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# **Design Praxis with the Kingfisher and Bacteria; The River as Place for Post Human-Centered Design learning**

## **Abstract**

**The aim of this paper is to unpack and question the anthropocentricity of our interactions with public place and how we might be able to foster learning to overcome dominant modes of praxis. The article focuses on rivers as an example of opportune places for Post Human-Centered Design of informal education and decentralized co-design of culture. The surrounding literature are presented, leading to pathways to radical inclusion of more-than-human concerns and discusses the interactions that can emerge through case study on the Naka river in Fukuoka, Japan.**

**Keywords:** More-than-human, Non-human, Inclusion, Learning, Anthropocene, Post Human-Centered Design, River, Personhood.

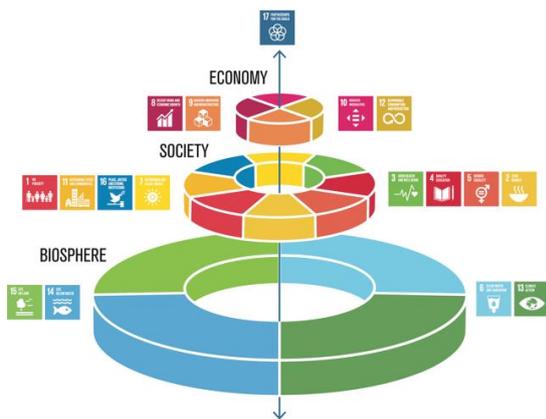
## **Radical inclusion of the self**

**Approaches to more-than-human (MTH) concerns can be explained started from questioning that notion of the “user” in design. Given that the human body, or human biome contains bacterial cell counts that are approximately match or exceed the number of human cells, estimated at a ratio of 1.3:1(Sender & Milo, 2016), the non-human is a fundamental aspect of our existence. Our anthropocentric notions that underpin Design therefore are a simplification at best, and even when considering one “user”, radical inclusion starts from an understanding that the human is a minority within the body of MTH concerns.**

## **The body and biosphere**

Taking the body and its health as a starting point, the multispecies self can be expanded. Sariola & Butcher highlight that Antimicrobial resistance for example has been framed in a multispecies context through the concept of One health, an expansion that looks to beyond human health to pets and nature; in practice so far, such attempts have come up short in terms of taking a MTH approach seriously (2022). So, it can be said that we are at a nascent stage of MTH research.

The shortfalls are evident elsewhere, the wedding cake model in fig. 1, developed by Folke et al. (2016), arranges the SDG's so that they are layered and concentric, according to economy, society and biosphere. The visual strength of this model is to highlight that economy and society sit atop the biosphere that supports it. However, when seen this way, non-human goals take 13 out of 17 goals. Clearly our current anthropocentric biases persist.



**Figure 1: The wedding cake model. Credit: Azote for Stockholm Resilience Centre, Stockholm University (CC BY 4.0)**

In the 2014 Manifesto, Horton et al. present a Manifesto based on the concept of planetary health. With an even broader scope than One health, planetary health extends out to consider the biosphere, but still with human health as the central concern. An important factor highlighted by the planetary health report a key point, that anthropocentric dominance has allowed for a lack

of empathy, (and imagination of the other) to use simplified economic metrics over the actual health of the planet (Whitmee et.al., 2015). Wendt has argued that empathy employed by the design fields does not include the ecological thought necessary for sustainability (2017), however in the case of the planetary health framework, such empathy extends beyond that of homo sapiens and is a matter of defining empathy as inclusive of non-human beings. Haraway and Begelke have thoroughly discussed the notion of companion species (2003), where mutual empathic responses between human and non-human are co-dependent. {For a concise review on related concepts of posthumanism and design that exceed the focus on this article see Forlano (2017)}

### **Take me to the river**

The limits of human-centered design and it's need to expand beyond it's anthropocentric roots have been raised by Thomas et al., and highlighted the example of personhood granted to the Whanganui river in the Te Awa Tupua (Whanganui River Claims Settlement) Act 2017 as one of pertinence. (2017)

Whanganui follows after the Te Urewera Act 2014, as groundbreaking examples of rights of nature, where personhood was granted to the national park (O'Donnell, 2018). These cases impacted the granting personhood in of Uttarakhand India to the Ganges, Yakuma rivers and the Himalayas Glaciers and bodies of water that flow into the respective rivers. (Gellers, 2021). The Ganges and Yakuma were overturned by the Supreme Court, however the Himalayan Glaciers have been not (Talbot-Jones & O'Donnell, 2021). These can be said to be the emerging grounds for conflict and innovation in going beyond human-centered design. The waters have cultural importance beyond the utility for power generation or fresh water use. The Ganges, or Ganga is "widely acclaimed for its great cultural, spiritual, economic and ecological significance, which far transcends the national borders

and boundaries” (Kumar, 2017), therefore the rivers are cultural institution of extensive scope. In the case of the Whanganui, the local saying is *I am the river, and the river is me* (Ko au te awa, Ko te awa ko au in Te Reo Maori language). Such worldviews clearly differ to the frameworks of Human-nonhuman in the conventional design space as discussed by Thomas et al. (2017). Empathy for the river, is in this case a tangible conception, as it captures the river as a living entity, including the animals, plants, water itself and the land. As Gellers puts it “the tenets of Earth system law could advance a radically inclusive interpretation of communities of justice (2021)”. We can say that radical inclusion in design is wickedly intertwined with MTH concerns. Though there are early examples of praxis being shared such as the agricultural work of Loh( 2020), there is much to be explored. In the stages of transition, still nascent, cycles of unlearning the anthropocentric and learning of post human-centered praxis are needed. But, with the integral and embodied nature of post anthropocentric designing, places and spaces of learning equally require critical inquiry.

### **River as more than human places of learning**

In relation to MTH learning, conventional institutions such as museums and zoos have their place. However, the river and associated commons have characteristics for post human-centered design pedagogy. As Adams & Branco discuss, Parks and similar places of lived experiences, not afforded by brick and mortar institutions, and can “facilitate experiences with nature that are unparalleled in the classroom” (2017). Such connection to nature itself has shown to be intrinsically valuable (Mayer, 2004). In addition, the rivers connect the mountain to the sea. Travelling through biodiverse ecologies, mountainous terrain to rural and urban human settlements they integrate with human settlements of rural and urban terrain. From the lens of

environmental science, Tanaka has led such research connecting the head waters to the sea through the Headwater to Ocean or H2O studies (2013), as well as Forest- Sato- Sea (Sato refers to Japanese rural settlements). The research assesses biodiversity and water quality but also connects to bottom-up environmental movements, a representative case being the initiative lead by coastal fishermen named 'The Sea is Longing for the Forest'. The praxis overlaps scientific research and vernacular culture educating participants in ecological learnings as well as delivering societal mobilization (2016). The rivers allow a place for learning that transcend institutional boundaries, and foster communities of learning beyond the formal/informal border. Such open praxis is rich for exploration. In following section I will outline relevant praxis that I have facilitated as a design researcher.

### **Designing for and with the Kingfisher**

The Naka river flows through Fukuoka city to the Hakata Bay, and is the closes river to the School of Design at Kyushu University where I am based. The river has been one field where I developed my design praxis. I have undertanken multiple design explorations as part of undergraduate and post graduate education teaching, as well as post human-centered design research. One such case is the Global Goals Jam, a two day design jam to tackle the SDGs started in 2016 beginning when the United Nations Development Program (Global Goals Jam, n.d.). The Fukuoka instance has inclusive design and universal design running through its veins. With roots in the Challenge Workshops pioneered by Julia Cassim at the Helen Hamlyn Centre (Dong, 2013), it was originally in connection with Universal Fukuoka City initiative that promotes Universal Design in the city. In 2016 the Global Goals Jam was combined as a joint event.

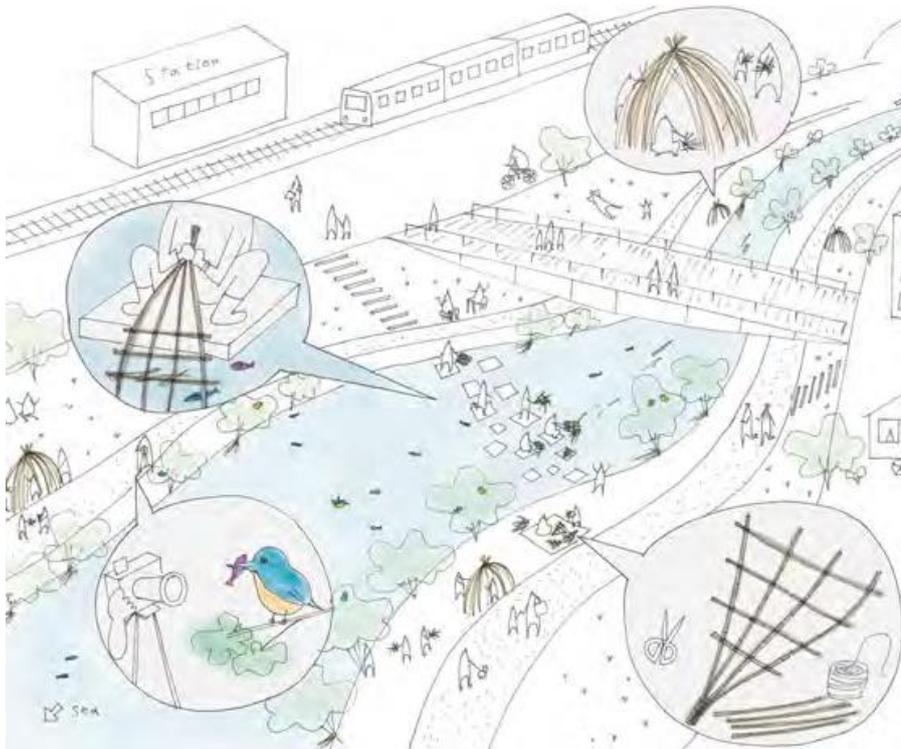
The 2018 Global Goals Jam in Fukuoka took place over the period of November 29th (Thu) -30th (Fri) . I was co-director,

alongside Yanfang Zhang and included Mark Watson as workshop adviser visiting from Australia as regular Jam organizer. The theme for the year was decided as Water and the City, focusing on Goals 11 and 14, partially in reaction to the torrential rains experienced in the region (KIDNEXT, 2018). Guest speakers included members from the local chapter of Mizbering (a nationwide social design initiative started by the Ministry of Land, Infrastructure, and Tourism to develop riverside activities in partial collaboration with Prominent Ad-agency Hakuodo among others). The Project received a Good Design Award in 2018 (Good Design, 2018). A Local government official from the city also shared issue to do with the sewer system.

There were four teams that formed with diverse members including local students, exchange students, professional from the public. Of the four one team looked to find stakeholders along the Nakagawa river.

The team looked lost about how to approach this topic during the jam. As a facilitator, I encouraged the team to go to the river, despite the lack of time being a tangible factor, and the team and I walked to the closest point of access to the Nakagawa. The team talked with people along the river, but one person stood out. There was a photographer taking pictures near the river. Through interviewing the photographer (A), it was revealed that A was a birdwatcher. He possessed knowledge of the habitat of birds, and was particularly interested in the kingfisher (Kawasemi in Japanese). He identified that the kingfisher needed trees overhanging the river, and that such trees were a nuisance from the perspective of routine maintenance, since they catch river trash, and drop vegetation into the water. Based on this interaction, the team looked to opportunities to design around for the kingfisher. The final outputs of the team were an overall conceptual vision for a kingfisher-inspired river design as seen in

**Fig 2. This included ideas and prototypes of river cleaning (Fig 3.), shelter for people and sharing kingfisher habitat while improving the rivers health overall.**



**Figure 2: Kingfisher ( Kawasemi) Project vision produced during GGJ 2018**



**Figure 3: Physical prototype of woven river waste catcher**

The team members were from various backgrounds but none of them from a zoological or ecological specialization. By exploring the river they were able to come across a member of riverside society, in this case a photographer and bird lover. His passion and empathy for the kingfisher sparked the team to conceptualize and stretch beyond anthropocentricity within the short jam session.

### **The Kingfisher inspires the future of the river**

I have shared the documented outputs from this project, as well as example from the Whanganui river with participatory networks of praxis. Directly inspired from such results I have continued to engage with the river and joined to form the Nakagawa Future Conference ( Nakagawa mirai kaigi), a bottom up organization to imagine and develop the future of the Nakagawa river front officially established in 2021. Currently the organization is gathering companies, local government and citizens to imagine the future of the river, and develop practical projects. The organization has applied and gained funding from the Ministry of Land, Infrastructure and Tourism to conduct place making in the river area and form a vibrant community. Such praxis has led to planning stages of new collaborations with a local primary school to teach MTH approaches to co-design on the Nakagawa river, with an eye to observing with a nonhuman perspective, such as fish and bird point of view, to understand nature and have a tangible understanding of risks in relation to bodies of water. In parallel, I have collaborated in a post human-centered design education project in Kyoto, where students designed for MTH concerns in the Kamo river, these results have been documented by Ito (2021).

## Implications

The transition to anthropocentricity from the individual to planetary scale was explored through the lens of one health and planetary health frameworks. I have argued that radical inclusion of the MTH can be rethought from the individual, considering the human body is a multispecies vessel. In discussing the inadequacies of current nascent efforts, and limits of human centered approaches, the granting of rights of nature, in the form of personhood is a powerful idea. The river described by indigenous Maori as inseparable from the self, links with the idea of the multispecies reconceptualization of the individual in design, where micro and macro are interconnected and intertwined. Similarly, I have argued that such conceptions of the river are themselves cultural institutions that provide opportunities for learning that is needed to transition from anthropocentric thinking, and that such learning cannot occur in the confines of traditional institutional bounds. The nature of rivers as connectors from the Mountains to the sea make them places for learning that transcend dogmatic anthropocentric structures. Through the case study of the Nakagawa and the Kingfisher, I have demonstrated early clinical results, highlighting the potential of rivers as places of learning and praxis that are wonderfully inseparable from the community of learners.

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