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Sonic Shimmers – Explorations Inspired by the Defensive Behavior of *Apis dorsata*

The research-creation project I worked on in Linz aims to develop a kinetic and sound artwork inspired by the defensive behaviors of *Apis dorsata*, the giant honeybees native to Southeast Asia. Through the use of mechanical and sonic devices, as well as programming, the installation will seek to artistically translate the fascinating defense mechanisms of the bees, by reinterpreting their synchronized movement and communication into something new.

During my residency, I made significant progress in advancing my project by exploring various technical, spatial, and relational dimensions in order to create a prototype module for the kinetic and sound installation. This module will serve as a core component of the larger artwork, which draws from the collective defensive behaviors of *Apis dorsata*.

To better define the spatial arrangement of the installation, I created rudimentary models to visualize and test potential interactions between the modules. These trials helped refine my choices regarding layout, ensuring that the programmed behaviors and the aesthetic, immersive effects I want to evoke are fully realized.

Being near the Kunstuniversität in Linz provided the opportunity to consult with Laurent Mignonneau, a professor specializing in electronic systems, which opened up new avenues, particularly for signal transmission methods between modules. During my residency, I also conducted research at the Tinguely museum in Basel and at the Speelklok Museum workshops in Utrecht, which proved to be incredibly enriching. I studied various mechanisms that will help design the synchronized movements of the installation.

In Linz, I did numerous tests in programming and devised strategies for the physical and programmed transmission of impulses between the modules. I primarily worked with ultrasonic, vibration, and infrared technologies. Among these experiments, the most promising results emerged from using modulated infrared systems, which appear to offer a viable solution for achieving synchronized interactions via invisible and silent communications. These technical advancements bring the installation closer to the poetic expression I aim to create through the movements of the modules.

The project is still in progress, and while significant strides have been made, much work remains to be done. Currently, I am refining the prototype modules and further testing communication methods to ensure the seamless interaction between the components. The system's programming is still evolving, with ongoing adjustments to the timing, movement synchronization, and signal transmission. Additionally, I continue to experiment with materials for the modules to enhance both the visual and sonic impact of the installation.

My residency in Linz provided valuable time and space to delve into different ideas and develop the foundation for this ongoing work, without the usual distractions of my daily life. During my stay at Salzamt I was able to refine my ideas and explore new approaches to both the mechanical and sonic elements of the installation. Additionally, the vibrant artistic community in Linz has offered opportunities for inspiration, collaboration and feedback, which has enriched my creative process and helped me stay motivated. I look forward to further refining the system and eventually presenting the installation as a fully realized sound and kinetic artwork.

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