

# Finger Breath – Material and control through intimate sounds

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## 1. PROGRAM NOTES

Finger Breath, for performer, live electronics, and zither, was originally commissioned by the Frontside International Chamber Music Festival, funded by a grant from the Swedish Arts Council, and premiered in January 2023 as a headphone performance in the belly of a small passenger ferry. The main concepts behind the work are three: First, the intimate sounds from the musicians breathing, and from his fingers on the strings of an ancient zither. Second, the idea that the live breathing and the musician's sounds played by finger movements are the only sources of gestural control and expression in the piece. Breathing and finger movements form the basis of many musical expressions throughout the world, as they are our most intimate physiological and gestural bodily mechanisms. Third, the combination of the first two into a situation of "entangled musicianship", where each action has triple consequences: as a sound source to be heard live, as a sound source being fed to various buffers for later manipulation and playback, but also as a source of gestural control, affecting a variety of playback mechanisms for the buffered sounds. It is thus impossible to play something without also altering the conditions for future playing. Hence the entanglement.

## 2. PROJECT DESCRIPTION

This piece premiered on January 15th, 2023, as part of a set of small chamber music concerts.

In the piece, I am using two sound sources as both the only audio source material and the source of gestural control:

- \* Breath - the sound of my breathing. (Breath)
- \* Finger - the sounds of playing a 100 years old broken 64-string chord zither, untuned by time.

There are no prerecorded sounds, and no stored sequences. Everything is derived live from these sources, both sonically and gesturally.

Every sound I make is both a source material, captured by various sound engines to be used as audio for the piece, and at the same time the contours of the sound is used to control the very same sound engines. So, I cannot feed new sounds into

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the engines without also "playing" them with the same sounds. I call this kind of musical double-bind "entangled musicianship", where each action by the musician binds them for future implications of their current actions, as every action has multiple consequences, now and in the future. Hence the piece unfolds as a braid over time – as an entangled musicianship. This has been an underlying principle of a number of my pieces over more than a decade, focusing on systemic aspects of improvisation and performance, and I am now initiating a research project around the aesthetic and interactive implications of this entangled mode of interaction.

In the piece I use granular synthesis, reel-tape emulations, and real-time additive spectral analysis and resynthesis, as well as patch-programmed chaotic pattern generators from iterated folding functions controlling different replay mechanisms. Full-band and multi-band envelope following used for gestural control. All implemented in a modular synthesis system. And a 100-year old 64-string untuned chord zither, played by hand.

The mappings used go many ways – volume and timbre of breath sounds are used to control playback engines of both breath and zither sounds, and to modulate parameters of two iterated folding functions that generate chaotic melodic and rhythmic structures. The nonlinearity and sensitivity of the chaotic function generators yield significant variety from slight nuances in the performance. Likewise, volume and timbre of the zither playing controls similar processes, but in other configurations.

During the performance, some global parameters are adjusted manually on knobs and faders, but they are limited to volumes of the different sound engines that form the electronic setup, and a few pitch ranges of these sound engines.

Throughout the piece I maintain a breathing frequency of 2,5-3 breaths per minute. This significantly affects the mental state of the performer. In the beginning and end the actual breathing sounds are heard, but in the middle sections we only hear their implications, resulting in an organic, slowly oscillating texture. Throughout the performance, the breathing is used as a gestural source, also when it is not directly heard, as are the string sounds.

The piece was originally performed four times in a row for different audiences, three of which were recorded. It was a headphone concert (audience had individual headphones, as did I) for ca 10 people per performance, in the belly of a small (30m) passenger ferry, as part of a complex chamber concert circle in a chamber music festival. You can hear the audio from the river and the engine of

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the boat in the beginning and end of the piece, and sometimes also during the performance, as it leaks into the microphones.

### **3. PERFORMANCE NOTES**

The piece was originally conceived and performed as a 10-12 minutes live headphone concert for a small audience, repeated several times, because of the intimacy of the sounds and interactions used. So ideally, this would be the best mode of performance. In the premiere, we used a conventional setup with a set of headphone amplifiers and long cables to each audience member (20 people capacity), but it is maybe possible to do something similar with Bluetooth or streaming through people's phones, even though I suspect latency could be a problem and diminish the live experience. Finger Breath can be adapted to a conventional amplified concert setup, with careful microphone management and feedback control.

For a performance I bring everything needed up until the stereo balanced line output from my mixer (zither, modular, microphones, mic preamp, personal mixer, power strip).

From a venue I will need:

- A table, ca 60x120cm
- A chair or piano stool
- One power outlet
- Audience headphone rig or active speaker arrangement/PA

### **4. MEDIA LINK(S)**

Video documentation from three of the original four performances are available here. As the piece contains both chaotic processes and improvisational elements, the performances are slightly different:

<https://youtu.be/1g0xs71Sdps>

<https://youtu.be/Y1UC49iJurk>

<https://youtu.be/MOz6r0xy2Cs>