The Quercetum Chorus Workshop

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Abstract
The Quercetum Chorus Workshop introduced students in the Cal Poly Pomona Interdisciplinary Paris Study Abroad Program (CPP IPSAP) to methods of deepening human-tree relations through sound, drawing and movement. Students applied a multi-sensory approach to knowing trees by attuning to their frequencies, textures, shapes, and movements. They were invited to reimagine trees as more-than-human bodies and relate to them through shared sonic, visual and somatic sensibilities. Embodiment, listening and inner reflection bridged the personal to the environmental in a co-creation process participants could share later in a variety of educational and community contexts. The Quercetum Chorus is part of Sonic Kinesthetic Forest, a research collaboration between landscape designer, Rennie Tang, sound artist, Eleni-Ira Panourgia, and movement/dance educator, Lisa Sandlos, that responds to issues of disembodiment, social isolation, and disconnection from nature. For the Quercetum Chorus workshop, we partnered with landscape design studio Coloco, the design team for a multi-year urban development project in Val de Fontenay, a suburb of Paris. Coloco had planted a group of 20 species of oak trees (a quercetum) near their project site to test the resilience of the trees in the current environmental context and inform the strategy for future oak tree planting within the new development. Each student observed, documented and researched one oak tree in the quercetum. Using our methodology, they developed a sonic kinesthetic language for relating to their tree, allowing them to enhance their design practice through empathy and an appreciation for their tree's resilience as it became established.

Keywords: Landscape Architecture, Drawing, Dance, Movement, Sound, Listening, Embodiment, Climate Change, Sensory-Based Methods, Pedagogy

Introduction

The Quercetum Chorus Workshop is part of Sonic Kinesthetic Forest, a research collaboration between landscape designer, Rennie Tang, sound artist, Eleni-Ira Panourgia, and movement/dance educator, Lisa Sandlos. As a project that began during the COVID-19 pandemic across three time zones, it relies on virtual communication technology while responding to issues of disembodiment, social isolation, and disconnection from nature.

The Quercetum Chorus workshop emerged from our collaboration with the Paris-based landscape design studio Coloco, which is part of the design team for a multi-year urban development project in Val de Fontenay, a suburban neighborhood at the eastern periphery of Paris. At the outset of the project, Coloco planted a group of 20 different species of oak trees, known as a quercetum, on a plot of land near their project site to test the resilience of the trees in the current environmental context. The experiment will inform the strategy for future oak tree planting within the new development.

The workshop utilized sound, drawing and movement methodologies with the objective of deepening human-tree relations and developing novel co-creation processes. Our approach focused on multi-sensory ways of knowing trees by attuning to their frequencies, textures, shapes, and movements. The methods that were used invited students to reimagine trees as more-than-human bodies (Weig, 2021; 2022) and explore ways of relating to them through shared sonic, visual-spatial and somatic sensibilities. Each student was assigned one oak tree in the quercetum to observe, document and research. Using our methodology, the SKF team worked with the participants to develop a sonic kinesthetic language for each tree in the quercetum as a means of enriching their tree research and empathizing with their tree as it attempted to meet the challenges of becoming established. Through this common language, participants were asked to perform a series of improvisations exploring the effects of climate change on trees and humans and create video-recorded, site-specific performances to be shared in a culminating presentation.

Embodiment, listening and inner reflection activities may be used as a starting point for addressing ecological and social challenges faced by landscape and urban designers grappling with multi-scalar realities of large development projects (Ingold, 2021). Landscape architect David Buck points out the need for "the development of design tools to specifically address the rich temporality of landscape space within landscape architecture, and sound as a vital constituent of it" (Buck 2017, 4). We propose sound, movement and embodied drawing as a combined set of design tools that can help bridge the personal to the environmental, and the body to the city.

Understanding climate change through the lens of trees was a key area of focus of The Quercetum Chorus workshop. By using this approach students were introduced to differences in the ways landscape designers and artists acquire and create knowledge. Familiar with working in the visual realm, students could see visible signs of stress in their trees such as wilted leaves or bare branches. However, they could not see the tree roots below the ground or grasp whether their tree was affected by the pollution coming from the adjacent street. It was these invisible and temporal aspects of trees that became a driving force behind the workshop activities. Non-visual sensory data acquired through interdisciplinary collaboration is equally valuable and a relief from the over saturation of visual imagery in our daily lives. Research that highlights the other senses can be found within discourses surrounding arts-based approaches to climate change:

> … may foster new ways of sensing, experiencing and anticipating the future in conditions of high uncertainties and high stakes. … Art experiences have the potential to 'bring climate change closer' to include 'experiences' (emotional and embodied) and provide texture and meaning on which new ways of seeing the world can emerge. (Galafassi et al., 2018)

These arts-based approaches attempt to address the core issues that make climate action challenging for many. One of these issues is that the threat of climate change seems abstract and distant, thus downplaying the urgency of taking action (Spence et al., 2011). Another issue relates to the primacy of verbal language which may result in communication barriers between humans and the natural world. Art practices are capable of opening up non-verbal forms of engagement and tacit knowledge inherent within complex ecosystems (Galafassi et al., 2018; Eisner, 2002) such as that of trees and forests.

In our workshop, moving with and listening to trees was a process of guiding the body to align with the rhythm of trees, the pace of their swaying branches or the decades-long process of growth and decay. This exercise awakened students to the disjuncture between vegetal life as their medium and their future job in the field of landscape design of imposing human temporality on nature, either speeding up or slowing down the existing order of time (Jackson, 1984) in the pursuit of controlling nature. The Quercetum Chorus workshop aimed to make climate change both visible and visceral for students, enriching their landscape architecture design skills, drawing attention to their ecological values, exploring sonic kinesthetic forms of expression, and developing design strategies that celebrate the aliveness of the landscape.

As a highly adaptable set of tools, our sonic kinesthetic process can be shared in a variety of professional, educational and community contexts in the future. We demonstrated the process and methodology of The Quercetum Chorus Workshop during our workshop presentation at the Paris Conference on Arts & Humanities (June 2023).

Background

Workshop Context

Students who participated in The Quercetum Chorus Workshop were students in the Cal Poly Pomona Interdisciplinary Paris Study Abroad Program (CPP IPSAP), a one-month intensive summer program directed by CPP faculty, Rennie Tang and Nina Briggs. Cal Poly Pomona is a state university forty kilometers from downtown Los Angeles. Eleni-Ira Panourgia and Lisa Sandlos were invited as guest artists from Berlin and Toronto respectively to co-facilitate the Quercetum Chorus Workshop with Tang. The group of eighteen students included a mix of Cal Poly Pomona undergraduate and master's students: nine undergraduate students in landscape architecture of different year levels, three undergraduate students in architecture, three undergraduate students in engineering and three master's students in landscape architecture. The CPP IPSAP project was centered around a collaboration with the landscape design studio Coloco, led by Pablo Georgieff. Coloco's project sites were located near Val de Fontenay, a suburban train station located just outside the periphery of Paris within the commune of Fontenay-sous-Bois and situated in the department Val-de-Marne.

The Quercetum Chorus Workshop took place in two locations within the vicinity of the future urban development: 1) a test plot of oak trees within the neighborhood Quartier

Alouettes and 2) Parc des Olympiades. The aim of the workshop was to instill a sense of embodied knowledge in the students that would guide how they approached the design of this urban development, which was largely driven by the construction of transportation infrastructure. As a way to initiate the project and honor the history of the city, Coloco planted a quercetum of twenty different species of oak trees on a temporary test plot.

The intention was to foster a more empathetic connection between the students and the trees to help them design with a deeper understanding of how all life forms would be affected by the new transportation infrastructure, built forms and new landscapes.

Sonic Kinesthetic Forest Approach

In our ongoing research collaboration, Sonic Kinesthetic Forest, we bring together sensory-based, creative methods of embodied drawing, sound and movement to facilitate human connection to trees and forest landscapes (Tang et al., 2023). Our work draws from David Abram's (1996) perspective that sensory practices are beneficial for humans in responding to issues of disembodiment, desensitization and disconnectedness from nature. By combining somatic, visual, spatial and sonic modalities, we seek to reinforce our connection to trees for developing "ecological empathy and embodied engagement" with landscapes (Tang et al., 2023). Activating our sensory perception while tuning in to the interconnected relationships of landscapes offers opportunities to observe and better understand how climate is changing over time.

Embodied and ecological understandings can be arrived at through movement exploration and improvisation. As moving beings, humans are part of the ever-changing, interconnected ecosystems of our planet and connections can be made between patterns of motion in nature and movement elements of human behavior and interaction (LaMothe, 2015; Pomer, 2023). Shared experiences of movement including somatic attunement to heartbeat, breathing and the dynamics of expressive gestures can restore humans' intrinsic sense of belonging to the natural world (George, 2017). Through its potential to connect mind and body, movement and by extension, dance, has been used across many cultures as a means of promoting healing and transformation, both individually and collectively. Working creatively through movement and dance can provide opportunities for an ecological approach to health and wellbeing that goes beyond language and logic (Copteros et al., 2017). Training the senses and moving in response to movement patterns of nature (for example, cycles of growth and decay in forest) can cultivate "ecokinetic knowledge" in humans (LaMothe, 2015), an epistemology that can be tapped in the practice of landscape design.

Sound provides information about multiple dimensions of a landscape and their relationships including human and non-human, spatial and temporal, material, ecological, cultural, historical, geographical and climatic (Schafer, 1977). Focusing on sounds in landscapes can offer new perspectives and understandings about human and nonhuman relationships and the ways in which they interact with each other and their environment. As Marcel Cobussen (2022, 15) asserts, "[s]ound is a sensory modality that can be used as an expressive category through which interaction takes place." Sound exists in both temporal and spatial scales and offers an embodied experience of a landscape (Barclay, 2019). It also propagates beyond the physical boundaries of sites, is invisible and changes over time, which can offer multiple perspectives of sites beyond what is visible and allow us to track change. Therefore, the consideration of the sonic dimensions of sites in landscape architecture designs can enhance

not only our sensory perception of locations, organisms and climate, but also our embodied connection with places as they change over time.

Drawing plays an important role in this research because it is a medium that designers are familiar with; yet it deserves further exploration as both respondent and instigator of sound and movement. Sonic Kinesthetic Forest focuses on embodied drawing, an abstract form of drawing that can be used to open up new directions towards rhythmic, textural and embodied elements in landscape architecture. Due to the need for drawing materials such as paper, pencils and charcoal, we are flexible about how drawing takes place during a given workshop, depending on whether it is online, indoors, outdoors or hybrid. We sometimes use a gestural approach where the drawing is invisible and bodily gestures perform the drawing on an imaginary canvas but, when feasible, we invite participants to draw on physical paper. In The Quercetum Chorus workshops, since we were mostly working outdoors, students used the gestural approach whereas in our conference demonstration participants used pencil and paper. Regardless of how the drawing is carried out, a key consideration is that drawing is a performative and temporal act that, in dialogue with sound and movement, can expand the ways in which designers think and create.

The Quercetum Chorus Workshop

The full-day workshop involved three parts: a) sonic kinesthetic activities near the Val de Fontenay quercetum: b) Sonic Kinesthetic Forest project background information and drawing demonstration; c) climate change improvisations in the park; group work and video outputs. Assigned readings prepared students for thinking about the significance of movement for all living beings and approaches to sound and climate change. 'Chapter 1: What is Movement?' from the book *Everybody Is a Body* (Studd & Cox, 2013) prompted students to reflect on the value of becoming more conscious of movement as fundamental to human experience. They were asked to consider how awareness of flow, an ongoing modulation of the continuum of free to controlled movement that connects inner experience to objects and other living beings in the environment (Studd & Cox, 2013), is important in the design disciplines specifically, and how knowledge of the basic components of human movement can be translated into their observation of the movement of trees and landscapes. For sound, students were asked to read the article 'Listening to nature: How sound can help us understand environmental change' by Garth Paine (2019) and consider the ways climate change could affect acoustic environments, the insights that sound and listening can provide about landscapes and ecosystems, and how they could employ sound in landscape design to activate a multisensory experience and address the effects of climate change.

Sonic Kinesthetic Activities Near the Quercetum

To foster human-tree connections, Sandlos and Panourgia led movement and listening activities near the Val de Fontenay quercetum. The activities took place in the morning and consisted of a sequence of guided movements led by Sandlos, followed by a listening exercise led by Panourgia. The day of the workshop was sunny and warm, leading us to engage with trees located in areas with shade.

Drawing on somatic practices including Bartenieff Fundamentals, Feldenkrais, Authentic Movement, and Body Mind Centering (Hanna, 1988), the movement exercise began with attunement to patterns of movement within the body. Closing their eyes to focus inward, students were directed to notice and exaggerate the rising and falling of their chests and the

lengthening and shrinking of their spines in the repetitive cycle of diaphragmatic breathing. They were guided to sense the subtle shifting of their weight across the soles of their feet and the small muscular adjustments that are necessary for balancing when standing vertically. Then, students were guided in visualizing roots growing downwards from their feet into the ground, providing stability as they began to gather energy from the earth with their hands, drawing it up along their bodies like sap rising through the trunk of a tree. They were asked to reach upwards through the crowns of their heads and the tips of their fingers as the leaves in a tree canopy move towards sunlight. As students explored free movements of their upper bodies and arms like branches being blown by the wind, they were invited to open their eyes to take in the trees and other humans around them and continue to move creatively in their own ways, sensing themselves as part of the larger ecosystem community of tree bodies (Figure 1).

Figure 1: Students moving together with trees.

Drawing from *deep listening* (Oliveros, 2005) and *perspective listening* (Wand, 2021) practices, the listening activity was focused on human-tree bodies and perspectives. Students were invited to imagine themselves as the trees on the site and listen with, through and under their tree bodies (Figure 2). They were guided to turn their attention to their various tree parts starting from leaves and branches to the whole canopy; then down to the trunk and lower towards the roots under the ground. Each listening perspective focused not only on the sound sources, but also responded to movement, weight and form, as well as in relation to other organisms, weather and climate. Listening as tree bodies enabled the students to react and adapt to the weather and climatic conditions on this specific site. Following the listening activity, students were encouraged to share any verbal descriptions or vocalizations of a sound that was the most important one for them as trees. Some of the impressions focused on traffic noise and its negative impact on trees, others on bird sounds and organisms co-existing with trees, while some others on the underground root system of trees and its function.

Figure 2: Students listening through their tree bodies.

This first session enabled the group of students to attune to their bodies, to the surrounding urban landscape and to each other. During the discussion that followed students shared their responses to the movement and listening activities, including comments about how they felt that their bodies had softened, opened up and become more connected to the site. They also shared how they discovered sounds and relationships between their tree bodies and the trees in the environment at the site by listening. This session was critical for introducing a sense of embodiment that set the stage for the following parts of the workshop.

Sonic Kinesthetic Forest Project Background and Drawing Demonstration

The second session took place at the Maison du Projet, a community space to which the Cal Poly students were granted access through Coloco. Sandlos, Panourgia and Tang gave a presentation on the practical and theoretical underpinnings of the Sonic Kinesthetic Forest to help the students contextualize the workshop activities. The presentation included examples of research and artistic works that involve movement, sound and drawing that engage with embodied and ecological approaches. These examples were drawn from soundscape and acoustic ecology (Barclay, 2019; Krause, 2020; Schafer, 1977), music, sound art and gardens (Jardins de Métis, n.d.; McKinnon; 2021; Messervy, n.d.; Schütz, 2017), Laban Movement Analysis (Fernandes 2015; Hackney 1998; Laban 1988; Studd & Cox, 2013) and choreography that integrates drawing such as the work of Trisha Brown (Eeely, 2014) and William Forsythe (1999). The session concluded with a drawing demonstration by Tang who explained the expressive use of charcoal in response to sound and movement qualities reflecting on textures, rhythms and embodied experiences. The students were encouraged to use these techniques in their drawings to help them visualize the sonic kinesthetic prompts given by Sandlos and Panourgia.

Climate Change Improvisations in the Park

This activity explored the impacts of climate change on trees by asking students to use movement and sound to perform improvisations based on the conditions in a series of climate change scenarios. For this activity we gathered in a shaded area within the Parc des Olympiades at Val de Fontenay. The students were divided into three groups to assume the roles of trees in a forest, climate change disruptors and climate change sound makers. The groups worked creatively towards structured improvisational performances of three climate change scenarios: a rainstorm, a drought and a fire (Figure 3). Roles rotated for each performance so that every group had a chance to perform each of the three roles. During the improvisations, one person served as the timekeeper, circling their arm like the hand of an analog clock around 360 degrees to indicate a "one-minute" period within which the sound and movement actions took place. To highlight the slow, long-term, nature of climate change, the "one-minute" revolution represented a decade in time. A space surrounded by trees in the public park setting was the location of our site-specific performance, which attracted spontaneous spectators from the local community.

The rainstorm scenario involved fast spinning, running and leaping movements, many of the disruptors cycling their arms to propel themselves through the space. They also hovered around the trees who reacted as if they were being blown down by the wind. The sound makers pushed and tapped tree branches with leaves on the pavement to create a stormy rhythm while others crushed plastic water bottles to create crackling sounds. Others used their voices to make animal-like sounds which increased in volume and pitch as the rainstorm barged through the forest. The fire scenario elicited more intense movements from the disruptors and many of the trees gradually collapsed to the ground. The sound makers used the same instruments but applied more force in response to the destruction. The drought scenario was the most challenging for the disruptors but eventually they came up with a strategy where they linked together to create a web-like organism that slowly made its way through the trees.

The structure of the improvisational framework set up by Sandlos and Panourgia provided each group with a clear sense of their role and cues for each round of improvisation. The role exchange during each improvisation session created the opportunity for students to experiment with different iterations and variations of the sonic kinesthetic manifestations. For example, playing with linear, circular and more dispersed configurations of their bodies in space while creating sounds using water-filled bottles, tree materials, body percussion and vocalizations opened up new ways for engaging with the landscape not only in situ, but also in a future scenario through an embodied experience. There was ample room for interpretation of the prompts and an invitation to contribute to the choreographic and sonic ideas while at the same time, the structure motivated the students to work collaboratively.

Figure 3: Students performing climate change improvisations.

Group Improvisations and Video Outputs

Following the sonic kinesthetic activities and climate change improvisations described above, the students worked in small groups of three or four to further explore the methods and engage with the site and their tree using the sonic kinesthetic methods they had learned. The groups were asked to choreograph a movement sequence and develop a soundscape to portray a small grouping of trees situated within the park landscape. They were also asked to specifically consider their own oak tree and how it might be affected by climate change. They were encouraged to make their own sounds or record sounds from the landscape. Groups took turns video recording each other's performances.

The video and audio recordings were then edited to create a 30-second video which was presented in the Maison du Projet at the end of the workshop. Each group shared information about their experiences of sonic kinesthetic engagement with trees and their creative processes involving embodiment and landscape in the realization of the video. The presentations were followed by a discussion on landscape, movement and sound inspired by the readings that the students had been given prior to the workshop. A sequence of screenshots from one of the videos with an accompanying narrative is shown below.

Figure 4: Screenshots from student tree performance video.

This team's performance explored the entire life span of a tree. Beginning as saplings emerging from the ground and moving upwards towards the sunlight, the three trees became integrated into their surrounding forest but, as a result of climate change, they eventually dropped back onto the ground. Outward stretching motions expressed growth while inward collapsing motions indicated decay.

Conference Workshop

At the PCAH2023, we presented the methodology and creative outputs resulting from The Quercetum Chorus Workshop and invited participants to experience our approach. We guided the conference participants through a selection of the exercises done in The Quercetum Chorus Workshop. Standing in a circular formation in the interior space of the presentation room at the Maison de la Chimie, participants were led through movement, sound and drawing activities that encouraged them to move and listen from the perspective of an imaginary tree with which they were familiar. With their eyes closed, participants used pencils on paper to experiment with abstract drawing in response to their moving and listening experience. Participants shared their impressions and commented on the potential of sonic kinesthetic sensory methodologies within pedagogical contexts in their respective disciplines.

Conclusions

Working with trees in The Quercetum Chorus Workshop at Val de Fontenay enabled students to perform in a sonic kinesthetic manner with and from the perspective of trees. Students applied a multi-sensory approach to knowing trees by attuning to their frequencies, textures, shapes, and movements. By approaching trees as bodies and relating to them through shared sonic, visual and somatic sensibilities, they were able to link the personal to the environmental in a co-creative and performative process.

In discussions that emerged from the workshop process, students commented on how sonic kinesthetic methods could be beneficial for landscape architects working with local inhabitants who typically do not participate in urban planning and landscape design processes. Since the language of architectural drawings and presentations are not accessible to everyone, using sound and movement to stimulate public interest and participation can be very compelling. Students expressed interest in paying more attention to sensory aspects of landscapes and in incorporating sound and movement into their future design projects.

The students appeared to be comfortable and enthusiastic about working expressively with their bodies. Previous activities in the CPP IPSAP program had also entailed movement and sound explorations which gave them an opportunity to get used to embodied ways of working. Their willingness to play and explore different ways of moving and sound-making allowed them to engage productively in the activity. Being in a group and working as a collective made the process enjoyable and likely lessened any feelings of self-consciousness they may have felt otherwise.

The co-creative and performative processes used in this workshop can be applied to other contexts in other regions around the world, all of which have particular species of trees experiencing climate change in different ways. We are developing this workshop as part of a global Sonic Kinesthetic Forest network and archive to draw attention to sound, movement

and embodied drawing as important tools for connecting climate change research with sensorial modes of knowledge production.

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