



Cathy van Eck performing *Cheering For Others Makes You a Leader* for pom poms, sensors, and live electronics. (Image: Pieter Kiers / beeld.nu)



Cathy van Eck performing *In Paradisum* for apple, contact microphones, and live electronics. (Image: Cathy van Eck)

The origins of sounds: working with bodily movements in electronic music and sound art

This research focuses on how artists compose connections between gestures and sounds in electronic music and sound art. Since there are no common or compulsory human gestures to generate electronic sounds, combinations of gestures and sounds are composed by artists. This project investigates what gestures artists use in their works, what our sensory systems expect, and how artistic desires and technical constraints influence each other.

Das Projekt untersucht, wie klanggenerierende Gesten und Klänge in der elektronischen Musik und in Sound Arts zum Einsatz kommen. Da kein fixes Repertoire von Gesten zur elektronischen Klangerzeugung existiert, haben Künstler*innen die Freiheit, diese Kombinationen von Grund auf zu entwickeln. Das Projekt analysiert, welche Gesten die Künstler*innen in ihren Werken verwenden und was Sensorensysteme erwarten, und betrachtet, wie sich künstlerische Ansprüche und technische Bedingungen gegenseitig beeinflussen.

Publications: van Eck, Cathy. "Creaking Apples and Singing Chairs: On Composing with Objects, Actions and Sounds". In *Embodied Gestures*, ed. by Enrique Tomás, Thomas Gorbach, Hilda Tellioglu, Martin Kaltenbrunner, 3–10. Wien: TU Wien Academic Press, 2022. https://doi.org/10.34727/2022/isbn.978-3-85448-047-1_1.

Introduction: This research project has two main goals. First, a seminar shall enable the students to experience many different set-ups for tracking the gestures of performers or audiences. By testing these set-ups themselves, they will get a completely different perspective on the technology and the artistic possibilities that it offers. Not only will they get a deeper understanding of how gestures and sounds can be combined, but they will also be able to create their own works with these existing systems. The second goal is to prepare the pre-existing research work for publication in a book format. During the seminar, the ideas, concepts and findings of previous research will be presented to the students. Their questions, comments and evaluations will evidently not only be very valuable for the further development of the research, but will also be seminal inputs for the comprehensibility of the conceptual framework.

Methods: Research and education are interwoven in three different ways. The first method is practice-based. With the help of sensor technology and different mappings in software such as Max MSP, the students will create their own ideas for how gestures and sounds can be connected. The second is a theory-through-practice method. During the seminar, we will make use of several categories for analysing gestures to explore how comprehensible they are, as well as whether they can be applied by others in their compositional work. The third method will take ideas, questions and comments from the students gathered at the seminar as a starting point and apply them to practice-based and theoretical research. Since the students will work with set-ups similar to many of the artists whose work has been analysed, they will explore how these set-ups influence their musical expression and compositional ideas. Finally, we will focus on the sociological aspects of the use of sensors in sound arts.

Results: The results of this project will be published in a book.

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