Towards Sustainable Sonic Arts Practices: Less Glitz, More Grit

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Abstract

In the context of the climate crisis, what makes for a sustainable practice for contemporary sound artists? It is clear that musicians, producers, composers, and sound designers can no longer blindly pursue the creation of beauty - emotional melodies, exciting rhythms, lush timbres - simply to lure listeners on a leisurely, alas temporary, escape into Scharaffenland. Art is more than entertainment. This paper argues that it is incumbent upon sound artists to dedicate their skill, time, and efforts towards the greater good of climate change mitigation. While many sound artists, including me, are closely connected to academic institutions that provide material resources and ample time for reflection, we must recognise that positions of privilege come with great responsibility. In fact, we cannot be content with raising awareness but must strive to stimulate action. In this talk, I will review initiatives towards sustainable practices amongst pop musicians, working in industry, and sound artists, working in niche or academic contexts. From there, I discuss four matters of concern for sound artists working in academia. Firstly, a rethinking of the aesthetics, purposes, sonic materials, and methods that composers and sound artists use, if their output is to generate meaning-filled experiences that reach beyond the serotonin rush of instant gratification and instead influence listeners to reflect and react to the crisis. Secondly, finding ways to calculate CO2 footprint for the production, presentation, and distribution of sonic artwork, while carefully weighing reasonable costs against potential (if not measurable) impact on audiences, in terms of positive behavioural change. Thirdly, stimulating students and other stakeholders by reviewing curricula and teaching practices in educational institutions. Fourthly, strengthening the network of initiatives geared towards sustainable practices among professionals in the field of sound art.

Less Glitz, More Grit

As a composer & sound artist working in academia, I believe it is incumbent upon me to dedicate whatever skills and experience I might have in support of sustainable art practices,

through teaching and research. Sound art is in many ways a niche practice within the larger umbrella of "music" or 'music business'. It is closely linked to academic institutions (Ikeshiro, Charrieras, Lindborg 2022, forthcoming) and enjoys privileges in terms of access to equipment, facilities, and other resources that are largely supported by the taxpayer.

Beethoven might be the first artist in history to be free from, in a paradigmatically different way, overbearing and external economic pressure. He famously yelled “Cattle!” at an audience and was largely able to pursue his work regardless of what the audiences might think of his musical compositions. Therefore he has been referred to as a “proto-Modernist”, the very first to create ‘art for art’s sake’. As a supporter of absolut music, Igor Stravinsky stated emphatically that “music means nothing outside itself” (Stravinsky 1956). One of his most astute followers, Frank Zappa claimed that 'art is entertainment' (perhaps echoing Nietzsche, who claimed that “every kind of reading belongs among my recreations”). Much as I appreciate Zappa's musical instincts (especially when connecting ‘high’ and ‘low’ art, as the Yellow Shark album), I've never believed this dictum to be true. And today, music and sound art have come a long way from Beethoven’s disdainful attitude.

As Kurt Langer says, decadence is synonymous with the music industry: it is a “fantasy that we created for our audience” (Langer & Aswad 2022). Analysing the historical context of art and entertainment, Andy Hamilton (2022) argues that the distinction between them is artificial and relatively recent. ‘Fine arts’ is “a modern concept, and… entertainment contrasts with any serious activity—science, politics, religion". He continues to define the aims of entertainment as “giving pleasure or delight by amusing, exciting or otherwise diverting the audience, in a way that calls on them to make little concentrated effort”. In contrast, art has a “conscious aesthetic end that richly rewards aesthetic attention… [within a more] complex relation to an audience”.

While I write these lines, COP27 (United Nations 2022) is ongoing (until 18 November 2022). Predictably, the conference has been heavily criticised by those in the West unwilling to consider its message (or eager for some Egypt-bashing), and seemingly largely ignored in Hong Kong (people don’t talk about it, and e.g. the South China Morning Post carries no reporting whatsoever, only the occasional ‘reader opinion letter’). But make no mistake: there is no contemporary matter more critical than the climate crisis. So what can musicians and sound artists do in this situation?

It might be true that much of current sound art and music takes the listeners mind off serious concerns. Shusterman (2003) ventures a “hypothesis concerning the cognitive contribution of entertainment: its relaxing function not only provides relief or diversion that can restore concentration but it can also sharpen sensitivity of perception by lowering the sensory interference caused by surplus tensions of muscular contraction resulting from excessive effort or straining”. This leads us to ask whether the value of such artwork lies partly in escapism. Hamilton seems to reduce the role of sound art and music to consolation, a practice

meant to comfort those in pain in face of inevitable death and destruction. Art, he therefore claims, might offer a temporary escape from immediate reality, yet it “is not escapism. Art may console, where consolation means helping through bad times, while recognizing that times are bad. Escapism means forgetting; consolation does not—a vital contrast between art and entertainment" (Hamilton 2022).

Pop music post-Covid mid-Crisis

The past three years with Covid-19 panic have presented extreme difficulties for professional musicians hitherto relying on live performance and paying audiences to make a living. Now that social restrictions are easing (at least in the West), many see this as an inflection point, suggesting that this presents an opportunity for music business, if the recovery from Covid-19 can be green. Those who adopt leaner practices may enjoy a competitive advantage. But how can it be done?

It might be true that when counting CO2, sound artists and their output make a miniscule dent in the ‘hockey stick’ curve (based on climate analysis by Michael Mann and collaborators in 1999). But let us start by considering the trade value of the ‘music industry’ as a whole: it is not small. Goldman Sachs estimates that by 2030 the total “global music streaming revenues (on a retail/gross basis) will hit $89.3 billion”, mostly from emerging platforms (Ingham 2022). In the big picture, this might still seem like not a whole lot. However, and importantly, music culture has always played a key role to inspire and fuel social movements. "Music, musicians and music businesses, through their unique cultural and economic power, can lead the way in demanding the systemic changes required to secure all life on earth." A survey by researchers at the University of Glasgow found that 82% of music fans were concerned about climate change compared to 72% of non-music fans. Fans are “both more concerned about climate change in general and expect the music industry to do extra on the issue”. Furthermore, they are “prepared to change their consumption habits to support more sustainable products and practices” (Shaw et al. 2022).

So what can be done? Langer (2022) claims that right now, at the tail end of Covid-19, there is an opportunity to "create an industry like few others: leading by example, powered by creativity, and working to make a better world for the next generation… to leverage this power of influence to course-correct on climate, while still growing our bottom line. If our own sense of self-preservation doesn’t ask this of us, then we need only look to the audiences and artists who are calling for it” (op.cit.).

Case study: DJs CO2 footprint

The most important way for anyone living in affluent countries and contexts to reduce their personal climate crisis impact is by avoiding flying. The total contribution of aviation to climate change is about 3.5% (Lee et al. 2021). For musicians, the practice of “relentless touring – driven by low income from streams and physical format sales – is precarious and

environmentally unsustainable" (Corner 2021). As a case in point, consider DJs, the high-flying masters of ceremony at large-crowd music events. The top 1000 DJs touring in 2019 used 51,000 flights, with a CO2 footprint equivalent to "20,000 households' electricity for one year, powering 8000 festivals for three days, or pressing 25 million records" (McLaughlin et al. 2021). The average touring DJ emits 35 tonnes of CO2 annually, which is over 17 times more than the sustainable carbon budget (REF needed) of approximately 2 tonnes of CO2 per individual" (Tachev 2022). In a report for CleanScene, Elidh McLaughlin proposes six actions to mitigate DJs negative impact on the environment: a focus on Future Equity; Accountability; Celebrate Local; Rethinking Exclusivity; Efficient Tour Routing; and Collaboration. These concepts are developed in their report (McLaughlin et al. 2021).

As Parncutt writes: "Until a few years ago, academics thought nothing of flying from anywhere in the world to a single location and enjoying a few days of intense communication. We returned home with new ideas, plans, and sense of purpose. In 2021, after a year of virtual communication triggered by the COVID- 19 epidemic, many are longing to go 'back to normal'. That is hardly likely, given the worsening global climate situation. Whereas COVID-19 happened more suddenly, climate change is more important in the long term." (Parncutt, Lindborg et al. 2021)

In addition, musicians in industry can switch to energy-efficient lighting and sound equipment, and prioritise venues that rely on renewable energy. (Tachev 2022), and if they output records on physical media, the materials can be recyclable (Wickes 2021).

Action

But music industry has to show that their engagement is more than just a fashion statement: "eco-enthusiasm has to come with concrete, identifiable actions" (Langer & Aswad 2022). "After pledging to reduce emissions, record labels, musicians and other stakeholders have to put their money where their mouths are" (Trapunski 2022). Individual actions do matter: "When we come together and collectivize those actions, we can rewire the system to favor justice, equity and equality. That's the power of community." (Climate Control Projects 2022, https://climatecontrolprojects.com/). These sentiments are shared by musician action groups, such as DJs for Climate Action (https://www.djs4ca.com/), which works together with other UK based organisations that have an international reach, such as LIVE Green (https://accessaa.co.uk) and Music Declares Emergency (https://musicdeclares.net). See also Derek Singleton's (2010?) analysis of the carbon footprint of music festivals in the USA. These associations are taking seriously the ideas of 'green jobs' (e.g. Johnson 2022, https://cpdonline.co.uk/knowledge-base/business/green-jobs/) and 'just transition' (the global trade union movement to prioritise workers' rights and reduce inequalities, see e.g. https://climatejusticealliance.org/).

Towards sustainable sound art practices

Having reviewed the current situation in the profit-oriented music industry, I discuss matters of concern for sound artists working in academia, and give examples from what we are currently dong at SoundLab (http://soundlab.scm.cityu.edu.hk/), co-Directed by the author, at the School of Creative Media. In SoundLab's approach to working with sound art at a higher education institution, we are adopting a four-pronged strategy that involves 1) rethinking the aesthetics; 2) calculating CO2 footprint; 3) reviewing curricula, and: 4) strengthening the networks. In what follows I will briefly discuss them and give examples from our practice.

1: Rethinking the aesthetics

Sound artists are practice-based: we tend to work with the materials and contexts that are immediately available to us. I suspect that the highly technical nature of the work and comparatively introverted mentality of many sound artists, when compared to for example visual artists or film makers, makes it harder for them to take in concerns that still seem to be far away, both in the future and geographically. But they are not.

I argue that we need to re-focus contents and materials, compositional purposes, sonic materials, and methods that we use, if our output is to generate meaning-filled experiences that reach beyond the serotonin rush of instant gratification and instead influence listeners to reflect and react to the crisis. As Richard Parncutt points out, "Visible green behavior can help reduce the value-action gap… people need to be shown what to do, and how… Another approach is climate change communication that anthropomorphizes nature… explaining that the atmosphere "doesn't negotiate" and "doesn't care where the emissions come from." (Parncutt, Lindborg et al. 2021).

At SoundLab, examples of our ongoing work include:

- Analysis of climate data sonification projects (Lindborg et al. 2022, in review)
- Project on environmental data sonification on mobile devices (Lindborg & Lenzi, application pending)

2: Calculating CO2 footprint

With his 'categorical imperative, Emmanuel Kant affirmed that the best fundament for ethical decisions is to "act only according to that maxim whereby you can, at the same time, will that it should become a universal law". What does this mean for academics and ethical action in the face of the climate crisis? We have to establish ways to calculate CO2 footprint for the production, presentation, and distribution of sonic artwork, while carefully weighing reasonable costs against potential (if not measurable) impact on audiences, in terms of positive behavioural change. It can easily be shown that a long-haul return flight in economy class corresponds to roughly a tonne of burned fossil carbon (creating 3.7 tonnes CO2). That figure, which does not consider other greenhouse gases (atmosfair.de), is comparable with

driving a car for a year (consuming 30 l of gasoline per week) or eating beef for three years (500 g per week, at 50 kg CO2 per kg beef)" (Parncutt, Lindborg et al. 2021). In this perspective, the single most effective action an individual can do is to reduce taking flights, preferably to none at all. "For many academics, the carbon emissions associated with air travel dominate personal carbon budgets, dwarfing other contributions such as from driving or eating a meat-based diet" (Quinton 2020). It follows that considerations of research ethics, as commonly discussed by ethics committees, might usefully include questions about conference organization (Parncutt & Seither-Preisler 2019; 2021), and hence the need to implement new conferencing formats that produce much less CO2 than what we have become used to previously. The proposed model also holds great promise to promote diversity, equity, and inclusion, which was the topic of a recent special issue in Array, the journal of the International Computer Music Association (Akkermann, Lindborg et al. 2021).

3: Reviewing curricula

We must stimulate students and other stakeholders by reviewing curricula and teaching practices in educational institutions. As a case study, we are reviewing the undergraduate courses at the School of Creative Media, CityU Hong Kong. There are currently 123 courses in the catalogue (available at http://www.cityu.edu.hk/catalogue/ug/current/catalogue/catalogue_UC.htm?page=B/B_course_SM.htm). Scanning the writeups we found only three (3) courses that have a description that contains either 'sustain/able/ability' or 'climate change/action/crisis/mitigation'. One of them is dedicated to the issues we are here discussing, even though it is not centred on music or sound art, and the writeup will be cited in full: "The course introduces students to sustainable values in art and product development by highlighting the responsibility of the artist/designer towards the ecological, economical and social influence of his/her creation. Ecological sustainability in art and design includes a holistic understanding of production and transportation methodologies and their application in a digital environment. It also includes notions energy efficiency and the use of eco-friendly materials in products and art pieces. Social sustainability in art and design encompasses clear and honest communication of a product, information or art piece and its positive influence on the society." (SM3726 Sustainable Art and Design). The two other courses mention, respectively, "questions of resource-use (for instance energy consumption, carbon emission, or impact on climate)" and "environmental narrative design".

We will have to do more work to chart the terrain of curricula: within our own institution and in comparison with sister institutions The important goal should be to identify best practices.

The course descriptions, and naturally their content as well, need to respond to the demands of the current climate crisis, the demands of students, and reflect deep insights into what are the most productive courses of action in the present situation. The first part of this paper

outlined the pressure from multiple international organisations within the field of music (some of which are part of the coordination spearheaded by the COP27), and as the Glasgow survey showed (Shaw et al. 2022), music fans are more sensitive than the average population towards adapting their habits and practices for climate change mitigation.

At SoundLab and in the context of DACA (more about it below), we are creating workshops generating and collecting materials for sound artists to work with. The point is to stimulate approaches to climate data sonification and music-making that has a clear connection to the issues brought about by the climate crisis. In the DACA Workshop in September 2022, students worked with meteorological data from Hong Kong Observatory. Materials, blog, and examples output are available at the website (http://dataclimate.org/daca-workshop/). Another example of how to stimulate students and young people to join their passion for creative sound art and engagement with climate action is the 'sample pack' by DJs for Climate Action (https://www.djs4ca.com/climate-sample-pack).

4: Strengthening the networks

The final argument I want to make is that we need to strengthen the network of initiatives geared towards sustainable practices among professionals in the field of sound art. This is about creating platforms for awareness and sharing of climate-aware practices. One example is the Conference on Data Art for Climate Action (DACA, http://dataclimate.org/), which was organised by the author in collaboration with nine organisations in Hong Kong and EU (http://dataclimate.org/information/partners/) together with colleagues and numerous contributors (http://dataclimate.org/conference/timeline/). "DACA is about sonification and visualisation of climate data with a purpose of exploration, awareness, education, and action… a focal point for researchers, artists, activists, and students, to meet, discuss, and learn from each other. DACA will support a wide, open source dissemination of knowledge. The organisers actively work towards diversity… participants are researchers, academics, and graduate students in arts, computer science, media, journalism, and environmental studies, as well as laymen and interested parties in the general population. …We reach out to climate scientists who are interested in sonification for dealing with their own data. The overarching goal of DACA is to support scientists and artists who seek to work more closely together and create perceptualisations of climate data that excite and surprise people" (http://dataclimate.org/conference/about/). In his keynote address, Moritz Stefaner stated that "We don't have an awareness problem. We have an action problem." Analysing historical, recent, and own work, he showed that now is the time for artists and designers to make a mental shift away from 'creating awareness' to 'generating action'. While Stefaner focuses on visual design, the same case can be made for sound art and sound design.

Conclusion

In fact, there is such a thing as ‘sound art for climate action’. In this paper, I have outlined a background to the current state of affairs by considering the philosophy of aesthetics, the recently awakened climate awareness in the music industry, and the thinly spread and mostly disjoint field of sound art (at least the part that connects with academia). I argue that we, as students and professionals in the field, have a responsibility to turn our attention, skills, and aesthetics towards answering the inescapable demands put up by the climate crisis. This firstly concerns conference travel, but also and ata deeper level, the kinds of musical work that we produce. At present, it is hard to find evidence that this attitude is stimulated in higher education, exactly where it is needed and in fact quite likely to be well received. Many conferences in the fields relevant to sound art have a genuine concern for climate action, including ICAD, SMC, and ICMC, but these are still heterogenous and not connected. Much work remains to be done.

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Declaration of non-dependence

The author declares having no economic interests in any part of materials presented in this paper.

References

Corner, A. (2021-04-27). Time to shake things up: music industry confronts climate crisis as gigs resume. The Guardian. Retrieved from https://www.theguardian.com/music/2021/apr/27/music-industry-confronts-climate-crisis-gigs-resume

Elidh McLaughlin, Eva Fineberg, & MacWilliams, F. (2021-03). Last Night a DJ toook a Flight: Exploring the carbon footprint of touring DJs and looking towards alternative futures within the dance music industry. In: CleanScene.

Hamilton, A. (2022). Against Modernism and Postmodernism on Art and Entertainment: A Kristeller Thesis of Entertainment. The British Journal of Aesthetics.

Haworth, C., Akkermann, M., & Lindborg, P. (2021). Diversity, pluralism--equity? Journal issue.

Ingham, T. (2022-06-13,). Goldman Sachs: The global music industry is going to be worth even MORE than we thought. Music Business Worldwide. Retrieved from

https://www.musicbusinessworldwide.com/goldman-sachs-global-music-industry-is-going-to-be-worth-even-more-than-we-thought/

Langer, K. (2022). Climate Control Projects. Retrieved from https://climatecontrolprojects.com/

Langer, K., & Aswad, J. (2022). Here's How the Music Industry Can Help Fight Climate Change. Retrieved from https://variety.com/2022/music/news/music-industry-fight-climate-change-1235313805/

Lee, D. S., Fahey, D., Skowron, A., Allen, M., Burkhardt, U., Chen, Q., . . . Fuglestvedt, J. (2021). The contribution of global aviation to anthropogenic climate forcing for 2000 to 2018. Atmospheric Environment, 244, 117834.

Lindborg, P., Lenzi, S., & Chen, M. (2022/08 (in review)). Climate Data Sonification and Visualisation: A Systematic Review of Aesthetics, Characteristics, and Topics in 32 Recent Projects. Frontiers in Psychology/Human-Media Interaction.

Parncutt, R., Lindborg, P., Meyer-Kahlen, N., & Timmers, R. (2021). The multi-hub academic conference: global, inclusive, culturally diverse, creative, sustainable. Frontiers in Research Metrics and Analytics, 53.

Parncutt, R., & Seither-Preisler, A. (2019). Live streaming at international academic conferences: Ethical considerations. Elementa: Science of the Anthropocene, 7.

Parncutt, R., & Seither-Preisler, A. (2021). Live streaming at international academic conferences: Doing rather than talking. Elementa: Sci. Anthropocene, 9(1), 00435.

Quinton, J. N. (2020). Cutting the carbon cost of academic travel. Nature Reviews Earth & Environment, 1(1), 13-13.

Shaw, D., Brennan, M., McKeever, D., & Wong, M. (2022). 'Turn Up the Volume'Survey: Music Fan Attitudes towards Climate Change and Music Sustainability-Initial Report.

Shusterman, R. (2003). Entertainment: A question for aesthetics. The British Journal of Aesthetics, 43(3), 289-307.

Singleton, D. (2010?). Carrying the Tune of Sustainability Addressing Climate Change in Creative Ways.

Stravinsky, I. (1947). Poetics of music in the form of six lessons (Vol. 66): Harvard University Press.

Tachev, V. (2022-07-12). How to Reduce the Music Industry's Climate Impact. Energy Tracker Asia. Retrieved from https://energytracker.asia/how-to-reduce-the-music-industry-climate-impact/

Trapunski, R. (2022-10-24). The music industry changes its tune on climate change. Corporate Knights. Retrieved from https://www.corporateknights.com/category-culture/the-music-industry-changes-its-tune-on-climate-change/

United Nations. (2022). Climate Change Conference [COP27]. Retrieved from https://cop27.eg

Wickes, J. (2021-08-12). Vinyl records are bad for the environment – it's time for that to change. The Face. Retrieved from https://theface.com/music/vinyl-records-pressing-plants-climate-emergency-needs-for-profit-label-saoirse-sustainability-environment-billie-eilish