

Designing with and Beyond Humans: Opportunities in Earth Centered Design Education

Introduction:

Current design methodologies and practices are operationalized in the context of imperial expansion and continue to exclude alternative ways of knowing, living and designing. These practices are mostly centered towards human needs and systems, seldom considering other species and bigger life systems that exist on Earth. However, Indigenous communities constitute 6% of the world's population and they are responsible for managing, tending and protecting 50% of the world's land mass (The Guardian, 2020). The success with which these communities tend to the land is directly tied to their Earth centered approach to living (Smith, 2021). This approach considers humans as a part of a larger system, instead of centering human needs above the health and wellbeing of other species on Earth. This approach recognizes that, by following the cycles of nature, we are inherently benefitting human life, as we are part of nature herself. By following a predominantly human-centered approach in Design (and many other disciplines), we often create systems and solutions that do not consider the full spectrum of life and systems that we are a part of. Earth centered ways of being invite an integration of indigenous and ancestral values that have historically proven to contribute to the preservation and health and diversity for the benefit of life on Earth (The Guardian, 2020).

For the purpose of this research, I will use Findeli's (2010) definition of design, which states that "the end or purpose of design is to improve or at least maintain the "habitability" of the world in all its dimensions". I aim to contextualize the findings of this research within the field of Earth-based design (Smith, 2019), which de-centers humans from the design process by considering the entirety of nature in the process of designing. Designing from a human-centered approach has failed to maintain a healthy and livable environment for humans and other species.

Pollution, toxicity, global warming and disease are a few of our challenges today (*Smith, T. (2019), St. Pierre, Louise. (2015), Tuhiwai Smith, L. (2021), Tunstall, E. (2023)). The importance of further integrating Earth centered living into design relies on a call deeper than sustainability. As sustainability becomes a term used to find ways to sustain the extraction of Earthly resources for human use (N, Zuniga Shaw, personal communication, August 21st, 2023). Earth Centered Design invites us to integrate our practices of making into the systems of nature, into the life of other species with the purpose being to benefit the overall health of the entire planet.

Although Indigenous communities have fostered an Earth centered perspective to life for generations, historically, this perspective has been devalued within academic settings. As Smith (2001) reminds us “The arguments of different Indigenous peoples based on spiritual relationships to the universe, to the landscape and to stones, rocks, insects and other things, seen and unseen, have been difficult arguments for Western systems of knowledge to deal with or accept. These arguments give a partial indication of the different world views and alternative ways of coming to know, and of being, which still endure within the Indigenous world.” (Smith, 2001). Design today needs a broader lens of 'relationality' (Escobar), beyond the "functionalist, rationalistic, and industrial traditions from which it emerged" (Escobar, 2017). Learning from non-western traditions allows for new ways of knowing to be introduced, allow for new worldviews and ways of knowing to be introduced into the field of design.

This research adopts inspiration from direct experience with the BriBri, Yawanawa and Guarani Communities in Central and South America, integrating these communities' ways of world-making into ways of designing within the context of Earth Centered Design. Design theory and practice can benefit from an Earth centered perspective not only to surpass the limited

notions and practices that sustainability currently has on the field, but also to integrate design itself into a transdisciplinary, expanded practice that welcomes a diversity of worldviews and ways of being.

Earth Centered Design opens up the design field for the integration of indigenous voices and for the possibility of dreaming new realities that can benefit the overall health of the planet for future generations on Earth. It sets design up for success in a world of environmental chaos in which current design solutions have failed to create better living systems for humans and beyond. The importance of this work lies not only in the historical reparations and representation needed in order to make the design field more democratic and inclusive, but in recovering ways of designing that are holistically connected to the Earth and expand and connect to other disciplines and worldmaking tangents..

Personal Experiences:

The learnings and experiences described in this paper came to be through personal experiences with the communities previously mentioned. In my undergraduate design education, I was exposed to the concept of sustainability within design and the practices to integrate sustainable ways of making into my practice. In parallel, I have had the opportunity to learn from indigenous and ancestral practices and be exposed to different ways of thinking, being and relating to the environment around me. These new worldviews deeply inspired my design practice and allowed me to integrate practices beyond sustainability into my design work. I recognize that, if it was not for these interactions outside of my academic training, I would not have been able to integrate such a holistic understanding of design into my practice, finding design solutions and generating systems that go beyond human needs, encompassing other species and multidisciplinary approaches into my work. Through the transformative impact these

life learnings have had in my life and design practice, I recognized the importance of integrating these teachings and ways of being into design education, bringing the benefit of an Earth centered perspective to design students who otherwise would not have the opportunity to apply a holistic, transdisciplinary way of thinking into their designs practices. I have had the opportunity to visit, learn from, and share space and time with indigenous and ancestral teachers outside of my academic practice, and later integrate these learnings into my research work as lived experiences.

I have learned from the Yawanawa through ceremonies and conversations that happened when I visited their territory in northwest Brazil in December of 2022 and as I continued to work with them online, helping them translate their classes and events from Portuguese to English. I have encountered Bribri women several times in Costa Rica in February 2023 and 2024 and learned from them in workshops and personal conversations. I have also had the opportunity to visit the Guarani in Sao Paulo, Brazil through an OSU university grant and learn from talking with community members and participating in a youth media project called Kunumingue in the Tekoa Ivy Pora community in August 2023.

It is important to note the context in which I am sharing this information that has been passed to me. To these communities, it is a choice to share their knowledge and traditions with the West. There is a common belief that, by sharing their knowledge, they can bring more awareness to the environmental and social struggles they go through, while also highlighting the importance of environmental awareness for the overall wellness of the collective (all beings that live on this planet). Creating environmental awareness and sharing these cosmovisions further completes their spiritual prophecies of Unity, and remembrance that we are all connected through the ecosystems we live in and tend to. Passing their knowledge forward benefits them, the entire

human family as well as the plants, minerals and animals that co-inhabit this Earth with us. In other words, the sharing of this knowledge is not only welcomed but encouraged, with a higher purpose of bringing all humans into balance with the overall wellbeing of all life on Earth.

By sharing certain approaches and values of the Bribri, Yawanawa and Guarani in this research, I am, as a designer and educator, redirecting what was shared with me and integrating it into future methods for teaching the concept of Earth Centered Design, which further heightens the awareness of these values and can, as was expressed to be of utter importance to these communities, contribute to the overall wellbeing of all beings that live on the planet.

Learnings:

For each of the communities mentioned, there is a component of this paper that exposes cultural practices around a certain object, material or ritual, as well as an observation of how learning is transmitted, within the context of Earth centered ways of being. By understanding how materiality and environmental awareness are intertwined in these communities, I was able to identify content that could be shared and taught to expand awareness and understanding of Earth Centered Design (i.e., curricular content), and also identify how this learning takes place in these contexts, translating them into ways of teaching and learning formats that can be brought to a design classroom (i.e., pedagogical approaches).

In the BriBri community, the practices observed and the wisdom shared revolves around Cacao, a plant grown in the BriBri territory in Costa Rica. The tending to Cacao in the community starts before seeds are planted and extends to how they are grown, collected, processed, consumed, and in recent times, how they are commercialized. Decisions regarding the management of Cacao topics such as commercialization and pest management pass through a council of Elders. The council utilizes rituals and spiritual practices in the process of decision

making and there has been evidence within the community that utilizing such practices that honor the Earth and the Spirit world has brought thriving to their cacao economies, allowing for the support of the families involved in the process. The methods of learning that are present in the community include teaching through storytelling (centering ancestral narratives), sitting in a circle to listen and discuss topics (non-hierarchical learning) and drinking Cacao in the process of learning about it (embodied learning).

In the Guarani community, the practices of beekeeping are shared in the context of supporting local bee species through ecosystem management. The health of the bees and the overall health of the local ecosystem are at the center of decision making surrounding the topic. Ritual and acknowledgement of Spirit are integrated in the decision making around habitat, beeswax and honey production and use, and the processing of the byproducts of beekeeping. Note that the material outcomes from the practices are considered byproducts of the wellness of the bees and the ecosystem, not vice versa. Through this content, the use of the honey and the wax is medicinal and ceremonial, and the consumption of those are in alignment with the same spiritual practices and values applied to beekeeping. The methods of learning that are present in the community are storytelling (centering ancestral narratives), sitting in a circle (non-hierarchical learning) and visiting the bees/ hiking the territory (embodied learning).

Yawanawa community practices are directly connected to Spirits and plant wisdom. Spirit informs decision making around health, medicinal plant use, and wellbeing rituals such as plant stems and clay use, among others. The Earth informs health and is directly interwoven with spiritual meaning. The study of the materiality of the world around us is done through the ecosystem and its equilibrium. The equilibrium is sought not through Western Science but through the study of spiritual practices. The methods of learning that are present in the

community are storytelling (centering ancestral narratives), sitting in a circle (non-hierarchical learning) and communing with Spirit to learn about plants and ancestral Wisdom through “Dietas”.

Project Development:

By learning the ways in which these communities center the Earth and Spirituality through a holistic lens in their practices, I looked into how to translate different learnings and practices into design content and pedagogies, in an attempt to further the teachings of these communities into the context of design education. By combining these experiences with a review of the secondary research, I envisioned a new framework for design teaching rooted in Earth centered ways of being. I have been developing this framework by generating, exploring and testing “SEEDS” (Social and Environmental Exercises for Design Beyond Sustainability). These SEEDS are exercises of varying complexity, depth and time-commitment that can be used to introduce topics that deepen the understanding of Earth Centered Design in a classroom space. This pedagogical approach became a large research and application project that is now being developed for my MFA thesis in Design at OSU. In this paper, I will showcase examples of two of the SEEDS that have been developed in this context. These SEEDS exemplify ways in which Indigenous teachings have been adapted to design curricula, showcasing part of a bigger body of work that I am creating. These exercises are currently being tested in classroom and community settings to assess the impact of introducing different content and methodologies for the advancement of Earth Centered Design. By testing these SEEDS in different environments, I have been able to start learning about their impact in student’s lives, as I mention below.

One of the main pedagogical formats I integrate into the classroom is teaching through Ritual. Ritual allows for an embodiment practice in learning. Additionally, it promotes cultural

longevity of ancestral knowledge that can be implemented in Design teaching. I looked at ways to deliver content (what is to be taught), and to create a container for students to dive into their own design process (the form in which the content is taught) through ritual practices. Two workshops were developed in this context. They both utilized methods such as sitting in a circle and taking time to pause through embodied learning in guided meditation. The introduction of information in a co-created space where everyone is a participant allowed for openness and ease, creating a dynamic learning environment for students. Both workshops took place in major Research 1 university's design classrooms.



workshop 1



workshop 2

Pictures of workshops 1 and 2, with students sitting in a circle and being introduced to topics related to Earth Centered Design.

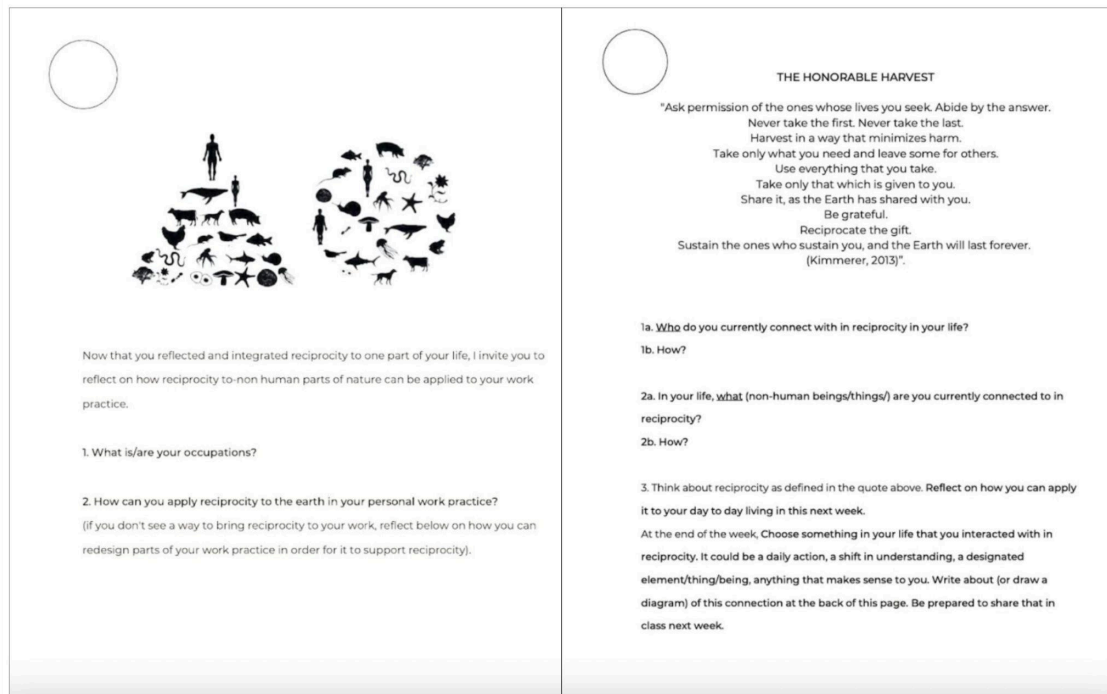
Both these workshops included a ritual format and delivered Earth centered introductory content. They introduced the concept of decentering humans from the design process and considering other species and their needs in the process of designing. I brought resources such as excerpts from Robin Wall Kimmerer “Braiding Sweetgrass” (2013) to the classroom, prompting

students to the concept of reciprocity with the Earth and what that can look like in their own lives and practices. Ritual became a medium to deliver the content and engage students in a different format of learning for these two SEEDS.

Workshop 1 introduced the concept of mycelium networks and how networking structures design decision making and systems thinking. Students were encouraged to engage with different learnings about mycelium introduced through a ritual format, in which I guided them through the four directions and connected each Earth element with a mycelium learning. Workshop 2 started with a guided meditation in which students were encouraged to reflect on the idea of Ecocentrism vs. Human-Centrism and find ways in which their practices could align to an Earth Centered Design Philosophy. Students participated in two sessions and were given the prompt to reflect on for the week in between sessions. The reflections that resulted from the exercise included considerations of other living beings in students' lives, conscious use of materials and products in their personal and professional practices, and an overall better understanding of Earth Centered Design and the concept of Ecocentrism than prior to the workshop.

Both workshops had a high level of engagement from students and an increase in reflection-driven conversations that allowed students to process the concept of Earth Centered Design. They were invited to consider more-than-humans in their lives and professional practices, and reflect on their engagement with other species and the impact they had on them. When considering more-than-human agents in their reflections, students mainly worked with agents that were familiar to them such as house plants, close community members, and pets. This accounted for a very limited amount of species/things that don't fully represent the diversity of the Earth, but allowed for a new way of thinking that could, with time, bring forth deeper

understanding of inter species interactions. The connections that students described with other species allowed for an exercise in reciprocity which manifested in the generation of reflections and actions. Reciprocity is a part of the primary indigenous values of the communities whose wisdom sharing inspired the workshop materials. Bringing this concept to students allowed for them to engage with Earth centered ways of being through the entry point of reciprocal multi-species relationships. Below is a sample worksheet from workshop 2.



Sample worksheet from workshop 2 containing exercises to reflect on reciprocity with Nature.

Conclusion:

The exercises described above are only a couple of examples of a larger array of activities that are being developed and tested. Introducing a new mindset takes time and a single exercise can only plant a seed. It cannot introduce a whole new way of perceiving the world or designing it. This research will further measure and analyze the impact of different exercises applied

individually and collectively, in order to create a framework that allows for educators to further implement and test these new activities and content into their communities.

It is important to note that for the purpose of this research, measured results are not as important as the impact an exercise can have in the future as it gets integrated into the student's understanding of a new perspective. Ideas take time to be embodied and developed. My goal is to introduce Earth Centered Design as a way of living and creating, so design students can have that as a part of their toolset as they practice design. This is the first step towards a more Earth Based Design education. Earth Centered Design requires embodiment in an Earth centered life, meaning that our professional practice and personal values need to be intertwined in the same common understanding. Because western cultures do not operate under a holistic, Earth centered lens, teaching Earth Centered Design requires the introduction and contextualization of the subject and method. Most students are not familiarized with or already embodying reciprocity in interconnected ways, so the introduction of simpler SEEDS might be required before more intricate concepts are applied. SEEDS accounts for different learning contexts and offers a range of depth and time investment options so that educators can gauge and adopt these methodologies and content according to their classroom needs.

It has been already possible to look at results from these practices through feedback from students that participated in the workshops. I have heard back from students on how the prompted workshops encouraged them to rethink daily consumption, and incorporate Earth centered decisions in material sourcing and iterative practices when designing. I am also working with educators in different departments at OSU to further test and implement the "SEEDS" into their classrooms, which will allow for further analysis of the content and its benefit in the medium to long term, as applied by other educators. The main goal of the project is to introduce

the concept of Earth Centered Design through different content-based formats, as well as bring different methodologies in which this content can be taught, such as incorporating a ritual format into the classroom space.

Next Steps:

From the application of this work so far, I have learned how to develop different levels of in-classroom engagement activities to meet students where they are (from introductory content to advanced ideas), as well as work within different time frames to propose SEEDS that can be integrated into current curriculum or brought in as a semester long class. My hope is that the variety of the SEEDS presented in this project will allow for flexibility and expand the application of Earth Centered Design in the classroom space. I plan for this work to become a resource and stepping stone for educators looking beyond-sustainability for solutions for a resilient Design practice.

As this work is further developed, my plan is to organize the SEED exercises that have been created into a concise deck of instructional cards for further educational use. The cards will come accompanied with a handout that explains context, purpose and provides guidelines on how to apply the SEEDS into different classroom environments. These cards can be utilized for quick, 15-minute introductory exercises all the way to developing a whole curriculum for a semester long class. I hope this work can become a tool for educators to share their experiences introducing Earth Centered Design learnings into the classroom space. Further, I hope this work can show how Earth Centered Design can impact students' practices beyond the in-class explorations, informing design thinking, process and generation making as it informs the next generation of designers.

Future Seeds:

Earth Centered Design not only generates, but regenerates design practice. “Through making-with ecosystems, an expanded kinship network regenerated our design practice, layering past and present, mauri, matter, and place” (Smitheram & Joseph, 2020). With this regeneration, comes the (re)integration of humans into the systems of nature where we belong. “We step across the threshold of a new state of belief and of being that will come to define 21st century science” (Eisenstein, 2019).

Instead of rejecting humanity as a whole, Earth Centered Design is about understanding our species as a part of a bigger ecosystem. In doing so, we can bring integration back to our predominantly-western design practice, benefiting the survival of humans as a species, while also contributing with the balance between humans and all other beings and elements that live on this Earth. As Eisenstein reminds us (2019), “the powers of reason, science, technology will still be with us... a co-creative partnership with the universe instead of domination and control. A co-creative partnership with the Wild. In education, a co-creative partnership with the child.” And in design, a co-creative practice with our present and future realities.

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