ways involves critical listening and the electroacoustic genre is the sonic domains of timbre and tone. The emphasis on timbre and tone have long been a style-defining characteristic in both commercial electronica and academic electroacoustic music. For example, Dennis Smalley's work with spectromorphology is well documented by the electroacoustic community and remains a foundational theory of and approach to timbre-morphing for practitioners (Smalley 1997). As productions increasingly rely on timbre morphing using technology, electroacoustic musicology is now more applicable across genres and presentation formats. Fink, Wallmark and Latour attempt to bridge the gap between timbre and tone, illuminating how the materiality of sound can structure cultural practice. Elements of the popular music signal chain are used as a hermeneutic window into broader questions of musical meaning, identity and power (Fink, Wallmark and Latour 2018: 12). Still, more can be done to provide a critical and cultural perspective in the electroacoustic space as we see in sound studies, the anthropology of music and the commercial music world. At the same time, further work is needed in the commercial realm to discuss technical practices as has been done in electroacoustic studies. An excellent resource that uses many electroacoustic/critical listening techniques to illustrate how listeners measure race through sound and locate racial subjectivities in musical vocal timbres is *The Race of Sound: Listening, Timbre, and Vocality in African American Music* (Eidsheim 2019). Similarly, an article in this issue by Anders Reuter, 'Pop Materialising: Layers and topological space in digital pop music' articulates a mediatised topological materiality for

pop music that increasingly depends on deep audio computation more commonly found in electroacoustic music.

Historically, there has been a strong overlap between the electroacoustic and commercial music communities when they develop new technologies that can be capitalised on and new modes of creation that fit into academic composers' modernist projects (Lemmon 2019). More recently, there are other major areas of overlap between electroacoustic and commercial music communities such as the DIY ethic and a focus on building or customising technology. Circuit bending, hacking and instrument customisation has long been supported in the experimental side of electronic music and recently supported through academic organisations such as the New Instruments for Musical Expression (NIME), Sound and Music Computing (SMC), the Society for Electro-acoustic Music in the United States (SEAMUS) and the International Computer Music Association (ICMA). However, this practice is now embraced in the commercial realm. For example, Andreas Kitzman and Claes Thorén's 'The Modular Journey: Uncovering Analogue Aesthetics in Digital Landscapes' delves into the DIY ethic of the Eurorack synth world in this issue. Of course, synthesisers have long crossed the borders of genre and style and there are many similarities between the research and production of electroacoustic experimentation and those playing out in Eurorack spaces, which consequently reflect the modern world of boutique guitar pedals. For example, practitioners build their own custom pedals, they build from kits, buy pre-made pedals and customise them, and naturally also buy wholly pre-made. There are even specialists who focus on the history of various pedal manufacturers and lines. JHS Pedals, which has a popular YouTube channel,[2] has dedicated time in recent episodes to cover the owner's weighty 11-year research project into the ProCo Rat pedal – work that would not be out of place in an academic journal. We also see successful content creators focusing on the DIY aspects of pedal creation. Wampler Pedal's YouTube channel[3] tends to focus on technical aspects of circuit design, which in the past would be published through an engineering conference. On the Eurorack side, emerging Ugandan artist and DIY synth builder Brian Bamanya, who performs as Afrorack, brings rhythmic improvisation and handcrafted sensibilities to the devices he constructs for music making.[4] These organisations and channels are not focused on academic electroacoustic

composers, but rather musicians working in predominantly commercial music styles, yet many of the concerns of technology and timbre are the same. As shown with the Soulwax project, it is easy to connect over gear. In this issue Dylan Davis takes an EA approach to both a specific piece of gear and a highly specialised electronica subgenre in 'Acid Patterns: How people are sharing a visual notation system for the Roland TB-303 to create and recreate acid house music'. Acid house was pioneered in Chicago by DJ Pierre and Sleezy D., whose names are most likely not familiar to *Organised Sound* readers – even a scholarly article commenting on music journalist coverage recognises that: 'There are lots of articles about Aphex Twin and Orbital, because they're all white guys you can understand. But how many articles are there about DJ Pierre?' (Ross et al. 1995: 76).

Both commercial and electroacoustic music have long-standing problems with diversity, equity, access and inclusion as underrepresented groups face significant barriers to entry. This issue is apparent in both the education and commercial sectors of our field. Georgina Born and Kyle Devine noted that 'demographics of students taking British MT degrees, in comparison to traditional music degrees and the national average, are overwhelmingly male, from less advantaged social backgrounds, and slightly more ethnically diverse' (Born and Devine, 2016: 1). In 2016, *The Atlantic* published a story discussing the lack of women in audio, while noting that only 7% of members of the Audio Engineering Society were women, with some saying that number is probably lower given that there was an option to opt out of reporting gender in the survey responses (Lanzendorfer 2017). BIPOC (Black, Indigenous, People of Colour) artists, technologists and administrators are equally underrepresented in the music industry as well. In 2020, the *New York Times* noted Black music executives' lack of representation when compared with Black artists (Sisario 2020). Elias Leight discusses the difficult challenges of levelling the playing field for people of colour due to the inherent racism that exists in the record industry (Leight 2020). Disabled people are among those most often left out of the conversation. A 2017 report on the representation of disabled people in the British music education industry by Drake Music, one of the leading international organisations working with music, technology and disabilities, noted: a) there was little data available on the music education workforce; b) the landscape of the music education sector is complex, which may make strategic, structural change difficult; c) there is a wide range of understanding of disability; and d) music education hubs are at different stages in their journey to making their music offerings more inclusive (Drake Music 2017).

---

[2]JHS Pedals, www.youtube.com/channel/UCjfbkA4jJkJY5g0wbjuoZWA.

[3]Wampler Pedals, www.youtube.com/channel/UCdVrg4Wl3vjIxonABn6RfWw.

[4]www.youtube.com/channel/UCPfBqZQ2P8NqY7puxYzirtw.

While there are many organisations working to improve impact for underrepresented groups,[5] we need people of privilege to participate in the call for change. This includes educators, performers, musicians and you. Educators who include literature and topics from a wider group of professionals offer aspiring students opportunities to find role models from similar backgrounds. This effort is too often lacking in the music technology space. Improving access should start at the early stage of a child's musical life. Simple lessons processing their voice or making a beat with freeware on mobile devices can begin a lifelong journey of creativity with technology. Exposure to music technology at an early age can empower students with contemporary musicianship skill and represents an opportunity to extend traditional music learning and provide access to all (Fick and Bulgren 2022: 10).

Educators and scholars may benefit from taking a social justice perspective to music education when pursuing an understanding of assumptions and biases (Adams and Bell 2016: 403). In considering the prominences of European Art Music standards, students can benefit from challenging their position. Why are these examples the models that are celebrated? What factors limited the voices of others? It should come as no surprise that technology-based commercial and electroacoustic music are dominated by white and able-bodied voices. Why is it that only ethnomusicological and popular music receive critical commentary? There is a plethora of music made in different styles that can be examined from an electroacoustic perspective, even if it is not labelled as electroacoustic music. In this issue, musicologists interfaced with musicians who work with technology; the guest editors reached out deliberately to make these connections so the academic musicologists could put the work of the musicians into an electroacoustic context. Rather than asking the artists to write a scholarly article, we encouraged collaboration across musical disciplines to tell these stories in an academic context/voice. We gain knowledge of King Britt, Maria Chavez and Tom Erbe's practices as contextualized by Tara Rogers, Kristina Warren and Ted Gordon.

In an attempt to increase representation, electroacoustic organisations have been collecting music from BIPOC and other underrepresented artists. Jeffrey Stolet leads a project, Diverse Electro-Acoustic Music (DEAM-onlinth.net), in order to share information about electronic and computer music created by composers of underrepresented groups. Stolet writes: 'the motivation for this information-sharing is to expand the range of electronic music that educators can access as they shape educational experiences' (Stolet 2021). Education institutions also contribute to collating resources of underrepresented artists and their scholarship for students. Several universities have centres and/or websites designed to point music students to resources outside the predominantly white male canon. The University of Toronto has put together a 'guide that supports research on the musical traditions and scholarship of BIPOC individuals and groups' (University of Toronto Libraries 2022). Their guide is not restricted to a specific type of music but includes examples in both art and popular music. The GRAMMY Museum has created several initiatives to raise up underrepresented voices in various pop genres, including a recent partnering with the National Museum of African American music for the Rosedale Summit, which celebrates the past, present and future of BIPOC in country music (Cision PR Newswire 2021). Several music journals have also recently sought to increase representation through special editions devoted to raising up underrepresented groups and official commitments to address historical marginalisation.[6]

However, this is just the beginning. We need to do more on a local level to combat systemic issues. Young people from underrepresented groups need to see models of successful people working in the industry. National programmes such as Little Kids Rock,[7] Splice[8] and Bleeps and loops[9] attempt to bridge the gaps discussed here through opportunities where young people can experience success making music with technology. Music Inclusion Coalition is working to get technology into schools for disadvantaged high school students.[10] Camps, workshops and after-school programmes for children interested in working with technology offer exposure, and this can lead to increasing representation long term. Midnightmusic[11] and Mix Major Electronic Music School[12] are great online resources to get started teaching young people creative approaches using music technology. We need to ask ourselves what can we as researchers in the field of electroacoustic music scholarship offer to these

---

[5]There are many groups of note dedicated to making an impact for underrepresented voices in the United States, including Afrorack (www.afrorack.org/), Castles of our Skin (www.castleskins.org), Initiative for Indigenous Futures (www.liftmusicfund.org/organizations-promoting-bipoc-in-music), Soundgirls (https://soundgirls.org), Techne (https://technesound.org/) and WAM (https://womensaudiomission.org).

[6]*Popular Music Studies* (https://online.ucpress.edu/jpms/issue/33/4) and *Popular Music* (www.cambridge.org/core/journals/popular-music/prosecuting-and-policing-rap-cfp).

[7]www.littlekidsrock.org.

[8]https://splicemusic.org/institute/workshops.

[9]https://bleepsandloops.com.

[10]www.musicinclusioncoalition.com.

[11]https://midnightmusic.com.au.

[12]www.youtube.com/c/MixMajorConnect; https://learn.mi;www.bandlab.comx-major.com.

organisations, and conversely, how can these organisations and the creativity of their constituencies inform our thinking on electroacoustic music more broadly?

Historically, access to music technology has been exclusive due to cost, a high-tech learning curve and demanding physical interfaces. This has long been a deterring factor for lower income households and people with disabilities. Recent changes in remote workflow, mobile technology and instruments allow access to music tech for more people than ever. Billie Eilish's *When We All Fall Asleep, Where Do We Go* (Eilish 2019) was a monumental commercial success and most notable from a production perspective because it was created using bedroom recording practices that relied heavily on at-home post-production. The industry had been moving in this direction for the better part of two decades (see the Jack Antonoff-led group, Bleachers's 2014 album, *Strange Desire* as an earlier successful commercial model of bedroom recording). With the availability of free and low-cost DAWs on computers and mobile devices, anyone can record and produce their own music. Browser-based DAWs BandLab, Soundtrap and Soundation provide accessible solutions to audio production. BandLab in particular boasts over 20 million users.[13] As a social platform and DAW, BandLab allows users to create content in a web browser, collaborate online, post songs and follow other artists. This program is incredibly useful for a wide range of audio projects and is regularly taught by many music educators throughout the world as a low-tech solution that yields high-quality results (Fick 2021: 113). Assistive technology has impacted workflow in the industry too. It is common in many production fields today to record, mix, edit and collaborate with people remotely in all types of media production jobs. Furthermore, assistive instruments such as Skoog,[14] JamBoxx,[15] Clarion[16] and Eyegaze[17] make it possible for people with physical disabilities to interact with technology and make music. DRAKE Music and other organisations are leading the development of assistive instruments for music technology that can easily be applied to the practice of electroacoustic music. The divide between academic and non-academic art is shrinking, and that much can be learned by focusing an electroacoustic musicological lens on artists and artistic practices outside the university lineage.

As always, *Organised Sound* publishes exceptional articles with topics extending beyond the issue's theme. Perhaps the most closely related to the topic of broadening the scope of electroacoustic music is Escande Marin's article, 'The Topological Model in the Works of Yuasa Jōji', on the prolific Japanese composer who developed new technology to create music that intersected with theatre directors, dancers, poets, photographers, film-makers and others. Marin uses the study of 'spatial distortions through continuous transformation' as a metaphor to consider the plasticity of sound and describe how Jōji developed a philosophy of the perception of time. Dealing with space and society, Ronald Boersen's 'Enactive Listening: Perceptual reflections on soundscape composition' articulates the affordances offered for a listener by the divergent processes of soundscape composition, contextualised within the wider electroacoustic domain and its sociohistorical context. Finally, Carmen Pardo Salgado's article, 'Ecologies of Sound with Regard to Arrhythmia', examines a single collaborative multimedia installation through a horizontal sound ecology approach, contextualising its aspects by dismantling a hierarchical ontology.

Jason Fick
jason.fick@oregonstate.edu
Margaret Schedel
margaret.schedel@stonybrook.edu
Brandon Vaccaro
brandon_vaccaro@uml.edu

REFERENCES

Adams, M. and Bell, L. 2016. *Teaching for Diversity and Social Justice*. New York: Routledge.

Born, G. and Devine, K. 2016. Gender, Creativity and Education in Digital Musics and Sound Art. *Contemporary Music Review* **35**(1): 1–20.

Cision PR Newswire. 2021. The GRAMMY Museum and the National Museum of African American Music Host the 1st Annual Rosedale Summit. www.prnewswire.com/news-releases/the-grammy-museum-and-the-national-museum-of-african-american-music-host-the-1st-annual-rosedale-summit-301399520.html (accessed 11 February 2022).

Dockway, R. and Moore, A. 2010. Configuring the Soundbox 1965–1972. *Popular Music* **29**(2): 181–97.

Drake Music. 2017. Think2020 Paper – Disabled People in the Music Education Workforce. www.drakemusic.org/

---

[13]www.bandlab.com.

[14]https://skoogmusic.com.

[15]www.jamboxx.com.

[16]www.openupmusic.org/clarion.

[17]https://eyegaze.com.

blog/becky-morris-knight/drake-music-response-to-arts-council-england-diversity-report-2016-17/ (accessed 11 February 2022).

Eidsheim, N. S. 2019. *The Race of Sound: Listening, Timbre, and Vocality in African American Music*. Durham, NC: Duke University Press.

Fick, J. 2021. BandLab: A Free Cloud-based Digital Audio Workstation (DAW) for Music Production. *CMS Symposium* **61**(1). https://symposium.music.org/index.php/61-1/item/11510-bandlab-a-free-cloud-based-digital-audio-workstation-daw-for-music-production (accessed 11 February 2022).

Fick, J. and Bulgren, C. 2022. Developing 21st-Century Musicianship: Tablet-Based Music Production in the General Music Classroom. *Journal of General Music Education* **35**(2): 4–12.

Fink, R., Wallmark, Z. and Latour, M. 2018. *The Relentless Pursuit of Tone: Timbre in Popular Music*. Oxford: Oxford University Press.

Holman, T. 2010. *Sound for Film and Television*. New York: Routledge.

Lanzendorfer, J. 2017. Why Aren't There More Women Working in Audio? *The Atlantic*, 30 August. www.theatlantic.com/entertainment/archive/2017/08/why-arent-there-more-women-working-in-audio/537663/ (accessed 10 February 2022).

Leight, E. 2020. The Music Industry Was Built on Racism. Changing It Will Take More Than Donations. *Rolling Stone*. www.rollingstone.com/music/music-features/music-industry-racism-1010001/ (accessed 10 February 2022).

Lemmon, Eric. 2019. The Impact of Institutional Support on Artistic Research and Creation: The Columbia-Princeton Electronic Music Center and the RCA Mark-II. *International Computer Music Conference Proceedings*. New York: Michigan Publishing.

Lewis, George E. 2000. Too Many Notes: Computers, Complexity and Culture in Voyager. *Leonardo Music Journal* **10**(December): 33–9. https://doi.org/10.1162/096112100570585.

Lewis, G. 2008. *A Power Stronger than Itself: The AACM and American Experimental Music*. Chicago: University of Chicago Press.

Moylan, W. 2015. *Understanding and Crafting the Mix: The Art of Recording*. New York: Focal Press.

Ross, A., Owen, F., Knuckles, F. and Cooper, C. 1995. The Cult of the DJ: A Symposium. *Social Text* **43**: 67–88.

Sisario, B. 2020. The Music Industry Is Wrestling with Race. Here's What It Has Promised. *New York Times*, 1 July. www.nytimes.com/2020/07/01/arts/music/music-industry-black-lives-matter.html (accessed 10 February 2022).

Smalley, D. 1997. Spectromorphology: Explaining Sound-Shapes. *Organised Sound* **2**(2): 107–26.

Stolet, J. 2021. Diverse Electro-Acoustic Music. http://deam-online.net (accessed 11 February 2022).

Trew, J. 2020. Soulwax and the Hunt for the EMS Synthi 100. *Engadget*. www.engadget.com/soulwax-ems-synthi-100-deewee-sessions-143007711.html (accessed 10 February 2022).

University of Toronto Libraries. 2022. Guide to BIPOC Musicians and Related Literature. https://guides.library.utoronto.ca/c.php?g=719206&p=5143106 (accessed 11 February 2022).

DISCOGRAPHY

Bleachers. 2014. *Strange Desire*. RCA 88843-07166-2.

Billie Eilish. 2019. *When We All Fall Asleep, Where Do We Go?* Darkroom 00602577427749; Interscope 00602577427749.