



xCoAx 2021 9th Conference on
Computation, Communication, Aesthetics & X

2021.xCoAx.org

Mind the Gap Between Platform and Brain

Keywords: Ecomedia, Capitalocene, E-waste, Networked Performance, Art Platforms,
Critical Making

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This practice-based research project generates applied knowledge of the prospects and problems of participation and exchange of technological artefacts. I introduce my research assemblage, *circuitBoard*, a blended online and community platform for critical making. With the premise that critical making and art platforms can evaluate social inequity, challenge institutional hierarchies, and question how capitalism and colonialism have destroyed ecosystems, the theoretical lens of ecomaterialism analyses media and technology-based artistic praxis. The research outcomes include community-based platform design and performative modes in developing activities that encourage more inclusive participation during crises.

Purpose of the Research

We are in the Capitalocene. The mining of the materials needed to produce technology artefacts is only increasing, and discarded consumer gadgets produce large amounts of electronic waste (e-waste). Up to 50 million tonnes of e-waste is made every year (Kumar, Holuszko, and Espinosa 2017). Congruently, software processes and our digital products and labour run on physical hardware and energy consumption. They depend on this same natural resource extraction and manufacturing system, exposing how digital infrastructures are inherently material and exploitative of people and ecosystems. We are also amidst the COVID-19 pandemic, highlighting how diseases become pandemics due to ecological and socioeconomic injustices. In this research, ecomedia platforms present as spaces for creativity, healing, cooperation, and action.

Ecomedia platforms concern anthropogenic impact on the environment; including representations of nature, interventions in ecosystem configurations, participatory approaches to environmental communication, and the resource demands and effects of technological infrastructures (Ziser 2016). Rather than bringing people together to solve a problem, we can collaborate on possibilities with critical making. Ratto and Ree (2012) describe critical making is “to use material forms of engagement with technologies to supplement and extend critical reflection and, in doing so, to reconnect our lived experiences with technologies to social and conceptual critique.” This research investigates how critical making, artists, educators, facilitators, activists, technology, artefacts, cultural capital, and public participation are parts of a cognitive ecology.

Background and Related Work

Analysing media and praxis through the framework of ecomaterialism requires consideration of three tenants as proposed by Hunter Vaughan (2018): 1) Media practices have material impacts; 2) Material culture is the byproduct of distribution and consumption; 3) The environment is the primary source of labour. My review of works includes maker spaces, ecomedia art, and networked platforms. The following are selected projects.

Thomas Thwaites *The Toaster Project: Or a Heroic Attempt to Build a Simple Electric Appliance from Scratch*, took nine months to mine the resources, mould the metals, create the wiring, and complete a functioning toaster. Thwaites’ findings on resource extraction and exchange, consumer behaviour, and labour systems are manifold. However, most striking is the argument that sustainability is not

an act of self-reliance, but a cooperative effort that can serve different purposes depending on the values that we share (Thwaites 2012). An influential factor of individuals cooperating on networked platforms is how Cox and Pezzullo (2015, 213) present “self-initiating movements” through bottom-up accessible tools. For example, *Trashlab* and *Waterwheel* are self-initiating movements. Based in Helsinki, Pixelache’s organisation Trashlab aims to generate a community of artists, designers, hackers, recyclers, and activists to address electronic waste with creative approaches. While *Trashlab*’s format is similar to maker spaces, they do not have a permanent physical location, and they distribute their activities online and in different locations to reach different communities. *Waterwheel*, developed by Suzon Fuks and Inkahoots, was an online, interactive, and collaborative platform for sharing media, knowledge, ideas, performances, and presentations about water. Waterwheel facilitated collaborative engagement with artists, scientists and audience participants.

Ecomedia and maker platforms are increasingly discontinued due to lack of funding. Alternatively, they can become machines of capitalist exploitation (Goriunova 2019). Therefore, media practitioners are becoming dependent on appropriating a network of centralised social media platforms, despite the adverse environmental effects and breaches of our information rights. The potential of ecomedia platforms means leaders and stewards representing diverse human cultural beliefs and artefacts can confront the coloniser’s worldview hierarchy and provide alternatives to environmental science communication.

Proposed Approach

CircuitBoard is a blended-media arts platform that harbours creative communication around e-waste, planned obsolescence, and awareness of disproportionately affected individuals. The platform is blended in that it is both online and community-based. The aim of the online platform is for exchanging resources, peer-production, and community skills-sharing. Since the interaction model between the components selected should be a logical chain, and the open-source projects I assemble should have more or less well designed and documented APIs, their integration should pose feasible. I will map the exchanges of technology and artefacts during activities by tagging objects we use and tracing movements between people across the platform and the workshops. I am not interested in the objects’ points, but the lines between them—the relations between people.

The forming of community partnership projects offers cross-generational possibilities to access technologies and repurpose media. Rather than relying on corporations to implement greener processes and circular manufacturing, there are creative possibilities—communities are agents of change. They can be highly influential in raising awareness of environmental and social issues, revealing peer-to-peer, community, and national implications around sustainability and equitable access to technology. An ongoing question I have with *circuitBoard* is, how can we be engaged with the goals of sustainability as a stimulant and not as a restriction? Thus, this praxis centres on community-centred caring that allows for justice and climate health.

Facilitators can help artists, participants, and collaborators find socially engaged ways of generating ecomedia projects. My participatory research approach includes my process and values into the facilitation of activities and platform design. As a play participant, practice-based researchers play by being engaged members in activities (Tracy 2013, 109). I must be reflexive and maintain the respective subjectivities of the people I interact with, assuring my approach is descriptive and instructive rather than prescriptive.

Contributions

Currently, I am co-facilitating *makerBoard*, a program with vulnerable youth and new foster parents to develop a distributed maker platform. Concurrently, I am developing *futuresBoard*, a blended workshop program for upcycling technology around the theme of 2051 with CU Boulder's Environmental Center. *circuitBoard* can also host a participatory archive and networked performances. With the 2020 *circuitBoard* project *Murphy's Law Or.*, networked performance was a way to examine materiality, collaboration, authorship, and distributed cognition.

These *circuitBoard* projects are iterations of the platform and will be a part of the *circuitBoard* assemblage. Each project is an offshoot that the partners I work with can develop independently of *circuitBoard* as a social open-source approach. Likewise, their findings will continue to inform my research and future iterations of *circuitBoard*. The prospecting vision is to continue to develop the online platform with a cumulative networked community showcase running on *circuitBoard* as the final phase for my PhD research.

Progress

This research is iterative, and as I am in the second year of the PhD program, I must reflect on my exploratory practice-based activities thus far and develop a sound community-based design methodology to form a research proposal for the following two-years.

In mapping out how networked performance can further inform my research, a promising aspect is improvisation, which is accessible to anyone who has something to show or share without the commitment of making an artefact. It also transitions the focus from materiality to making as a performative act. There is an emerging inquiry into a platform that hosts activities at the intersection of performance and critical making. Consequently, I advocate a community-based platform that is ecologically mindful, assembling individual and collaborative contributions, resources, and stories.

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