Intra-action

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1 PROGRAM NOTES

Intra-action is an experimental computer music system and improvised performance where human agency and perceiving generative processes create an ecology of unconventional synthetic sonorities. The work is inspired by philosopher Karen Barad [1], for whom phenomena or objects are not external to one another, and do not precede their encounters, as implied in 'interaction': instead they emerge from 'intra-action', an interior process of relationships. In this work, intra-action is both a process occurring inside the computer – where morphological processes are shaped in relation to one another through machine listening and agent-based organisation – and a posthuman relation where 'human' and 'machine' agency are co-dependent. Intra-action was commissioned by, and premiered at, NEXT Festival 2019 in Bratislava.

2 PROJECT DESCRIPTION

The work is a live computer music solo performance which blends improvisation and algorithmic systems. The interface consists primarily of knobs which are programmed to use time-dependent data to control synthesis process, so that both the velocity of hand movements and the position of the controller generate output. Cross-coupled mappings, which cause complex morphological behaviors, are also used. The synthesis processes capture characteristics of performance and an automated system elaborates on these by generating sound automatically once the human performer lets go of the controllers. The generative processes create a self-organized texture by listening to one another and intra-acting as agents, regulating their own density, spectral orientation and other aspects, depending on the behavior of their neighbors. Machine learning (neural networks) are used for some of the controller mappings, and some of the synthesis processes are also trained to respond to certain audio textures with certain responses. The work is created entirely in the SuperCollider environment for synthesis and algorithmic music.

3 PERFORMANCE NOTES

The work can be performed in club or gallery settings as well as large multichannel concert settings. The premier took place at NEXT Festival in Bratislava, with a 10-channel sound system. A laptop runs the algorithm and synthesis, but is not interacted with in the performance which focuses on MIDI knob and pad controllers. The system is highly flexible in terms of multichannel setup and can be programmed to suit any sound system and audio interface provided by a venue.

Technical requirements:
Table
Audio interface Speaker system
Equipment used, provided by performer:

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MacBook Pro
2 x MIDI Fighter Twister 2 x Korg nanoPAD2
1 x AKAI MPD218

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ETHICAL STANDARDS

The work was commissioned by, and premiered at, NEXT Festival in Bratislava 2019.

REFERENCES

[1] Karen Barad. 2007. *Meeting the universe halfway: Quantum physics and the entanglement of matter and meaning.* duke university Press.