River

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1. PROJECT DESCRIPTION

"No one can step into the same river twice."

This instrument, named as River, contains rules and randomness.
What exactly is music and how does it connect to and shape our form? Traditional musical instruments always have fixed physical forms that require performers to adjust to them. How about making a musical instrument that is more fluid and more expressive via deforming according to performers' movements? This was the question I attempted to explore when I started making this project. For this project, I combine the movement of dancing with music to present a fluid and dynamic shape of musical instrument. The fabric of this instrument can be separated as an extension to wash. It's portable, wireless, chargeable, stable and beautiful.
This musical instrument generates sound by detecting different movements of the performer. It has four different modes selected by toggling the switches on the instrument interface. Each mode has different movement detection methods, generating various sound and music. Moreover, it can be played as a transmitting Tambourine.
As for the music in my performance, it's all played by myself lively, consisting of different sound triggered and changed by performers' gestures and melody composed myself.
Like the name of this instrument River, the four toggles and their detection methods and their corresponding generated sounds are intentionally designed. From simple node, beat, loop, drum, to various node, melody, music, the detection methods and their triggered sounds are becoming more and more complex and various, developing like a journey of a river.

Fig. 1. River.

As for the performance, it tells a story about a river.

River knows this: there is no hurry. We shall get there some day. I see the river as the extension of my body. More intuitive than narrative, more fleeting

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than infinite, the river rises, falls, flows and meanders, and I follow the journey.

Fig. 2. Performance.

Fig. 3. Performance.

Fig. 4. Performance.

Fig. 5. Performance.

Fig. 6. Performance.

2. TECHNICAL NOTES

The core of this instrument is comprised of Arduino, multiple sensors and fabric. Bluetooth is used in the instrument to send data from sensors in real time to computer. Once the computer gets the signal, it categorizes the gesture and movement of the body and the state of the instrument by machine learning and some programming algorithms made by the author. Then the author used Max/Msp and Ableton Live to make sound and music based on the categorized result.

3. PROGRAM NOTES

4. MEDIA LINK(S)

- Video: https://vimeo.com/306346063
- Video: https://vimeo.com/327361203

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