Title: PANDORA'S MYCOPHONY

AUTHOR: CELESTE BETANCUR, CCRMA, Stanford University, USA

AUTHOR: JACK ARMITAGE, Intelligent Instruments Lab, Iceland University of the Arts, Iceland

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1 PROGRAM NOTES

Pandora hears her own dreams, they talk to her in mysterious voices, unknown languages.

You find yourself standing alone, in the middle of her darkness.

You don't know how you got there.

Are you one of Pandora's dreams?

Talk to her, maybe she will answer you.

In this audiovisual dreamscape lies a re-imagining of Pandora's story, where the contents of her jar are bioluminescent swarming spores that seek to fill the world with hope instead of evil, and life instead of death. The spores want to get out, their evolutionary powers are hidden, and the whole universe is waiting to be explored. Meanwhile, Pandora is dreaming, condemned to keep the box closed. Life waits to be released.

2 PROJECT DESCRIPTION

This performance is the meeting point of two audiovisual, practice-based research projects exploring the outer limits of live coding, *Agential Scores* and *Pandora's Dream*, from two artist researchers who have previously performed together at NIME, in Algoraves and other contexts. We bring these two projects together in a retelling of the story of Pandora, where the 'evils' in her jar are actually intelligent fungal spores that are released into the world to protect the existence of life.

Agential Scores [1] seeks to harness the emergent and self-organising properties of ALife as a notational system for composition and performance, through an open source Python library called Tölvera (an Icelandic kenning for "number beings"). We see ALife as an almost literal petri dish for practical inquiry into musical agency, with a veritable zoo of systems and species on offer, that inevitably brings into play issues of biology, evolution, ecology, philosophy, computation and more. *Pandora's Dream* is a fully functional code editor for the ChucK language, C, Javascript, and a simplified version of C# called PandoraC# (PC#) but that is just a part of Pandora. Pandora can dream shapes and objects, flying around an infinite space. She sees boxes, many of them, and each one is empty, but if you take one, you can write code inside of it, the code will be inactive unless you, Pandora, choose to run it. What is going to happen when you decide to close the box and then to reopen it?

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Our Pandora is a Mother Earth figure rather than a "patriarchal prototype of the object of desire who promises pleasure and power" [5]. In our story, humans have misinterpreted Pandora's life-giving fungi as evil and try to kill it. In the piece we present a space where it is possible for humans to step back and see the contents of Pandora's jar - spores of the bioluminescent ghost fungus *Omphalotus nidiformis* [4] - as life force, teacher and connection to ancestral realms, and try to understand their workings. Like Kimmerer, we "dream of a world guided by a lens of stories rooted in the revelations of science and framed with an indigenous worldview—stories in which matter and spirit are both given voice" [2]. As Latour notes: "In opening the black box of scientific facts, we knew we would be opening Pandora's box [...] It is much too deep for me on my own; are you willing to help me reach it?" [3]

3 PERFORMANCE NOTES

This piece is expected to last between ten and fifteen minutes. Stage with two projectors and table for two laptop performers are required including mains electricity for laptop chargers. Authors will provide sound cards onstage that will require one stereo DI box each to run into the mixer/PA.

4 MEDIA LINKS

- Agential Scores: https://iil.is/research/agential-scores
- Pandora's Dream: https://ccrma.stanford.edu/~celeste/256a/hw4.html
- Video + Audio: https://youtu.be/SNq_w1ZJRiEt

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ETHICAL STANDARDS

NA

REFERENCES

- Jack Armitage and Thor Magnusson. [n.d.]. Agential Scores: Artificial Life for Emergent, Self-Organising and Entangled Music Notation. In Proceedings of the 8th International Conference on Technologies for Music Notation and Representation (2023).
- [2] Robin Kimmerer. 2013. Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge and the Teachings of Plants. Milkweed editions.
- [3] Bruno Latour. 1999. Pandora's Hope: Essays on the Reality of Science Studies. Harvard university press.
- [4] MANISHA Mishra and DEEPA Srivastava. 2021. Bioluminescent Fungi: Reviewing Nature's Riddle. Journal of Mycopathological Research 59 (2021), 199–206.
- [5] Polly Young-Eisendrath. 1997. Gender and Desire: Uncursing Pandora. Vol. 6. Texas A&M University Press.