embody

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1 PROGRAM NOTES

embody is a piece for live performers using stethophones (stethoscope microphones), which I have created from hacked stethoscopes, in order to amplify the heartbeat and voice in the chest or vocal tract. The motivation came from my exploration of the sounds trapped within my body, such as my heartbeat and the resonance of my voice in my vocal tract or chest. Is it possible to record our voice as we hear it in our head?

On the surface, *embody* asks the questions: "What if the ocean had a heart? What if machines could speak?" In some sense, the ocean does have a pulse through tides and machines do make noise, we just do not understand them as human. In the piece, sounds of the natural and built environment are anthropomorphized using the sounds inside the performers' bodies. On a technical level, the sounds were constructed using spectral convolution and envelope following, probing the spectral overlap of our bodies with sounds external to us.

The piece includes sounds from two field recording sessions; one at the beach in Pescadero and another on a tour through the Stanford Energy Facility. The piece is spatialized in 3rd order Ambisonics to resemble a sonic body.

2 PROJECT DESCRIPTION

The stethophone is simply a small condenser microphone inserted in the tube of a stethoscope, which allows the live sound of a performer's heartbeat to be processed and heard in real-time. Interest in using bio-signals for an inclusive performance were part of the motivation for the stethophone (Ortiz, 2012), and the piece uses live processing in Max/MSP to transform each performers' heartbeat. Using the breath, performers control their heartbeat according to a score.

3 PERFORMANCE NOTES

The piece requires three performers, preferably who are differently abled, to be seated onstage. The piece is usually presented with a multichannel speaker system for 3rd order ambisonics, but audio will be streamed in binaural, so please wear headphones.

4 MEDIA LINKS

- Video: https://www.youtube.com/watch?v=C5ZR-kO9AuA&feature=youtu.be
- Audio: https://soundcloud.com/barbaranerness/embody-binaural-wear-headphones

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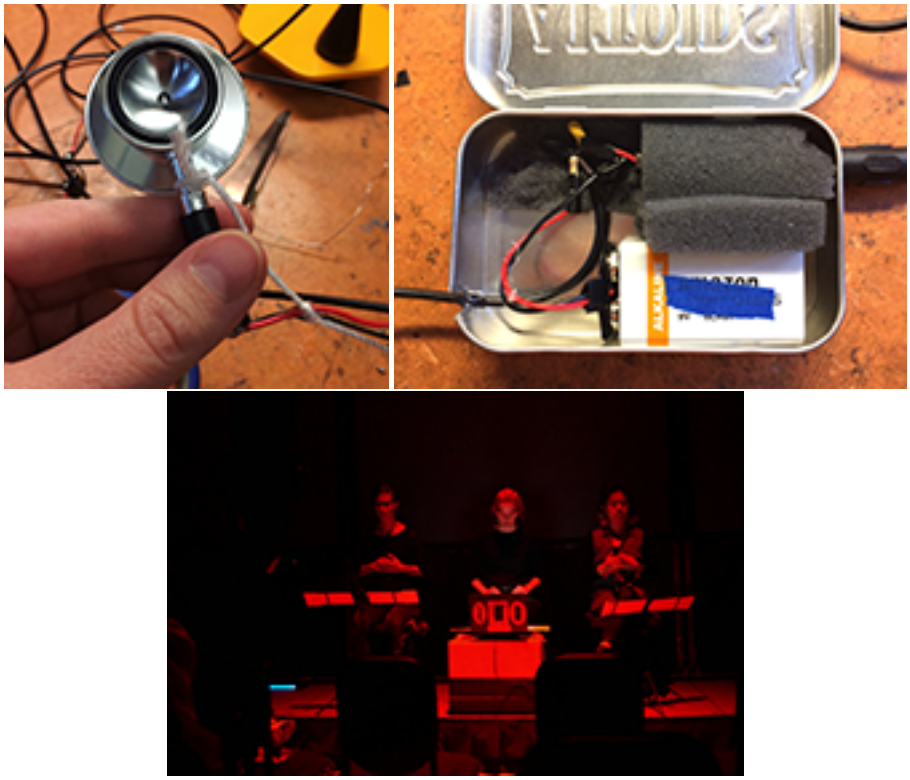

Fig. 1. Stethophone and performance

REFERENCES

Ortiz, Miguel. (2012). A Brief History of Biosignal-Driven Art: From Biofeedback to Biophysical Performance. *eContact! 14.2 - Biotechnological Performance Practice*, https://econtact.ca/14_2/ortiz_biofeedback.html