

# *SOUNDING THE SPECULATION*

AN EXPLORATION INTO DESIGN, NARRATIVES AND  
SUSTAINABLE FUTURES

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MA SUSTAINABLE DESIGN

STUDIO: ADM05

2022

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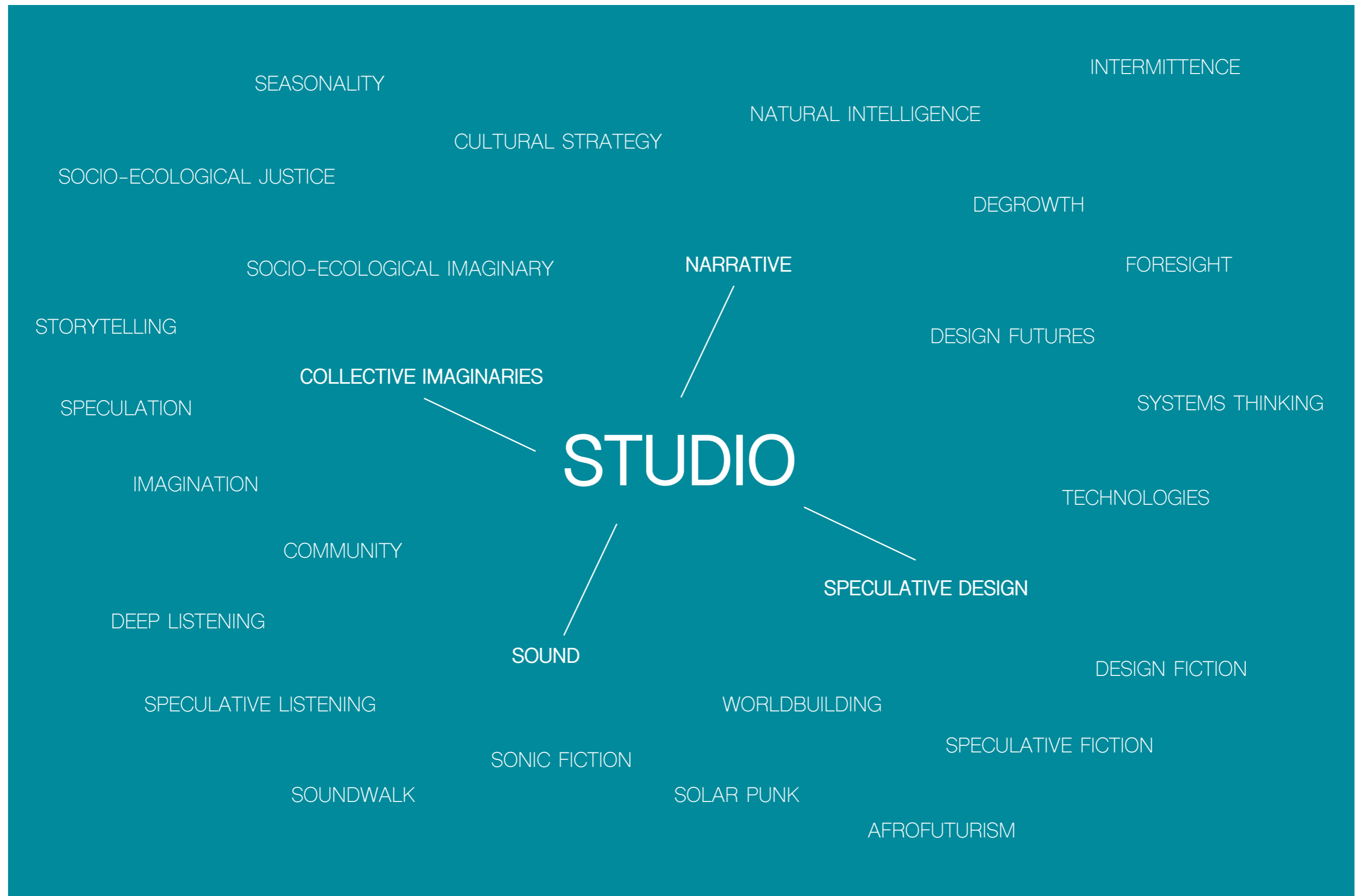
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# STATEMENT OF INTENT

The entanglements of socio-ecological crises are increasingly being referred to as a crisis of culture. This reflects a need to shift existing Western socio-cultural narratives that perpetuate detrimental and unjust systems that have global ramifications. Sonic perspectives are uniquely positioned to provide alternative narratives and insights though are seldom utilised in discursive design. How then might an inclusion of sound and listening practices within design provide alternative insights and imaginaries for socio-ecologically just and sustainable futures?

This work will address narratives engaging a socio-ecological imaginary through sonic approaches to design and further theoretical enquiry. Three outputs will be produced seeking to create community around alternative ways of thinking. These are presented as an accepted conference paper abstract, a soundwalk proposal and an essay for FIBER Reassemble Lab's Medium. It will then survey example initiatives such as Regenerative Futures and Superflux regarding their speculative, imaginative and transdisciplinary approaches whilst consulting the theoretical positions of discursive design, sound studies and wider sustainability discourses.

Complexities of theoretical enquiry within the contexts of sound studies and speculative design arise in the lack of balanced academic literature available within these disciplines, situating this work predominantly in the Global North. These limitations are addressed in discussion and 'the dark side of speculation'. Opportunities for expanded research into non-dominant voices therefore arise with a call to acknowledge projects and insights generated outside of exclusionary academic contexts. Significance of the work will be measured in the resulting potential for continued development of ideas explored and reception to the publishing and execution of proposed outputs.



# INTRODUCTION

<sup>1</sup> Amitav Ghosh, *The Great Derangement: Climate Change and the Unthinkable* (London: Penguin, 2018).

<sup>2</sup> Aaron S. Allen, "Prospects and Problems for Ecomusicology in Confronting a Crisis of Culture," *Journal of the American Musicological Society* 64, no. 2 (2011): 414–24, accessed April 1, 2022. <https://doi.org/10.1525/jams.2011.64.2.414>.

<sup>3</sup> Audre Lorde, "The Master's Tools Will Never Dismantle the Master's House," in *Feminist postcolonial theory: A reader* (New York: Routledge, 2003), 27.

<sup>4</sup> Shukla J. Skea et al, *IPCC, 2022: Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*, (Cambridge, UK and New York, NY, USA: Cambridge University Press, 2022), accessed April 20, 2022, doi: 10.1017/9781009157926.

<sup>5</sup> David C. Korten, *Change the Story, Change the Future: A Living Economy for a Living Earth* (California: Berrett-Koehler Publishers, 2015).

<sup>6</sup> Chris Riedy, "Storying the Future: Storytelling practice in transformative systems," *Storytelling for Sustainability in Higher Education: An Educator's Handbook* (2020): 1.

<sup>7</sup> Jeff Buckles, *Education, Sustainability and the Ecological Social Imaginary: Connective Education and Global Change* (London: Palgrave Macmillan, 2018).

<sup>8</sup> Cambridge Dictionary, *Speculation*, accessed April 1, 2022, <https://dictionary.cambridge.org/dictionary/english/speculation>.

<sup>9</sup> Cambridge Dictionary, *Imagination*, accessed April 1, 2022, <https://dictionary.cambridge.org/dictionary/english/imagination>.

If the climate crisis is a crisis of culture,<sup>1 2</sup> then we must turn our attention to what embeds culture – thought. Creating space for alternative narratives to stimulate thought may therefore encourage transition towards an alternative contemporary Western culture, moving in favour of the most social-ecologically sustainable futures that still remain available in the critical timeframe we are operating within. Where the alternative to this is 'business as usual', this work does not propose a fallacy of utopian quick fixes via imaginary thought. Instead, it seeks to explore the value of addressing crises in such a way as disruption to dominant proceedings. Through its critique, this work seeks to present a balanced approach to the practice of speculation through design theory, narrative and sonic perspectives whilst still acknowledging its own contextual limitations. Responding to Audre Lorde's infamous commentary that "the master's tools will never dismantle the master's house",<sup>3</sup> this is where the power and importance of creating space for imagination and speculation lies. The most recent IPCC report states that global CO2 emissions must be halved within the next decade to retain any hopes of maintaining a 50% chance of limiting warming to 1.5 degrees Celsius,<sup>4</sup> demonstrating the urgency for alternative conceptualisations that pave the way for political action that is currently stagnating. In reference to Korten,<sup>5</sup> Reidy states that it is "becoming increasingly clear that a conscious transformation towards a sustainable world will require not only technological, financial and institutional innovations, but also the emergence of new stories and narratives about the nature of human society and our relationship with the Earth".<sup>6</sup> Studio is therefore a preliminary exploration into how this might be addressed.

Where design fiction, speculative design and foresight analysis are examples of practices exploring futures through unique disciplinary lenses with their own preferred methods, this work positions itself as building communities around thinking akin to Buckles stance on education as future building.<sup>7</sup> Given the visually and materially orientated nature of these practices, an inclusion of sonic perspectives to engage an embodied, immersive speculation is tentatively proposed by asking: how can the sonic support the design of alternative narratives in pursuit of socio-ecologically sustainable and just futures?

It is perhaps first useful to establish how various terms are used throughout. Cambridge Dictionary defines speculation as "the activity of guessing possible answers to a question without having enough information to be certain".<sup>8</sup> Imagination is defined as "the ability to form pictures in the mind" or "the ability to think of new ideas".<sup>9</sup> In this context, speculative and imaginative thought could be used almost interchangeably. There are however subtle distinctions despite occasional crossovers, particularly across disciplines. One might argue that in practice, speculation is informed by some form(s) of information, for example data in foresight analysis that results in design of new systems or policy. This is in contrast to imagination, which may be considered to be unconstrained by such information and therefore free to move beyond speculation. However, speculative design is perhaps one example where these assumptions may be contested given its thorough use of creative imagination as bedrock of the discipline. Therefore, in this workbook, speculation and imagination are presented adjacently save for specific contexts, such as that of speculative design or a socio-ecological imaginary, as follows.

The term 'imaginary' features prominently. This is in response to the concept of the 'social imaginary' that is linked here to narrative and design futures. Bottici presents a distinction between 'imagination', 'imaginary' and 'imaginal'.<sup>10</sup> She presents the 'imagination' as practice of the individual. In response to Arnason, the 'imaginary' is considered to be a context that is both informed by and so too informs the individual's imagination.<sup>11</sup> Ultimately, Bottici presents what she believes to be an antidote to this separation: the 'imaginal' as a social ontology which might be understood in the context of this work as the blurry in-between – a place of ontological distinction that exists beyond the metaphysical separation of the individual versus society dichotomy perceived by her in the two previous terms. Bottici does however later note, albeit briefly and with no elaboration as to why, that her discussion of the imaginary bears no resemblance to that of Charles Taylor's work on the subject,<sup>12</sup> which Buckles' 'Ecological Social Imaginary' builds on. Whilst this workbook, particularly the conference paper, supports the notion of moving beyond dualistic thought that has led to mind/body, nature/culture binaries and thus accepts the concept of Bottici's 'imaginal', the term 'imaginary' is still most prominently utilised as it relates to Buckle's work. He defines it as "the unstated and unarticulated but commonly accepted and reproduced ideas and practices that allow people to live together in a way that enables them to know, interpret and live in the world in a meaningful manner".<sup>13</sup> This choice is due to the relationship between ideas weaved throughout this workbook of narrative as it relates to the design of systems and culture.

This workbook begins with the presentation of three outputs: a conference paper abstract, a speculative listening soundwalk proposal and an article plus proposal for a second written as the result of participation as a visiting researcher at the Amsterdam based FIBER Reassemble Lab. I then present contextual positioning through the role of the sonic as it relates to the design of narrative, example projects and what is referred to here as 'the dark side of speculation'. The workbook concludes with discussion on various aspects of what has been presented before a short summary to end.

<sup>10</sup> Chiara Bottici, "Imagination, Imaginary, Imaginal: Towards a New Social Ontology?", *Social Epistemology* 33, no. 5 (2019): 433–41.

<sup>11</sup> Johann P. Arnason, "Reason, imagination, interpretation," in *Rethinking imagination*, eds Gillian Robinson, Rundell, John (London: Routledge, 1994): 155–170.

<sup>12</sup> Charles Taylor, *Modern Social Imaginaries* (North Carolina: Duke University Press, 2003).

<sup>13</sup> Buckles, *Education, Sustainability and the Ecological Social Imaginary: Connective Education and Global Change* (London: Palgrave Macmillan, 2018): 27.

OUTPUT	AUDIENCE	COLLABORATION	KEY IDEAS
SONIC REBELLIONS: SOUND AND SOCIAL JUSTICE CONFERENCE ABSTRACT	PAPER: ACADEMIC PRESENTATION: ACADEMIC / PUBLIC(S)	THEORY* (SECONDARY) PANEL DISCUSSION (PRIMARY)	SOCIO-ECOLOGICAL JUSTICE LISTENING-AS-CARE NARRATIVE
SPECULATIVE LISTENING SOUNDWALK	ACADEMIC	THEORY* (SECONDARY) PARTICIPANTS (PRIMARY)	DEEP LISTENING LISTENING-BEYOND-MATERIALITY RELATIONALITY
FIBER REASSEMBLE LAB: NATURAL INTELLIGENCE ESSAY	PUBLIC(S)	THEORY* (SECONDARY) WORKSHOPS (PRIMARY) ROUNDTABLES (PRIMARY)	LISTENING-AS-TECHNOLOGY ORAL HISTORIES ECOLOGICAL ETHICS

\*See 'A Note on Collaboration' in Discussion

# SONIC REBELLIONS: SOUND AND SOCIAL JUSTICE CONFERENCE ABSTRACT

<sup>14</sup> Buckles, *Education, Sustainability and the Ecological Social Imaginary: Connective Education and Global Change* (London: Palgrave Macmillan, 2018).

<sup>15</sup> Jana-Axinja Paschen, and Ray Ison, "Narrative Research in Climate Change Adaptation—Exploring a Complementary Paradigm for Research and Governance," *Research Policy* 43, no. 6 (2014).

<sup>12</sup> Kamila Pope, Michelle Bonatti, and Stefan Sieber, "The What, Who and How of Socio-Ecological Justice: Tailoring a New Justice Model for Earth System Law," *Earth System Governance* 10 (2021).

<sup>17</sup> Mimi Sheller, *Mobility Justice: The Politics of Movement in an Age of Extremes* (London: Verso Books, 2018).

<sup>18</sup> Peter Adey, "Emergency Mobilities," *Mobilities* 11, no. 1 (2016).

<sup>19</sup> "Sound Art Hannah," Hannah Kemp Welch, accessed February 1, 2022, <https://www.sound-art-hannah.com/right-to-record>.

<sup>20</sup> "Mikhail Karikis," Mikhail Karikis, accessed February 1, 2022, <http://www.mikhailkarikis.com/2020/07/22/ferocious-love/>.



Figure 1: Sonic Rebellions: Sound & Social Justice banner

The following abstract was accepted for the upcoming 'Sonic Rebellions: Sound and Social Justice' conference at the University of Brighton. The full paper will be presented in person on 28th May 2022 on a panel as part of conference proceedings under the sub-theme of 'listening':

### *Listening as Care: Sounding Towards a Socio-Ecological Justice*

*Listening and sounding play crucial roles as relational ways of knowing for all living systems. However, listening as care is often human-centred within existing contexts of social justice. Exploring collective relations and entanglements beyond the anthropic enables the pursuit of socio-ecologically equitable futures. This paper asks how might we utilise the intimate, embodied perspectives and practices provided by the sonic to extend social justice conceptualisations. We can explore how care is currently exercised through listening and sounding by considering historical and present examples from political dimensions to welfare concerns. The paper then speculates on how we might expand the notion of social justice to become a socio-ecological justice where 'listening as care' encompasses intersectional sustainability discourses for just futures.*

Language is important in shaping perceptions and our ability to articulate alternative imaginaries.<sup>14</sup> How we define and conceptualise ideas ultimately contribute towards the development of narratives.<sup>15</sup> Within the wider context of Studio, this paper serves as an example of narrative expansion through theoretical enquiry. Seeking to deepen existing definitions of social justice to become a socio-ecological justice is aided here by sonic perspectives and practices. In challenging what we currently conceive as social justice to include the ecological, the nature/culture binaries and separations of humans as 'other' to our environment have the potential to be dissolved. Beyond the philosophical and utopian ideals of this notion, this has the potential to affect policy including legal protection for human and more-than-human species. Examples of these connections can be found in cases where Earth is given rights<sup>16</sup> and issues of mobility justice where climate concerns are acute.<sup>17</sup> <sup>18</sup> The paper will also incorporate examples from my workbook in the Radical Modes of Design Culture and Practice module such as Hannah Kemp Welch's 'Right to Record' campaign<sup>19</sup> and Mikhail Karikis' 'Ferocious Love',<sup>20</sup> demonstrating listening-as-care in action.



Definitions of socio-ecological justice have already been thoroughly explored by many, sometimes also framed as climate justice or environmental justice, therefore this paper does not seek to provide its own definition or dwell on linguistics. Instead, by speculating on how listening and sounding may provide embodied, alternative insights to aid in narrative shifts towards a socio-ecological justice, this paper speaks to their broader potential as methods in addressing wider pervasive and destructive cultural narratives that underpin the design of systemic structures. The concept of a 'socio-ecological justice' contributes to the notion of a 'socio-ecological imaginary' explored throughout Studio, also posited by Jeff Buckles as the 'Ecological Social Imaginary'<sup>21</sup> and is deliberately chosen in keeping with the conference's theme of social justice.

On the value of utilising writing to explore sonic perspectives, Voegelin contemplates writing as a soundscape composition where "it works from listening... not to theorize the heard but to generate its possibilities"<sup>22</sup> that make heard the "acoustic realities of diverse subjectivities, marginality and migration".<sup>23</sup> The purpose of this paper then aims to "practice a writing that comes from listening and works toward a sonic sensibility that renews and pluralizes philosophy and epistemology",<sup>24</sup> which in the wider context of Studio might "craft narratives that theorize and produce new knowledge through listening practices".<sup>25</sup>

The presentation of this paper will take place alongside PhD researcher Bethan Prosser whose doctoral work explores connections between listening and gentrification. Once individual presentations have taken place, discussion will then ensue reflecting on our work led by the panel chair. Here, the panel and wider conference can be conceived as ideation spaces where research is shared and built upon collectively in an environment that facilitates and enables such discussion both during and post event.

As noted later in the discussion section, the target audience for this paper and presentation are primarily those in an academic context; in this case specifically those interested in sound. Whilst this has benefits in that it promotes networking and potential future collaborations, it also risks remaining in the confines of the ivory tower speaking only to those to whom it is already relevant. By opening this conference up to wider publics via the Brighton Fringe, the potential to connect with a broader audience is presented, though how successful this will be remains to be seen.

<sup>21</sup> Buckles, *Education, Sustainability and the Ecological Social Imaginary: Connective Education and Global Change* (London: Palgrave Macmillan, 2018).

<sup>22</sup> Salomé Voegelin, *Sonic Possible Worlds: Hearing the continuum of sound* (New York: Bloomsbury Publishing, 2014), 14.

<sup>23</sup> Voegelin, *Sonic Possible Worlds: Hearing the continuum of sound* (New York: Bloomsbury Publishing, 2014), 13.

<sup>24</sup> Voegelin, *Sonic Possible Worlds: Hearing the continuum of sound* (New York: Bloomsbury Publishing, 2014), 2.

<sup>25</sup> Pedro J. S. Vieira de Oliveira, "Design at the Earview: Decolonizing Speculative Design through Sonic Fiction," *Design Issues* 32, no. 2 (2016): 51.

# SPECULATIVE LISTENING SOUND WALK

<sup>26</sup> Brona Martin, "Soundscape Composition: Enhancing Our Understanding of Changing Soundscapes," *Organised Sound* 23, 1 (2018): 24, accessed April 20, 2022. <https://doi.org/10.1017/S1355771817000243>.

<sup>27</sup> Voegelin, *Sonic Possible Worlds: Hearing the continuum of sound* (New York: Bloomsbury Publishing, 2014), 3.

<sup>28</sup> John L. Drever, "Listening as Methodological Tool: Sounding Soundwalking Methods," in *The Bloomsbury Handbook of Sonic Methodologies*, edited by Michael Bull, and Marcel Cobussen (USA: Bloomsbury Publishing, 2020).

<sup>29</sup> Pauline Oliveros, *Deep Listening: A Composer's Sound Practice* (Lincoln: IUniverse, 2005).

<sup>30</sup> Ana Hofman, "The romance with affect: sonic politics in a time of political exhaustion," *Culture, Theory and Critique* 61, (2020).

<sup>31</sup> Voegelin, *Sonic Possible Worlds: Hearing the continuum of sound* (New York: Bloomsbury Publishing, 2014), 10.

<sup>32</sup> Voegelin, *Sonic Possible Worlds: Hearing the continuum of sound* (New York: Bloomsbury Publishing, 2014), 10.

<sup>33</sup> Petra Tschakert, "More-Than-Human Solidarity and Multispecies Justice in the Climate Crisis," *Environmental Politics* 31, no. 2 (2022): 291.

<sup>34</sup> Ranulph Glanville, "Researching Design and Designing Research," *Design Issues* 15, no. 2 (1999): 88, accessed April 20, 2022, <http://www.jstor.org/stable/1511844>.

I have been invited to propose leading a sound walk for the University of Brighton school of Architecture, Technology and Engineering in response to comments to SSGT Justine Devenney that bridging activities between courses are desired to alleviate isolation and facilitate connection, particularly amongst postgraduates within the school. Whilst this has been proposed on the premise of primarily supporting wellbeing, it might perhaps also serve as an interesting opportunity to engage participants in alternative ways to consider their scholarly practice whilst simultaneously supporting their wellbeing and encouraging interdisciplinary connections across the various courses. This opportunity builds upon my freelance work outside university for ECHOES – a platform for making immersive, interactive audio walks through geolocate audio technology.

Soundwalking is a methodology that dynamically engages other qualitative methodologies explored in Studio. Martin states that soundwalking "initiates a dialogue between researchers and the community, providing a variety of localised perspectives which can help researchers understand how sound influences our perception of place".<sup>26</sup> We might then consider "listening as a generative and participatory practice".<sup>27</sup> Engagement through active listening provides space for both internal and external contemplation, with the wellbeing aspects of sound having been widely documented.<sup>28</sup> The Deep Listening practices of Pauline Oliveros<sup>29</sup> introduced in Future(s) embody the mediative and sensorial connections that listening affords us – both aurally and through corporeally sensed vibration. Engagement and benefits resulting from soundwalking are however contingent on factors such as individual reciprocity, raising questions as to its assumed effectiveness.

## *Listening Beyond Materiality*

This walk could also serve as opportunity to put into practice the concept of 'speculative listening' explored in the Future(s) module and thus serve as continued development of this work. A speculative listening towards a socio-ecological imaginary might be engaged here. How might we experience multi-species conversation? Listening is relational.<sup>30</sup> How does this, if at all, alter our perceptions if we utilise listening to access lifeforms beyond their materiality? How can we use listening to consider materials in a different way? Voegelin states that "listening affords us a different sense of the world and of ourselves living in this world; it affords a different relationship to time and space, objects and subjects and the way we live among them".<sup>31</sup> She continues: "It gives us access to what is there if we look past the object into the complex plurality of its production; and it shows us the world through relationships and processes".<sup>32</sup>

This walk is not presented as an activity whereby participants would be dictated to as to how to listen and how they should consider their own experience, but instead guided through prompts. As with the rest of my work, the subjective experience is given full permission to exist as vital to the collective. Tschakert reflects that "we may seek inspiration in... stories, from urban and rural experiments to transformative arts and activism, that move us beyond our many biases and limitations to allow us to imagine and prefigure relational flourishing in our shared world".<sup>33</sup> In the same way Glanville states that he characterises "design as a conversation, usually held via a medium such a paper and pencil, with an other... as the conversational partner",<sup>34</sup> listening invites a conversation between self and environment. This opens space to deepen relationality that impacts conceptions of design. Therefore, despite being the facilitator of the soundwalk, it can also be understood as collaboration with participants whereby listening is presented as a medium for interpretation, shared and built upon through group reflections.

It should be noted that this walk is not a research output derived specifically for Studio and will take place regardless. As this will likely be far past the Studio deadline, we are still developing exact details of the proposal and so they will not be presented here where it remains a propositional output. The concept is nonetheless included as an example of the value of listening and soundwalks as relevant to my work in practice, as I have touched upon in previous modules. However, for a brief overview of what this might entail: we will begin with some deep listening exercises to tune into the aural sense. Participants will then be guided along a mapped out route where we will periodically pause and engage with listening prompts at each chosen location to reflect upon. Consideration of varied mobility requirements and aural diversities<sup>35</sup> will be taken into account when confirming details. Another option might be to prompt participants to create their own sound map by whatever medium they prefer, similar to the activity at The Sensory Trust. Participants would respond to their chosen location and create a 360 degree map based on the sounds they hear in various directions.

<sup>35</sup> John Drever, "'Primacy of the Ear' – but Whose Ear?: The Case for Aural-diversity in Sonic Arts Practice and Discourse," *Organised Sound* 24 (2019), accessed February 1, 2022, <https://doi.org/10.1017/S1355771819000086>.

# FIBER REASSEMBLE LAB: NATURAL INTELLIGENCE ESSAY

<sup>36</sup> <https://etherpad.org>, accessed April 20, 2022.

<sup>37</sup> "The Guardian," Jonathan Watts, accessed March 28, 2022, <https://www.theguardian.com/environment/2019/mar/12/resource-extraction-carbon-emissions-biodiversity-loss>.

<sup>38</sup> Daniel Voskoboynik, and Diego Andreucci, "Greening Extractivism: Environmental Discourses and Resource Governance in the 'Lithium Triangle,'" *Environment and Planning E: Nature and Space* (April 8, 2021), <https://doi.org/10.1177/25148486211006345>.

<sup>39</sup> Pauline Oliveros, "The Earth Worm Also Sings: A Composer's Practice of Deep Listening," *Leonardo Music Journal* 3 (1993), accessed April 20, 2022.

<sup>40</sup> Donna J. Haraway, *Staying with the Trouble: Making Kin in the Chthulucene* (North Carolina, United States: Duke University Press, 2016).

<sup>41</sup> Donna J. Haraway, *When Species Meet* (Minnesota, United States: University of Minnesota Press, 2008).

<sup>42</sup> Jonathan Sterne, "Hearing," in *Keywords in Sound*, eds David Novak, Saka-keeney, Matt (North Carolina: Duke University Press, 2015).

<sup>43</sup> Kiri Dell, "Rongomatau – 'sensing the knowing': An Indigenous Methodology Utilising Sensed Knowledge From the Researcher," *International Journal of Qualitative Methods* 20 (2021): 6.



Figure 2: Natural Intelligence banner

FIBER's Reassemble Lab is an Amsterdam based initiative facilitated by academic and artistic practitioners. The third lab in the series, 'Natural Intelligence: Towards Renewable and Regenerative Digital Infrastructures' explored ecological impacts of internet infrastructures and speculated on online futures. Presentations, workshops and collaborative discussions fell under the four themes of the lab: Energy Literacy, Everyday Technologies, Collective Infrastructures and Fossil-Free Imaginaries. Researchers invited to participate in and observe the lab were tasked with disseminating the proceedings for the wider public in articles for Medium. Reflecting on the lab through the lens of our own research, this created a space for unique, multidisciplinary perspectives and responses to the themes. Time was allocated for project collaborations and roundtable discussions were actively encouraged. Varia Pad, the software being used to collect and reflect ideas over the lab, is an open source tool for collective note taking hosted by Etherpad which "allows you to edit documents collaboratively in real-time".<sup>36</sup> Created by the Varia Collective, the Rotterdam based group is concerned with accessibility of everyday technologies, favouring open source and low-tech design approaches.

The following article discussed here (full article attached separately; scheduled to be published on FIBER's Medium after Studio submission) responds especially to the themes of 'Collective Infrastructures' and 'Fossil-Free Imaginaries', though overlapping questions from 'Energy Literacy' and 'Everyday Technologies' are present throughout.

## ***Listening as Non-Extractive Technology***

This first piece is a more philosophical interrogation on how we define technology. Pondering on listening as non-extractive technology, sonic perspectives are used to reflect upon broader questions of how we define 'natural intelligence' in alignment with the lab's core theme. Building upon the previously proposed speculative listening soundwalk's considerations of lifeforms beyond materiality, this piece deepens that stance through challenges to the extractivism exhibited by existing digital infrastructures that are fuelling climate breakdown.<sup>37 38</sup>

Through tracing oral histories as community archiving to stories as data, the embodied and sensorial knowledge afforded by listening both aurally and via the body is explored with support from the ideas and words of Pauline Oliveros,<sup>39</sup> Donna Haraway<sup>40 41</sup> and Jonathan Sterne.<sup>42</sup> Importantly and as noted in the introductory paragraph to the piece: in times of urgent crises such as we are living in today, listening is not presented here as a solution to low-tech advances, but as a speculative lens through which we might give space to alternative capacities of thinking and doing. This piece takes a strong metaphorical stance at times. This is intentionally so, as in line with some Indigenous tradition where Dell states that "metaphorical thinking is the unexpected linking and unification of ideas not previously joined, and the ability to see resemblances and/or make comparisons between two apparently dissimilar objects or qualities. Metaphors form a common and natural part of Maori discussion and thought".<sup>43</sup>

Also briefly reflected upon in this piece is the ‘digital discomfort’ roundtable – a collective endeavour enabling collaborative discussion and synthesis of ideas in collecting thoughts on the dedicated Varia Pad. Featuring myself and six other researchers, presenters and participants from the lab, we took the wide ranging theme of ‘digital discomfort’ and interrogated the various aspects of what this might entail. Figure 3 is a snapshot of part of the pad and the notes collectively recorded.

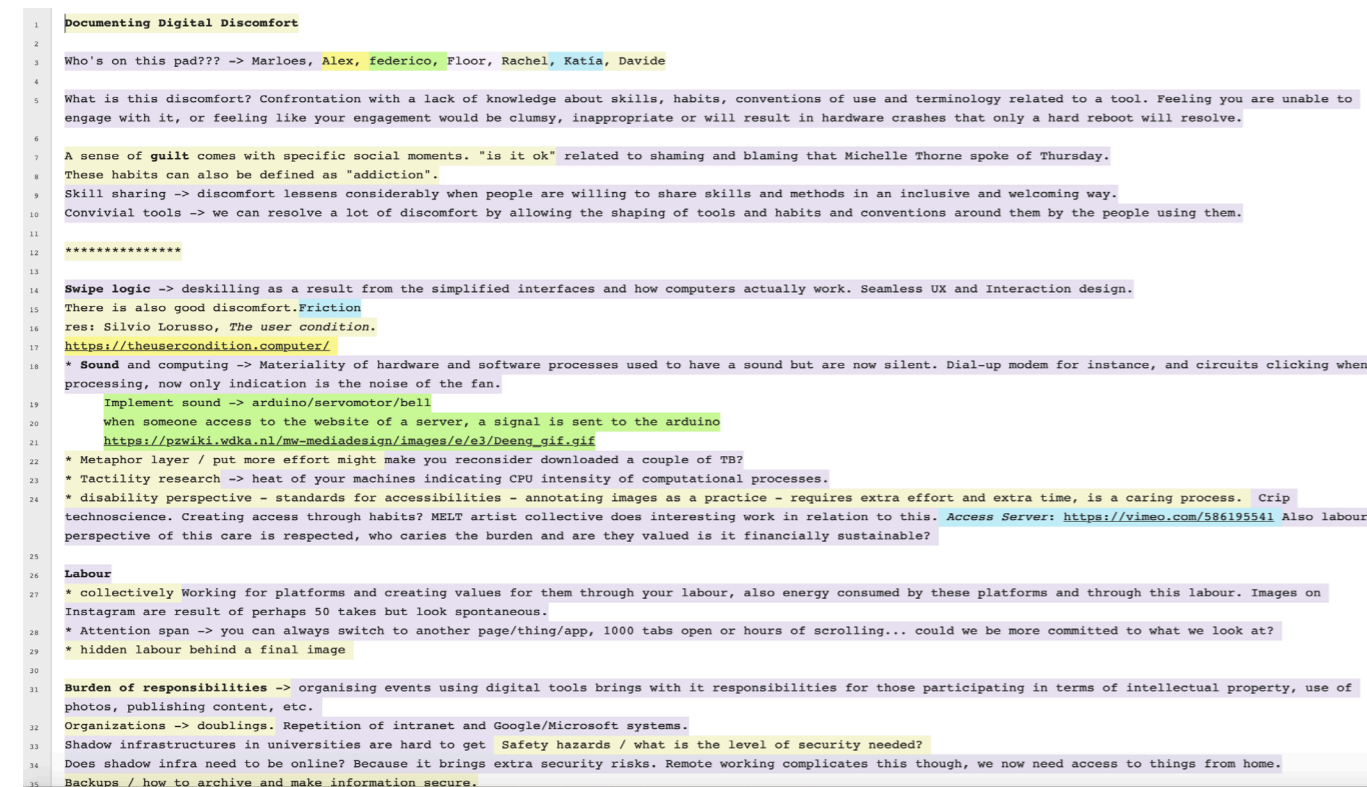


Figure 3: Screenshot of Digital Discomfort Varia Pad notes, authors own.

The discussions were engaging and thought provoking, with reflections and contribution from each of us in response to another pushing the boundaries of every point. I found involvement in this roundtable to be one of the most rewarding experiences of the lab. It established my belief in the importance of creating these spaces for collaborative thought experiments and speculation, as is advocated for in Studio as grounds for alternative ways of thinking and being that enable alternative ways of doing. I contributed discussion on sound and computing; sonic perspectives of the aforementioned oral histories; prioritisation of medical back ups with regards to archiving where data hoarding is an energy concern; accessibility considerations of more climate aware low-tech ‘solutions’ for the disabled, elderly and socio-economically disadvantaged; discussion on slowness and letting go amongst other talking points in response to further ideas posed. Whilst parts of the discussion may have been individually initiated such as with the previous points, the collaborative nature of the roundtable ensured a non-hierarchical space where conversation and ideas flowed in tandem. No ownership was taken over the resulting direction, encouraging an open space where ideas had permission to extend to wherever felt natural. With the variety of our backgrounds and experience, a rich, tentacular conversation led to a range of perspectives contributed, further establishing the value of such transdisciplinary approaches to ideation. Here and as with the panel discussion in the first output and prompt reflections in the second, conversation may be perceived as collaboration. There is intention to continue this roundtable to see what more may develop from discussions and how ideas might be realised through active projects.

<sup>44</sup> <http://situationlab.org/project/the-thing-from-the-future/>, accessed April 20, 2022.

<sup>45</sup> Isaijah Johnson, ““Solarpunk” & the pedagogical value of utopia,” *Journal of Sustainability Education* Vol. 23 (2020): 3.

<sup>46</sup> Kate Soper, *Post-Growth Living: For an Alternative Hedonism* (London: Verso Books, 2020), 11.

<sup>47</sup> Fredric Jameson, *Archaeologies of the Future: The Desire Called Utopia and Other Science Fictions* (London: Verso Books, 2007), 199.

<sup>48</sup> Donna J. Haraway, *Staying with the Trouble: Making Kin in the Chthulucene* (North Carolina, United States: Duke University Press, 2016).

<sup>49</sup> Sam Holleran, “Putting the Brakes on Dystopia: Speculative Design, Solarpunk, and Visual Tools for Positing Positive,” (2019): 2.

<sup>50</sup> Bruce M. Tharp, Stephanie M. Tharp, Ken Friedman, and Erik Stolterman, *Discursive Design: Critical, Speculative, and Alternative Things* (Cambridge, MA: MIT Press, 2018), 318.

### ***Sounding Out a Solar Punk Future***

The second piece will be written and published post Studio in accordance with FIBER’s timeline and will therefore be presented in the Master module. It will speak to the worldbuilding possibilities of speculative design, Solarpunk and the sonic with further reflections on the concepts of degrowth, seasonality, intermittence and ‘natural intelligence’ from conversations and workshops in the lab. I will begin with reflection on Lisette van Beek’s presentation and involvement in cross-institutional initiative ‘Climaginaries’ and other projects discussed. Climaginaries emphasises the social and cultural importance of this process; various publications have been produced alongside ongoing outputs that include exhibitions, soundwalks and future fictions workshops. At the end of her presentation, van Beek introduced us to Stuart Candy’s ‘The Thing From the Future’ from Situation Lab – an imaginative scenario game that “challenges players to collaboratively and competitively describe objects from a range of alternative futures”.<sup>44</sup> In a group of seven, we responded to prompts to collectively envision what our future scenario may entail, though this was not done ‘competitively’.

Michelle Lobo and Roel Roscam Abbing gave presentations introducing applied concepts of Solarpunk and degrowth respectively. In the context of Studio, Solarpunk might be understood as one version of a socio-ecological imaginary, presented as an aesthetic movement incorporating degrowth principles that can collectively be explored through speculative design. Johnson posits that Solarpunk is not necessarily a ‘low-tech’ movement, instead rejecting “technologies which are not in harmony with the environment”.<sup>45</sup> However, these technologies will “prove essential tools for ecological renewal, but only if they go together with a cultural revolution in thinking about prosperity, and the abandonment of growth-driven consumerism”.<sup>46</sup> Connecting movements such as Solarpunk and degrowth with approaches in speculative design and sonic narratives for socio-cultural shifts towards socio-ecologically just infrastructures will be explored in the essay in keeping with the lab’s theme of ‘natural intelligence’.

“Someone once said that it is easier to imagine the end of the world than to imagine the end of capitalism”.<sup>47</sup> This infamous quote paints a stark challenge to those attempting to address the latter. So deeply entrenched are Western systems and ideals that it will require deep untangling, an unbecoming<sup>48</sup> on the socio-cultural level in the Global North as much as the political and economic pragmatics of a socio-ecologically just transition. Whilst the latest IPCC report mentions degrowth, the included scenarios are still seemingly representative of a growth economy. This is an example of where ideas presented here in Studio become necessary to imagine viable alternative paradigms where “the difficulty is not in the technological re-tooling but in the societal reworking necessary to make a carbon-free future viable”.<sup>49</sup> If “good discursive design is work that impacts the mind as a precursor for preferred action or improves awareness and understanding in preparation for what the future holds or could be made to hold”,<sup>50</sup> then envisioning a socio-ecological imaginary, in this case inclusive of Solarpunk and degrowth values, enables understanding of what this may entail through fictional scenarios.



Figure 4: Hopepunk and Solarpunk: On Climate Narratives That Go Beyond the Apocalypse<sup>51</sup>

Crucially, this will not be an investigation into the details of Solarpunk. It will be an assessment of Solarpunk as an example movement and how that can be powerful in building community around ideals and aesthetics where “if we want to shift stories, we need to start thinking of them as technologies”.<sup>52</sup> Here, Solarpunk will instead be considered as a critical lens. Perhaps the value of Solarpunk then is in the concepts explored, framing the movement as a process as opposed to a tangible, utopian genre-led outcome. It is a space of imagination to interrogate the ideals expressed in the movement and how they may be contextualised and applied in realtime.

Reflecting on what has been briefly presented here, a potential future output might be that of a ‘Sound Artefact From the Future: Design Fiction Scenario’. Using sound as a means through which to instigate enquiry that can “generate futures that act as catalysts for public debate and discussion about the kinds of futures people really want”,<sup>53</sup> this might be manifested as a workshop or an audio experience similar to Moral Imagination’s ‘The Impossible Train Story’. This is inspired partly by participation in Julian Bleeker’s General Seminar workshop where as a group, we responded to design fiction prompts relating to a Solarpunk future and engaged in collaborative speculation of what this future scenario may entail, building our worlds through conversation. This suggestion would also provide an opportunity to extend design fiction methods to include a more multi-sensory approach, in this case through the sonic where “extracting generative and speculative theories from sound and its narratives—might contribute to an approach that begins with listening practices rather than with designed objects”.<sup>54</sup>

<sup>51</sup> *Hopepunk and Solarpunk: On Climate Narratives That Go Beyond the Apocalypse*, 2019, screenshot, <https://lithub.com/hopepunk-and-solarpunk-on-climate-narratives-that-go-beyond-the-apocalypse/>.

<sup>52</sup> Dan Burgess, “Stories for Life: What if stories are technologies for beautiful change?,” in *The Spaceship Earth Podcast*, November 21, 2021, podcast, 60.59, <https://www.thespaceship.earth/podcast/2021/11/22/episode-54-stories-for-life-what-if-stories-are-technologies-for-beautiful-change>.

<sup>53</sup> Anthony Dunne and Fiona Raby, *Speculative Everything: Design, Fiction, and Social Dreaming* (Cambridge, MA: MIT press, 2013), 6.

<sup>54</sup> Pedro J. S. Vieira de Oliveira, “Design at the Earview: Decolonizing Speculative Design through Sonic Fiction,” *Design Issues* 32, no. 2 (2016): 52.

<sup>55</sup> *The Fifth Sacred Thing*, 2022, screenshot, <https://jessicaperlstein.com/collections/artwork/products/the-fifth-sacred-thing-1>.



Figure 5: The Fifth Sacred Thing<sup>55</sup>

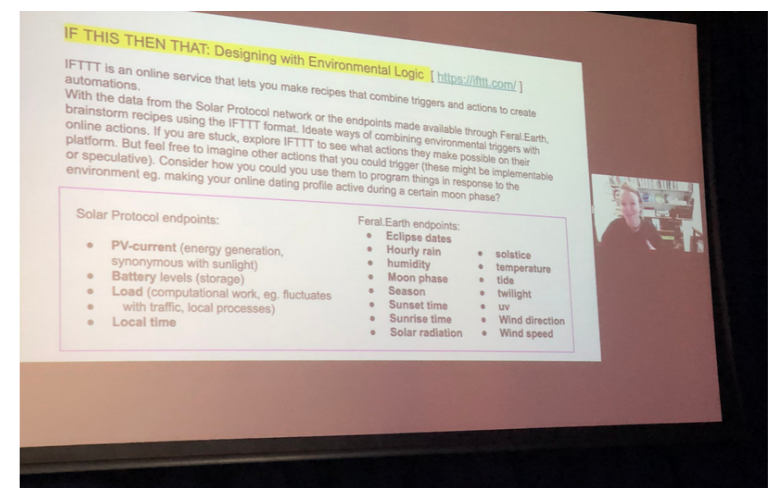
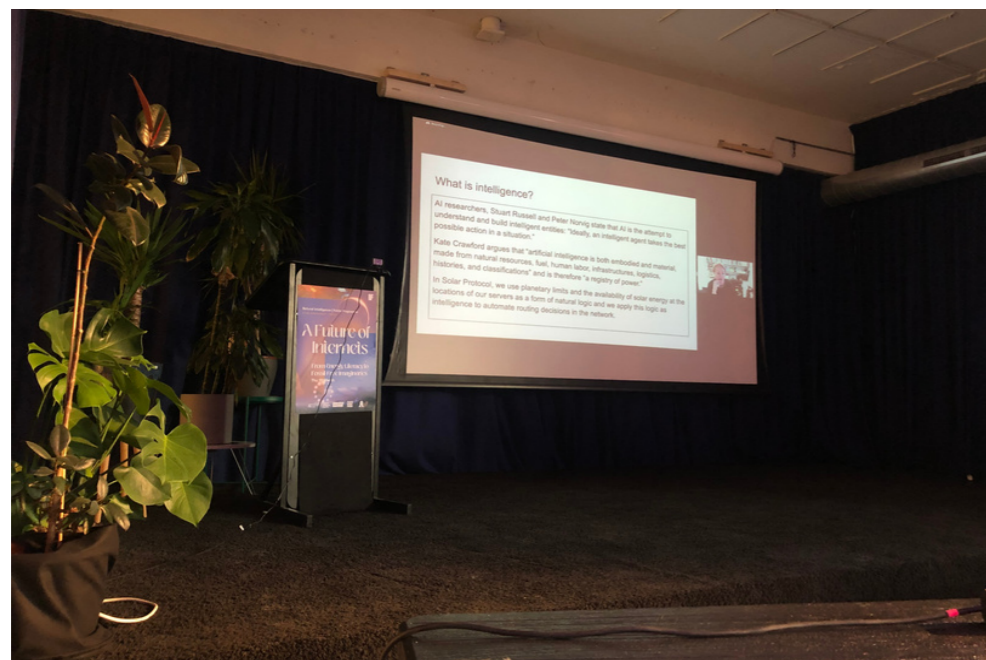
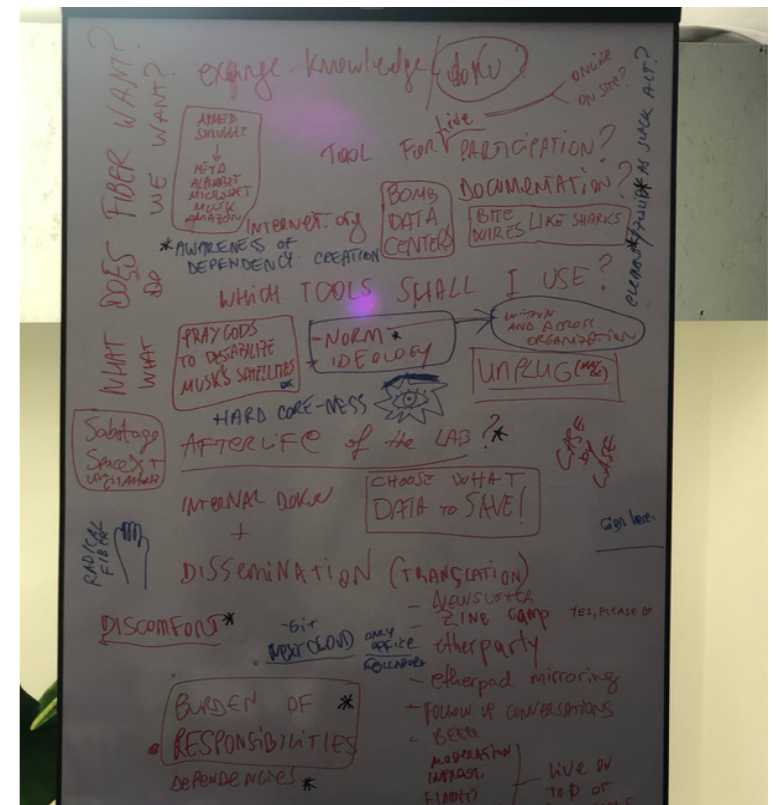
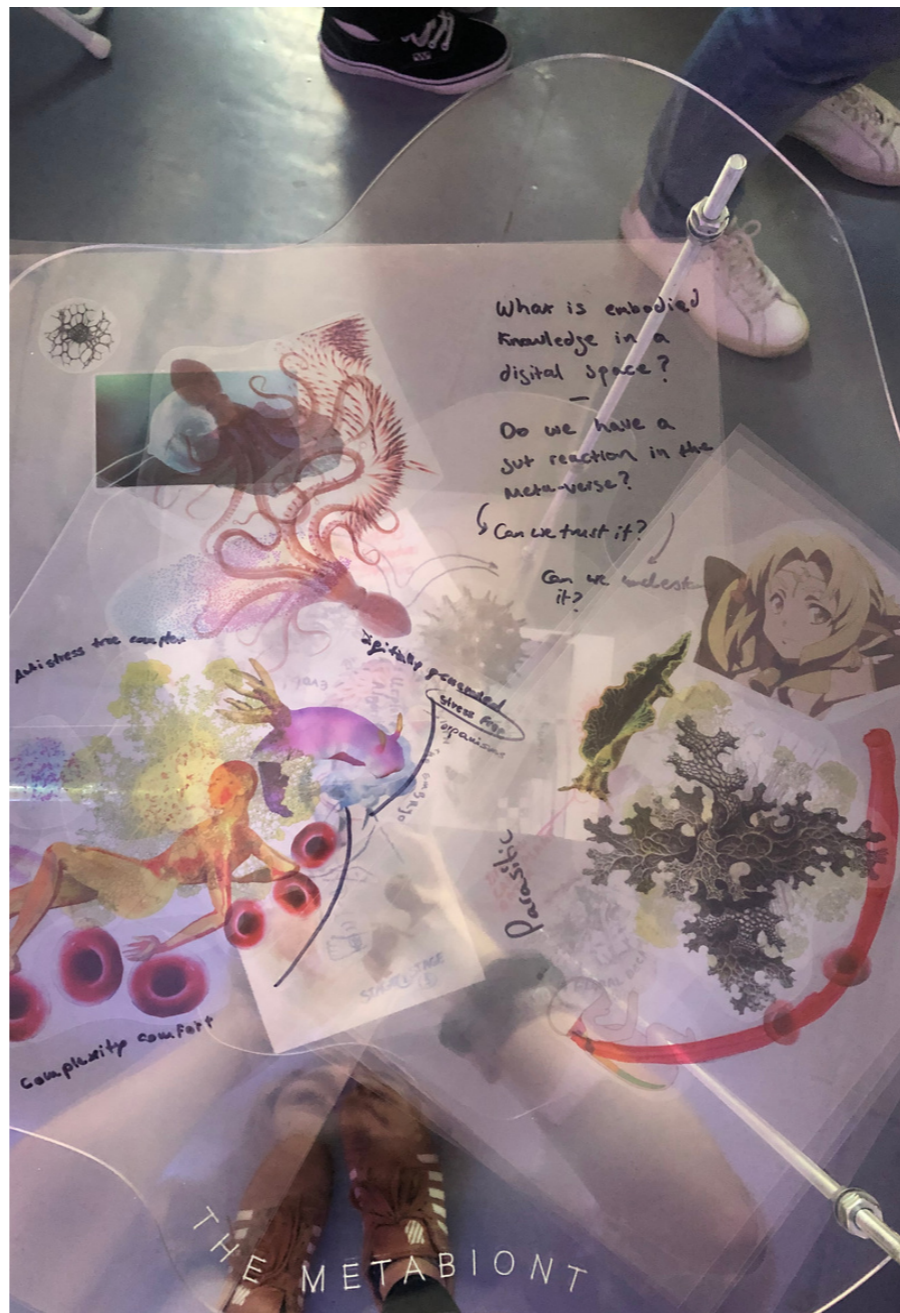
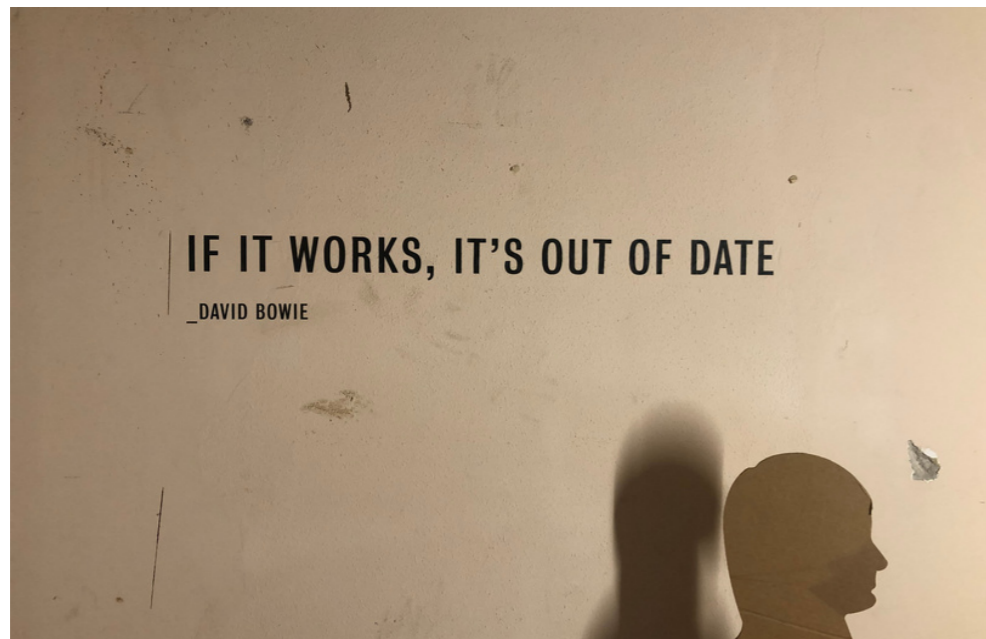


Figure 6: Photos taken at Natural Intelligence Lab, authors own.



# SONIC NARRATIVES

<sup>56</sup> “One Commune,” Sophie Strand, accessed April 20, 2022, <https://www.one-commune.com/blog/commusings-story-telling-is-an-emergency-sophie-strand>.

<sup>57</sup> Donna Haraway, “It Matters What Stories Tell Stories; It Matters Whose Stories Tell Stories.” *a/b: Auto/Biography Studies* 34, no. 3 (2019): 568, <https://doi.org/10.1080/08989575.2019.1664163>.

<sup>58</sup> Vieira de Oliveira, “Design at the Earview: Decolonizing Speculative Design through Sonic Fiction,” *Design Issues* 32, no. 2 (2016): 44.

<sup>59</sup> Kodwo Eshun, *More Brilliant Than the Sun: Adventures in Sonic Fiction* (London: Verso, 2018), 00[–004].

<sup>60</sup> Vieira de Oliveira, “Design at the Earview: Decolonizing Speculative Design through Sonic Fiction,” *Design Issues* 32, no. 2 (2016): 52.

This section further considers the breadth and potential of sonic narratives that has so far been presented through written outputs exploring conceptions of social justice, soundwalking, listening as non-extractive technology and the movements of Solarpunk and de-growth.

Sophie Strand comments that she has “begun to look at the increasingly unpredictable behaviour of climate systems as storytelling. Storytelling that happens on scale, both temporal and spatial, that does not subscribe to anthropocentric paradigms. Storytelling that uses forest fires as verbs, melting glaciers as protagonists, rising temperatures as narrative propulsion”.<sup>56</sup> This demonstrates the power of diversifying approaches from which we tell and conceive of stories, which Strand’s breadth of writing poetically exemplifies interweaving her own ecofeminist, disabled perspective.

As noted in the Sonic Rebellions: Sound and Social Justice output, language is important. Where human stories are often told through words, might we also consider how narrative is communicated beyond linguistics? Haraway speaks to the power of the Coral Reef Crochet project: “The abstractions of the mathematics of crocheting are a lure to an affective cognitive ecology stitched in fiber arts. The crochet reef is a practice of caring without the need to touch by camera or hand in yet another exotic voyage of discovery”.<sup>57</sup> Referring to earlier definitions of the imagination as aligned with images of the mind, what of other sensory information that informs our sense of imagination? The potential of speculative design in imagining alternative futures and collective narratives for systemic change may be well aided by the sonic, should it endeavour to include a multi-sensory approach that it arguably lacks at present. This is where the “intersection between SCD and sound studies is still just beginning to be explored, with only a few practitioners attending to how sound and listening give strong signals about possible futures”.<sup>58</sup>

The concept of ‘sonic narrative’ is ideally presented in Kodwo Eshun’s ‘sonic fictions’ that encapsulate the potential of sonic worldbuilding in his widely renowned “More Brilliant Than the Sun”, which he states “lingers lovingly inside a single remix, explores the psychoacoustic fictional spaces of interludes and intros, goes to extremes to extrude the illogic other studies flee”.<sup>59</sup> More Brilliant Than the Sun explores Afro-diasporic works, leading Oliveira to comment on the decolonial potential of this method: “sonic fictions give a helping hand to SCD by offering new ways of depicting futures that ask deep political questions—the ones that relate to sound— and they do so by inviting the decolonial SCD researcher to explore the poetics unveiled by sonic practices and to use them in their design language”.<sup>60</sup> One musical example that could be considered as sonic fiction is ‘Spanish Castles in Space’ by The Orb. This fifteen minute sonic journey inhabits entirely new sonic spaces through pairing unlikely sounds like that of sheep, Russian spoken word on a backdrop of synthesisers and a reimagined sampling of jazz piece “Spartacus Love Theme” to create its own unique sound world. The combined strangeness of these sonic elements make them evocative of a place unknown yet one that you can place yourself in through the listening, emphasising the potential of sound to create speculative spaces that might be utilised in design.

Acoustic ecologist Bernie Krause ponders that “within soundscapes are manifold narratives – encoded stories that expose long-held secrets”,<sup>61</sup> further pushing the boundaries of how we conceive of narrative similar to Strand. In the same way that design artefacts or literary fictions are used to facilitate speculation, sound is positioned here as a sonic facilitator rather than the ‘design’ itself. You are able to inhabit these sound worlds through the spaces they create. Perhaps we sometimes need the intangible to be able to imagine and realise the tangible. Sonic perspectives and practices are an ideal way in through their ephemerality where sound allows for ambiguity. Morton calls for this where “ecological beings such as lifeforms and global warming require *modal* and *paraconsistent* logics” that “allow for some degree of ambiguity and flexibility”.<sup>62</sup>

Voegelin “debates possible world theory as a strategy to access and compare sound as acoustic environments, as sonic worlds, while inhabiting them in phenomenological reciprocity”.<sup>63</sup> Tracing both examples of works such as by acclaimed soundscape recordist Chris Watson interwoven with her own philosophical reflections, Voegelin presents these sound worlds as spatio-temporal domains unto themselves. On the potential of listening, she claims it “offers another point of view, an alternative perspective on how things are, producing new ideas on how they could be and how we could live in a sonic possible world, and how we could include sound’s invisible formlessness in a current realization and valuation of what we understand to be the actual world”.<sup>64</sup> How then might sonic possible worlds contribute to alternative perspectives in design when working towards pluriversal<sup>65</sup> socio-ecological imaginaries?

There is however a potential for sonic naturalism<sup>66</sup> to persist in the construction of sound worlds. According to Jaggi, the “utopian image of the Anthropocene is the human silently listening to a rich and unspoiled environment of sound”.<sup>67</sup> Whose utopia is Jaggi speaking to and with what consideration of contextual implications? Unspoiled to whom? Jaggi’s ‘Ecological Model of Sound’ follows Schafer<sup>68</sup> in persisting with nature/ culture binaries, though she does later briefly consider a reframing of this model due to these dichotomies. Pink’s study detailed responses of people that actually expressed preference towards urban soundscapes.<sup>69</sup> This is not to disagree with the notion that aspects of anthropogenic ‘noise’ can be negatively perceived; the wellbeing benefits of listening to birdsong for example have been well documented.<sup>70 71</sup> This is to remain cautious of purist assumptions that have potential ramifications in the design of both narrative and beyond.

Jaggi goes on to reference ideas of a post-anthropocene sonosphere imagined sans a human population. What this contributes to environmental discourse is questionable. The late bell hooks offered that “to be truly visionary we have to root our imagination in our concrete reality while simultaneously imagining possibilities beyond that reality”.<sup>72</sup> We cannot avoid the concrete reality of human presence, so to sound an imagined world without arguably warrants little progress towards the (re)design of socio-ecologically destructive systems.

<sup>61</sup> Bernie Krause, *The Great Animal Orchestra: Finding the Origins of Music in the World’s Wild Places* (London: Hachette, 2012), 88.

<sup>62</sup> Timothy Morton, *All Art is Ecological* (London: Penguin, 2021), 25.

<sup>63</sup> Voegelin, *Sonic Possible Worlds: Hearing the continuum of sound* (New York: Bloomsbury Publishing, 2014), 6.

<sup>64</sup> Voegelin, *Sonic Possible Worlds: Hearing the continuum of sound* (New York: Bloomsbury Publishing, 2014), 2–3.

<sup>65</sup> Arturo Escobar, *Designs for the Pluriverse* (North Carolina: Duke University Press, 2018).

<sup>66</sup> Annie Goh, “Sounding situated knowledges: echo in archaeoacoustics,” *Parallax* 23, no. 3 (2017).

<sup>67</sup> Patricia Jaggi, “Listening to Reveries: Sounds of a Post-Anthropocene Ecology,” *Fusion Journal*, no. 19 (2021): 93.

<sup>68</sup> R. Murray Schafer, *The Soundscape: Our Sonic Environment and the Tuning of the World* (Rochester, VT: Destiny, 1993).

<sup>69</sup> Sarah Pink et al, “Recycling Traffic Noise: Transforming Sonic Automobilities for Revalue and Well Being,” *Mobilities* 14, no. 2 (2019): accessed April 20, 2022, <https://doi.org/10.1080/17450101.2018.1548882>.

<sup>70</sup> Danielle M. Ferraro, Zachary D Miller, Lauren A Ferguson, B Derrick Taff, Jesse R Barber, Peter Newman, and Clinton D Francis, “The Phantom Chorus: Birdsong Boosts Human Well-Being in Protected Areas,” *Proceedings of the Royal Society B* 287, no. 1941 (2020), <https://doi.org/10.1098/rspb.2020.1811>.

<sup>71</sup> R. Murray Schafer, *The Soundscape: Our Sonic Environment and the Tuning of the World* (Rochester, VT: Destiny, 1993).

<sup>72</sup> bell hooks, *Feminism Is for Everybody: Passionate Politics* (Lanham: Pluto Press, 2000), 110.

<sup>73</sup> Jonathan Gilmurray, "Ecology and Environmentalism in Contemporary Sound Art," (PhD diss., University of the Arts London, 2018).

<sup>74</sup> Morton, *All Art is Ecological* (London: Penguin, 2021), 67.

<sup>75</sup> Morton, *All Art is Ecological* (London: Penguin, 2021), 65.

<sup>75</sup> Voegelin, *Sonic Possible Worlds: Hearing the continuum of sound* (New York: Bloomsbury Publishing, 2014), 13.

<sup>77</sup> Aaron S. Allen, "Ecomusicology: Ecocriticism and Musicology," *Journal of the American Musicological Society* 64, no. 2 (2011), accessed April 1, 2022, <https://doi.org/10.1525/jams.2011.64.2.391>.

<sup>78</sup> "Eye on Design," Emily Gosling, accessed March 28, 2022, <https://eyeondesign.aiga.org/the-vital-links-between-the-design-music-industries-how-can-they-enhance-one-another/>.

<sup>79</sup> "World of Topia," Ojo Taiye, accessed March 28, 2022, <https://worldoftopia.com/ojo-taiye-three-poems/>.

<sup>80</sup> Yoko Akama, Sarah Pink, and Shanti Sumartojo, *Uncertainty and Possibility: New Approaches to Future Making in Design Anthropology* (London: Bloomsbury Academic, 2018).

<sup>81</sup> Vieira de Oliveira, "Design at the Earview: Decolonizing Speculative Design through Sonic Fiction," *Design Issues* 32, no. 2 (2016): 52..1548882.

<sup>82</sup> Jocelyn Longdon, "What Is My Role In The Climate Movement?," Instagram photo, February 7, 2022, <https://www.instagram.com/p/CZrOnTMp8s-/?igshid=YmMyMTA2M2Y=>.

<sup>83</sup> "Poetry Foundation," Siegfried Sassoon, accessed March 28, 2022, <https://www.poetryfoundation.org/poems/57253/everyone-sang>.

There is a constant tension, it seems, between (eco)sound(art) and its agentive potential.<sup>73</sup> Does one have to be already primed and reciprocal to be affected by sonic works that aim to effect some level of change? Whose truth is represented? Whose potential reality? What tangible effect do practices such as soundscape composition and soundwalking truly have beyond 'preaching to the choir' of those who already appreciate such work? At this critical stage of multiple crises, is it enough to merely provide artistic commentary? Morton addresses this to a degree through ruminating that "art isn't just decoration. It's causal. *It does something to you*".<sup>74</sup> They continue: "You don't ever exhaust the meaning of a poem or a painting or a piece of music, and this is another way of saying that the artwork is a sort of gate through which you can glimpse the unconditioned futurity that is a possibility condition for predictable futures".<sup>75</sup> If artworks then are both a mirror of the self and a portal to the future, what agentive potential might be gained through extending narrative enquiry to the sonic? Perhaps this is where design may incorporate sound and listening to "consider the frame of a current actuality and to implode it through the plurality of a sonic sensibility".<sup>76</sup>

Whilst there is promise in eco-sound art as sonic fictions, in the context of design it might be asking too much of Ecomusicology and Ecoacoustics to be something they simply aren't, as I explored in the Present(s) module. Music is a powerful cultural tool,<sup>77</sup> it "moves us and frames the world and our cultural experiences".<sup>78</sup> Music's power is also in connection and reprieve. This is beautifully posed in Ojo Taiye's poem where he asks: "In the dark times of climate anxieties, will there also be singing?".<sup>79</sup> This is not then about music per se, but more about strength in community accessed *through* music. Instead of asking sound and music to provide agency outside their domain, this could instead be understood as sonic imagination holding space for uncertainties and possibilities<sup>80</sup> alongside design. As Oliveira concludes: "Listening vocabularies pinpoint unexpected futures told by non-conventional theories, and the voices that are often silenced manifest themselves through oral and aural culture: music, spoken word, listening devices, all waiting to be heard and to be 'switched on'—and design has the crucial tools for making that happen".<sup>81</sup> Jocelyn Longdon, PhD researcher in Bioacoustics, Machine Learning, Local Ecological Knowledge at Cambridge and founder of Climate in Colour emphasises the importance of everyone assuming roles to address the climate crisis – be it through music, education or beyond.<sup>82</sup> To quote Siegfried Sassoon: "O, but Everyone Was a bird; and the song was wordless; the singing will never be done".<sup>83</sup> This is to say that we all have a role, the roles are varied, and the work will never be done.

Further enquiry might be explored through composition of a sonic fiction as research-through-design and reflection on subsequent insights attained through reflexive process.

# EXAMPLE PROJECTS

<sup>84</sup> I-D, "Douglas Greenwood, accessed April 20, 2022, [https://i-d.vice.com/en\\_uk/article/7k94n9/regenerative-futures-gen-z-study-antarctica-rgf1](https://i-d.vice.com/en_uk/article/7k94n9/regenerative-futures-gen-z-study-antarctica-rgf1).

<sup>85</sup> RGF1, 2020, screenshot, <https://regenerativefutures.co>.

If the crises of the world are interlinked, then so too must be our collective responses. Transdisciplinary projects and initiatives are rich tapestries of interwoven knowledge and experience by people whose range of backgrounds can bring unique perspectives to the task at hand. In line with the FIBER Reassemble lab, the following projects and initiatives are just a few examples of transdisciplinary collaboration both within and beyond academic contexts and projects engaging processes of imagination and speculation in line with my Studio focus: Regenerative Futures; Moral Imaginations; Wild Labs; Stories for Life; Imaginaries Lab; Climaginaires. All initiatives seek to explore socio-ecological crises through speculation, imagination, design, workshops, projects, podcasts and fictions. They demonstrate the value of transdisciplinary thinkers and makers coming together to collectively (re)imagine alternative possible futures through a speculative lens both within organisations and communities. Regenerative Futures, for example, is a collaborative project involving a collective of participants whose backgrounds range from artists, designers and architects to scientists, politicians and technologists. Ranging from the ages of sixteen to twenty-eight years and from seventeen different countries, this inclusive Gen Z focused initiative employs speculative design and popular entertainment principles as a means to communicating principles explored in this fictitious and utopian settlement in Antarctica. I-D Magazine's report<sup>84</sup> on the project further brings it to its target audience, creating an accessible space for younger minds to engage with complex topics.

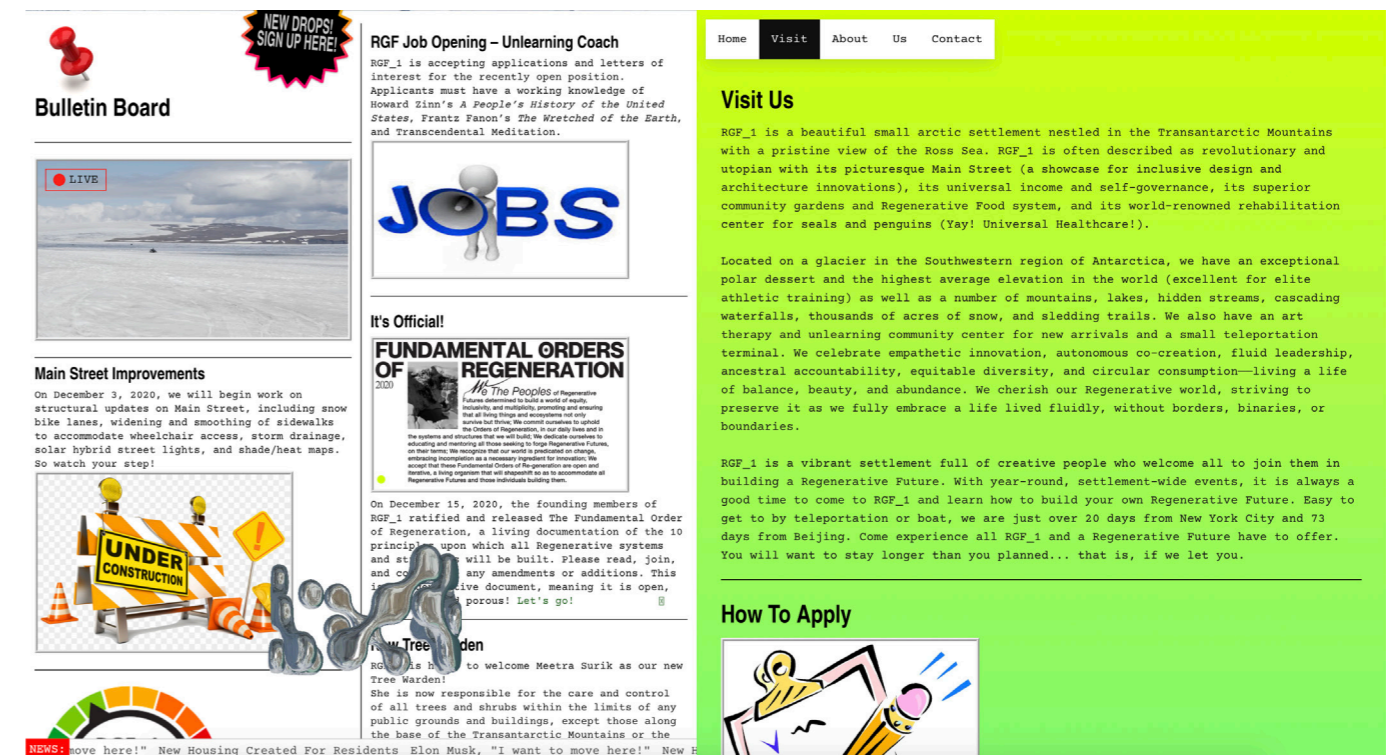


Figure 7: RGF1 Screenshot.<sup>85</sup>

Whilst in Amsterdam for the Natural Intelligence lab, I visited Superflux's 'Subject to Change' exhibition at the Droog Gallery. Presenting a collection of their recent work, this included: Trigger Warning; the Intersection; Field Guide for a More-Than-Human Politics; Invocation for Hope; Refuge for Resurgence. Superflux's work attends to speculative design, engaging critical foresight and experiential futures through multi-modal provocations incorporating artefacts, soundscapes from designers, researchers and technologists. The collection explores "resurgent forests to radical social movements, solarpunk technologies to multispecies banquets" where "Superflux use poetic and immersive storytelling to tackle these challenging and urgent concerns and present future ways of living with the planet".<sup>86</sup> The variety of mediums utilised present diverse ways to engage with the topics explored, particularly relevant to my work for Studio and for FIBER Reassemble. Had I not already been aware of Superflux's work however and the themes explored, I might have found it difficult to engage with due to the complexity of some of the ideas, raising questions of how such exhibitions might impact a wider audience.

<sup>86</sup> "Superflux," Superflux, accessed April 20, 2022, <https://superflux.in/index.php/subject-to-change-announcing-superfluxes-first-ever-solo-exhibition-at-the-droog-gallery/#>.

Below are a selection of images captured of 'Refuge for Resurgence', description of 'Invocation for Hope' and Superflux's manifesto:



Figure 8: Photos taken by author at Superflux exhibition in Droog Gallery, Amsterdam.

<sup>87</sup> Jason Hickel, "Quantifying National Responsibility for Climate Breakdown: An Equality-Based Attribution Approach for Carbon Dioxide Emissions in Excess of the Planetary Boundary," in *The Lancet Planetary Health* 4, no. 9 (2020), [https://doi.org/https://doi.org/10.1016/S2542-5196\(20\)30196-0](https://doi.org/https://doi.org/10.1016/S2542-5196(20)30196-0).

<sup>88</sup> Leah Zaidi, "Worldbuilding in Science Fiction, Foresight and Design," *Journal of Futures Studies* 23, no. 4 (2019): 21.

Referring again to crisis of culture, these imaginative, speculative and transdisciplinary methods are needed in order for different knowledges to work together. This is reflected across Studio with the breadth of disciplines represented. As with my closing statement in the previous section on sonic narrative, we all have a role and the roles are varied. It must however be stated that these projects are primarily situated within the context of the Global North, mostly as they seek to address the neoliberal dominance within these societies given that 92% of emissions are attributed to countries within this geographic region.<sup>87</sup>

Perhaps one critique all of these projects have in common, however, is a lack of evidence of effectual change followed up with the various stakeholders after a significant amount of time has passed. Beyond testimonials provided immediately post experience which are no doubt of value, how effectively has change been implemented into the stakeholders situations be it policy spaces, commercial enterprise or local community over the long term? Similar to critique later discussed of my own outputs, do these projects and initiatives sit in an echo chamber whereby they are preaching to the converted? If we are to initiate such long term, deep change on a socio-cultural level for socio-ecological systems change which this workbook is openly advocates for, we must endeavour to follow up claims that give these approaches more weight alongside the default approach of science and data. This of course is not always straightforward, with direct comparisons of hard, quantifiable data being often incomparable to soft, qualitative data. This is especially so when working with deep narrative change over longer temporal frames, as the above initiatives are. If "before we can design better futures for all, we have to build a societal-wide capacity to envision and design alternatives",<sup>88</sup> then deep narrative change is necessary to support this transition. This critique is not meant to deter from the value offered by such projects, but to remain cautious against naive claims of agency that distract from long term goals and instead be vigilant in shaping effective processes.

# THE DARK SIDE OF SPECULATION

<sup>89</sup> Buckles, *Education, Sustainability and the Ecological Social Imaginary: Connective Education and Global Change* (London: Palgrave Macmillan, 2018).

<sup>90</sup> Kodwo Eshun, "Further Considerations of Afrofuturism," *CR: The New Centennial Review* 3, no. 2 (2003): 291.

<sup>91</sup> Eshun, "Further Considerations of Afrofuturism," *CR: The New Centennial Review* 3, no. 2 (2003): 292.

<sup>92</sup> Eshun, "Further Considerations of Afrofuturism," *CR: The New Centennial Review* 3, no. 2 (2003): 290–291.

<sup>93</sup> Eshun, "Further Considerations of Afrofuturism," *CR: The New Centennial Review* 3, no. 2 (2003): 291.

<sup>94</sup> Vieira de Oliveira, "Design at the Earview: Decolonizing Speculative Design through Sonic Fiction," *Design Issues* 32, no. 2 (2016): 50.

<sup>95</sup> Mieke van der Bijl-Brouwer, and Bridget Malcolm, "Systemic Design Principles in Social Innovation: A Study of Expert Practices and Design Rationales," *She Ji: The Journal of Design, Economics, and Innovation* 6, no. 3 (2020), <https://doi.org/https://doi.org/10.1016/j.sheji.2020.06.001>.

<sup>96</sup> Alex McDowell, "Storytelling Shapes the Future," *Journal of Futures Studies* 23, no. 3 (2019): 109.

<sup>97</sup> McDowell, "Storytelling Shapes the Future," *Journal of Futures Studies* 23, no. 3 (2019): 109.

<sup>98</sup> McDowell, "Storytelling Shapes the Future," *Journal of Futures Studies* 23, no. 3 (2019): 109.

<sup>99</sup> Vana-Axinja Paschen, and Ray Ison, "Narrative Research in Climate Change Adaptation—Exploring a Complementary Paradigm for Research and Governance," *Research Policy* 43, no. 6 (2014).

<sup>100</sup> Vieira de Oliveira, "Design at the Earview: Decolonizing Speculative Design through Sonic Fiction," *Design Issues* 32, no. 2 (2016): 49.

The dark side of speculation is argued here as the space of privilege that enables dominant imaginaries<sup>1</sup> to thrive in place of pluriversal imaginaries; a continual colonisation of the future that disregards the vast range of socio-political-cultural-ecological contexts globally.

As Eshun points out, risks in dreaming the future lie in dominant imaginaries<sup>89</sup> potentially favourable to the few as the ones that become reality. If then it is the same figures that have space and privilege to imagine such scenarios, then whose "alternative tomorrows"<sup>90</sup> are we really designing? This monopolisation of future imaginaries runs the risk of developing into a "market futurism",<sup>91</sup> posed by Eshun as the capitalisation of speculation and foresight analysis. He states that "as New Economy ideas take hold, virtual futures generate capital. A subtle oscillation between prediction and control is being engineered in which successful or powerful descriptions of the future have an increasing ability to draw us towards them, to command us to make them flesh".<sup>92</sup> Science fiction is also at risk, as Eshun further elaborates that it "is now a research and development department within a futures industry that dreams of the prediction and control of tomorrow".<sup>93</sup> The dangers of this are further articulated by Oliveira's comments that when "choosing to shift its focus to political questions, SCD's dystopian worlds—usually portrayed by Northern designers—end up having much more in common with the realities of the global South than with those of science fiction".<sup>94</sup> We must also be conscious of extracting practices from one culture or field and applying without consideration or adaptations to another,<sup>95</sup> for example the co-opting of Indigenous methodologies or imposition of Western ideals on Indigenous cultures in the reversal.

A pertinent example of this is Alex McDowell's "housing and sustainability development"<sup>96</sup> project in Saudi Arabia. In his essay, McDowell dedicates only one short paragraph to the project, ultimately denying space to interrogate the complexity of what transpired and instead fetishising the experience. He speaks only to the digital visualisation of this speculative housing community without elaboration on the wider context of the project and the results. McDowell states that they "were asked to look ten years into the future of a specific Bedouin tribe, a nomadic tribe who had been settled and fallen into abject poverty, with failing crops and decaying shelter".<sup>97</sup> The incredibly strong language used denotes a heartbreakingly desperate situation for these people and raises many questions as to the project's ultimate outcomes and whether this community remained in 'abject poverty' once the project facilitators left. Further questions also arise, such as: What ecological and cultural data was taken into account? What does it mean to "own"<sup>98</sup> a vision that has been imposed on you by another? How can these be alternative choices with an abundance of trees in a desert that, by the authors own admission, has left these people with 'failing crops and decaying shelter'? Where does he propose the money for such a development will come from for these nomadic people? This project is questionable on many number of levels, but arguably speaks to two wider issues: That of the ethical concerns of 'speculative' projects such as this led by culturally unaware external facilitators, and that of the scholarly responsibility that follows when disseminating the experience. In this instance, these 'projects' potentially become less of a facilitation and more of an imposition. Participatory speculation within communities should seek to empower, not dominate.<sup>99</sup> McDowell's project exemplifies concerns of SCD that "the development of this discipline in European and North American universities has contributed significantly to engagement by both practitioners and researchers in rather classist, racist, and colonialist stances in their questions and projects".<sup>100</sup>



Figure 9: Al Baydha Village project by Experimental Design studio<sup>101</sup>

Futures thinking can also be regarded as a privilege as it relates to being afforded the luxury of mental space to conceive of realities beyond the overwhelm of immediate concerns. Socio-economic conditions such as the ‘abject poverty’ of the Bedouin tribe identified in McDowell’s project and the everyday demands of care work and living with disabilities are just some examples of this. Time, money, health, education and community are arguably vital factors that either enable or disable the ability to imagine viable alternative futures and the mental capacity for such speculation. This is not to say that imaginary worlds cannot be born out of strife; on the contrary, science fiction itself has been conceived as a speculative space whereby diaspora communities may be emancipated from their ‘alien’ status in Western contexts through fictional world building.<sup>102</sup> Fictional worlds, be it through the sonic, literary or other art forms can be used as alternative worlds to escape to from everyday realities into one unburdened by the issues faced. It is therefore important to distinguish between the escapist imagination presented latterly, and the impact imaginaries from a systemic perspective that are threaded throughout Studio. This is in addition to acknowledging any potential barriers to such an infrastructure of imagination<sup>103</sup> that may prevent equitable input towards collective futures that seek participatory engagement for systemic concerns. The need for plural imaginaries that are not separated as “social wholes that could be juxtaposed one beside another”<sup>104</sup> is called for here.

We must be mindful of our responsibility when world-building, storytelling and designing alternative narratives. Haraway details her own ‘speculative fabulation’ where the “basic plot proposes small communities forming spontaneously all over for unknown reasons, setting up in ruined areas with the commitment to repair damage and rebuild cosmopolitics linking communities through lines of caring and healing”.<sup>105</sup> The one child, three parent policy in this story in response to “the burden of immense human numbers over many decades”<sup>106</sup> is an example of where Haraway supports concern of human overpopulation, often contentiously attributed to communities in the Global South.<sup>107</sup> Although she subsequently notes that people may retain individual freedom and can choose to reproduce on their own terms, this does demonstrate the need to be cautious when building worlds through story where they have power to bring certain ideologies to life that may be misinterpreted against the author’s intended sentiment and ultimately cause harm. In her own words, “it matters what stories tell stories”.<sup>108</sup>

<sup>101</sup> McDowell, “Storytelling Shapes the Future,” *Journal of Futures Studies* 23, no. 3 (2019): 109, fig.5.

<sup>102</sup> Eshun, “Further Considerations of Afrofuturism,” *CR: The New Centennial Review* 3, no. 2 (2003).

<sup>103</sup> “Medium,” Cassie Robinson, accessed March 28, 2022, <https://cassierobinson.medium.com/tending-to-and-stewarding-the-seeds-35cd67197807>.

<sup>104</sup> Bottici, “Imagination, Imaginary, Imaginal: Towards a New Social Ontology?”, *Social Epistemology* 33, no. 5 (2019): 434.

<sup>105</sup> Haraway, “It Matters What Stories Tell Stories; It Matters Whose Stories Tell Stories,” *a/b: Auto/Biography Studies* 34, no. 3 (2019): 570, <https://doi.org/10.1080/08989575.2019.1664163>.

<sup>106</sup> Haraway, “It Matters What Stories Tell Stories; It Matters Whose Stories Tell Stories,” *a/b: Auto/Biography Studies* 34, no. 3 (2019): 570, <https://doi.org/10.1080/08989575.2019.1664163>.

<sup>107</sup> Jordan Dyett, and Cassidy Thomas, “Overpopulation Discourse: Patriarchy, Racism, and the Specter of Ecofascism,” *Perspectives on Global Development and Technology* 18, no. 1-2 (2019).

<sup>108</sup> Haraway, “It Matters What Stories Tell Stories; It Matters Whose Stories Tell Stories,” *a/b: Auto/Biography Studies* 34, no. 3 (2019): 565, <https://doi.org/10.1080/08989575.2019.1664163>.



# DISCUSSION

<sup>109</sup> Dan Burgess, “Cassie Robinson – On collective imagination, death and designing for social justice,” in *The Spaceship Earth Podcast*, July 13, 2021, podcast, 101.19, <https://www.the-spaceship-earth/podcast/2020/7/13/episode-36-cassie-robinson-collective-imagination-death-and-designing-for-social-justice>.

<sup>110</sup> “Medium,” Cassie Robinson, accessed March 28, 2022, <https://cassierobinson.medium.com/change-happens-if-our-collective-imagination-changes-7a1c0475a578>.

<sup>111</sup> Donna J. Haraway, *When Species Meet* (Minnesota, United States: University of Minnesota Press, 2008).

<sup>112</sup> Donna Haraway, “Symbiogenesis, Sym-poiesis, and Art Science Activisms,” in *Arts of Living on a Damaged Planet: Ghosts and Monsters of the Anthropocene*, eds Anna Tsing, Heather Swanson, Elaine Gan, Nils Bubandt (Minneapolis: University of Minnesota Press, 2017), 26.

<sup>113</sup> Haraway, “Symbiogenesis, Sym-poiesis, and Art Science Activisms,” in *Arts of Living on a Damaged Planet: Ghosts and Monsters of the Anthropocene*, eds Anna Tsing, Heather Swanson, Elaine Gan, Nils Bubandt (Minneapolis: University of Minnesota Press, 2017), 26.



Figure 10: Photo by author.

## *A Note on Collaboration*

By pushing the boundaries of how we conceive of collaboration, we further open the doors to a deeper and more innovative imagination of what could be, for which I express here as a necessity. Building upon ideas of others and therefore synthesising transdisciplinary thinking is presented here as indirect collaboration of theories and ideas. Engaging collective imagination<sup>109 110</sup> through conceptual writing shared through conferences, online journals such as Medium or soundwalking as presented in Studio conceives of collaboration as facilitating the space for alternative thinking within design to emerge. Storytelling too might be considered an indirect collaboration, offering the widely used analogy of stories as soil, planting seeds of imagination as a becoming-with<sup>111</sup> stories.

Reflecting on sympoiesis and the concept of the Holobiont touched upon in a workshop at the FIBER Lab and also in Arts of Living on a Damaged planet, might we consider collaboration as a co-becoming? Haraway states that “critters do not precede their relating; they make each other through semiotic material involution, out of the beings of previous such entanglements”.<sup>112</sup> Equally, the conceptual positioning in Studio does not precede its interaction with other theories; it is mutually composed through my own drawing together of ideas. Just as there are “critters becoming with each other at every node of intra-action in earth history”,<sup>113</sup> I stretch the boundaries of collaboration here to be conceived of as a ‘becoming-with’ other theoretical positioning through interaction of both the perspective and practice of listening as it relates to a socio-ecological co-becoming.

Furthering this, does collaboration have to be with sentient reciprocity? Or can you have reluctant collaboration? When plants grow through concrete, consented or not, they collaboratively form a new environment. Joining together at the root, the gap in the concrete is forced to widen. Reclamation of this patch of land presents a metaphor for how opposing factions can find common ground, linking with discussion on the value of transdisciplinary initiatives. Plants may have to work harder to break through, but equally their roots are protected by the concrete in an unlikely collaboration.

However, as my Studio work engages predominantly with secondary collaboration through theory and ideas, I must be aware of the limitations of this and the risk of remaining within my own echo chamber. Whilst some potential blind spots might be addressed through further reading, I cannot account for the value of conversing with others through primary collaboration as was evident in the richness of roundtables and workshops in Amsterdam.

### *Contextualising Design*

In the breadth of areas covered, it is worthwhile to discuss how design is contextualised here. In the early stages of Studio, speculative design and design fiction were identified as areas of interest to connect ideas. Delving deeper into the work, their place has emerged to be disciplines considered within the wider role of imagination and speculation presented here as opposed to the sole facilitators. As with collaboration, slippery definitions give way to broader considerations of how practice might be manifested. This mutation of disciplines in response to planetary challenges is arguably necessary to ensure practice remains dynamic, adaptive and inclusive. There is a clear focus on theory-as-practice throughout Studio, exploring the value in alternative epistemologies and ontologies. This perhaps situates Studio within a context of academia as ideation spaces or imagination labs. Prototyping spaces of collective imagination as opposed to physical design artefacts and instead as thought experiments expressed through speculative narratives in sonic, literary and design contexts are advocated for. Neri Oxman's nexus<sup>114</sup> demonstrates the value and interaction of these approaches and how they are dynamically intertwined. Thus, speculative design is considered here in its broadest sense – as a sub-discipline of discursive design that enables multi-modal conceptual approaches to speculation beyond the material. This being said, I don't feel that speculative design has been explored in this work anywhere near to the extent I had intended it to be, leaving some aspects of the work to feel unfinished. This is possibly due to the natural evolution of the work leading me in different directions and prioritisation of time being two potential factors.

Leaning away from critical and speculative design as the dominant discipline explored in Studio is also, in part, due to the limited diversity of references available. Dunne and Raby remain the most heavily cited, despite themselves noting that “we need more pluralism in design”.<sup>115</sup> Whilst this is perhaps understandable given their widely credited development of the practice and innovative book on the topic, it is still arguably of concern that such a limited number of individuals within one geographical context remain the sole source of citation, as is also the issue with sound studies.<sup>116 117</sup> If disciplines are to be dynamic as mentioned previously, scholarship that is not entirely reliant on a few is necessary.

Recommendations going forward include greater inclusion of design anthropology as a theoretical positioning, especially given the socio-cultural concerns as it relates to design in Studio where “design anthropologists engage with the complex challenges of emergent cultural forms, and with exploring directions for possible futures”.<sup>118</sup>

<sup>114</sup> Neri Oxman, “Age of Entanglement,” *Journal of Design and Science* (2016).

<sup>115</sup> Anthony Dunne, and Fiona Raby, *Speculative Everything: Design, Fiction, and Social Dreaming* (Cambridge, MA: MIT press, 2013), 9.

<sup>116</sup> Gavin Steingo, and Jim Sykes, *Re-mapping Sound Studies* (North Carolina: Duke University Press, 2019).

<sup>117</sup> Marie Thompson, “Whiteness and the ontological turn in sound studies,” *Parallax* 23, no. 3 (2017).

<sup>118</sup> Rachel Charlotte Smith, and Otto, Ton, “Cultures of the Future: Emergence and Intervention in Design Anthropology,” in *Design Anthropological Futures*, eds Rachel Charlotte Smith, Tang, Kasper, Vangkilde, Otto, Ton, Kjaersgaard, Mette Gislev, Halse, Joachim and Binder, Thomas (London: Bloomsbury Publishing, 2016), 19.

<sup>119</sup> “Feminist Killjoys,” Sara Ahmed, accessed April 15, 2022, <https://feminist-killjoys.com/2015/12/30/feminist-shelters/>.

<sup>120</sup> Dan Burgess, “Phoebe Tickell – Imagination Activist,” in *The Spaceship Earth Podcast*, March 3, 2022, podcast, 120.18, <https://www.thespaceship.earth/podcast/2022/3/3/episode-57-phoebe-tickell-imagination-activism>.

The issue of citation politics remains potent across disciplines and warrants further discussion as it relates to Studio. Sara Ahmed ruminated that “I often think of books as houses. They are built out of stuff. They create room for us to dwell. And I think of citations as bricks. When citations become habits, bricks form walls”.<sup>119</sup> Given the theoretical leanings of my work that perhaps best serve academic spaces expectant of scholastic citations, diversity of ‘official’ academic sources remains difficult where minority visibility is still lacking. Therefore the bricks that have built the house of this workbook are sought from broader places, with acknowledgement that arguments are often still propped up by more dominant voices. Citation choices might be considered here as theoretical collaboration with diverse perspectives.

The three outputs presented in this workbook and the accompanying contextual positioning are argued for as spaces for alternative ways of thinking to grow. Questions do however remain over the agency of imaginaries-as-process in such times of urgency as we are faced with. Risks of utopianism and the privilege of future thinking have already been addressed. There is perhaps a tendency to pontificate at a distance on the potential of imagination and speculation, as this work has admittedly done, without assessing specific case studies in more detail. This is one aspect of where ideas presented in Studio could be improved. However, in collating arguments on why imagination and speculation are needed to address a crisis of culture and how design can further utilise multi-sensory modes of engagement, a foundation is laid to explore in more detail how this might be realised. Imagination does not have to be whimsical. Phoebe Tickell of Moral Imaginations refers to her work as ‘imagination activism’,<sup>120</sup> taking an active approach to imaginaries-as-process. Moving forward, perhaps instead of the broad approach taken here, community and localised focus in transforming local culture as a return in part to localism might be explored.

It must also be questioned as to whether the outputs here are speaking within echo chambers. The conference presentation will surely attract those in spaces of academia with an already established interest in such concepts. The proposed soundwalk will take place again in an academic context and presumably only those with a mind open to this experience will wish to attend. The articles written for FIBER, whilst published on Medium to be accessible to the wider public, contain concepts explored in the lab that will potentially only attract already engaged readers who are aware of the initiative. This is not to render these outputs useless or detract from their potential value, especially given that the intended audience is largely those in academia and practice. It is simply to remain open and responsive to questions of utility.

If accessibility to alternative imaginaries and thought are to be advocated for in the collective realisation of the ideas presented, then information must be disseminated beyond the paywalls of academia without being seen as inherently inferior. Like Medium articles, podcasts have therefore featured in Studio alongside scholarly references as one example. This is to recognise the value of conversations with scholars and practitioners around their work, not just of the curated texts themselves. Podcasts act as space for facilitating these conversations where speaking around the written continues development of concepts through listening and conversation. In this way, conversation can be considered as social dreaming. Whilst still potentially operating within the aforementioned echo chamber, podcasts do present a more accessible opportunity for these ideas to be shared.

Looking ahead to the Master module, Studio acts as a preliminary exploration into the role of narrative, imagination and speculation with and through the sonic as it relates to the design of socio-ecologically equitable futures. My intention is to move this exploration into a ‘meta-design framework’ at the intersections of: deep listening, deep narratives, deep time and deep ecology to represent the four intersections of my work interests: sound, design, futures and sustainability. The intention is to bring these together as a fitting culmination to my various avenues of exploration in this degree.

# SUMMARY

A variety of ground has been covered exploring the range of ways socio-cultural shifts may emerge through design, theory and sonic perspectives to engage alternative narratives towards socio-ecologically sustainable futures. From writings that embrace theoretical investigation, discursive design scenarios instigating imaginary futures to the potential of sonic narratives and beyond, this work tentatively demonstrates the breadth of ways in which these shifts might be manifested. This opens up many lines for further enquiry. As stated at the beginning, imagination and speculation are not presented here as utopian or solution focused practices, and critique of these approaches is not without significance. Adjacent analysis of both the potential and the shortcomings of such ways of working are not seen as conflicting but instead as a necessary tension that this work does not seek to resolve, but to embrace. This enables accountability across the spectrum that will ultimately result in more effective processes of sustainable design as it is conceived of here. If we are to navigate our way through the multiple urgencies of our times, may we do so with both an informed speculation and the joyful, childlike wonder of our collective imaginations.

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