ISCRI: Communicating Between Two Alien Intelligences Through Art

Maggie Roberts
0rphan Drift
mer.liquify@gmail.com
www.orphandriftarchive.com

Stephanie Moran
Etic Lab LLP
stephanie@eticlab.co.uk
www.eticlab.co.uk

Abstract

ISCRI is a collaboration between artists and Machine Learning technologists that aims to produce both new kinds of aesthetics and artificial intelligence (AI) through interspecies research. Our aims are to develop an AI and, through imagining into the somatic tendencies of an octopus, an art experience that dismantles our western humancentric worldview.

Interspecies AI

ISCRI is offering a body of non-representational video artworks to an octopus. The kinds of images that will constitute the aesthetic provocations offered are informed by working with an interspecies communicator, swimming with octopuses, and through scientific and ethological academic research. The artist's *Becoming Octopus* project (Roberts 2020) showcases our initial explorations. Sensors monitoring the octopus responses will in turn modulate an emergent AI, mediating a kind of interspecies conversation in ways never tried before.

Our project primarily addresses the Art Machines 2 theme of Machine Learning Art and Ecology in that we are focused on the urgency of rethinking what it means to be human in the light of current developments in AI and ecosystem crisis. Underpinning *ISCRI* is the decentering of the western enlightenment human viewpoint through exploring how we might begin to communicate with other kinds of intelligence and consciousness (both organic and synthetic). Such multiplicity of communication feels imaginatively and ethically urgent today.

Transdisciplinary Collaboration

ISCRI, in development for two years, brings together the work of art collective 0rphan Drift and technology research consultancy Etic Lab LLP. The collaboration itself is an experiment—an interdisciplinary enquiry between multimedia/computational artists, Machine Learning (ML) technologists, cultural theorists, an interspecies communicator, a social psychologist and other scientists.

Previous aesthetics generated by AI as part of artistic explorations of algorithmic intelligence have been mostly harnessed to an artist's intention, producing the now familiar Optical Flow coded uncanny approximations of recognizable images (Huyghe 2018), the iterative images of Google Deep Dream, or GANNs reproducing old master paintings.

We minimize our control by using a form of ML called Reinforcement Learning that is not trained towards a pre-determined goal. Rather its development is determined by its learning thereby surfacing emergent and non-predictable forms. *ISCRI* is partnered by the Serpentine Gallery's Creative AI Lab, who are interested in how we will be transformed as humans through this experimental relationship with an octopus and an emergent AI.

Why an Octopus?

Octopus awareness is simultaneously individual and collective—a state for AI to aspire to. The octopus's nervous system is distributed throughout its protean body, with brains in each of its eight arms. In addition, octopuses are often highly curious and mimetic, they are noted for the ways they return the observations of underwater explorers and scientists, reversing the usual experimental paradigm, making them excellent potential interlocutors.

Computational Art

The "art made for an octopus" will explore the viewpoint of a distributed intelligence that does not prioritize vision-led perception (in the way a human does).

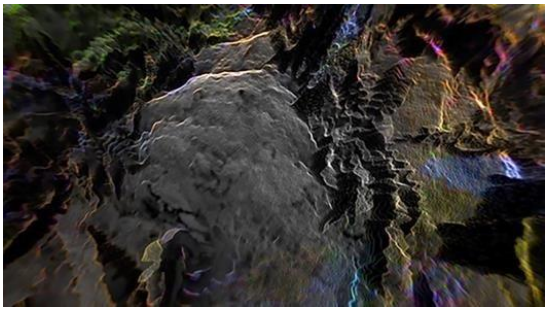

Fig. 1. *Lidar Cave in Polarised Light*, 2020, Maggie Roberts, HD video, copyright 0rphan Drift.

Fig. 2. *Polarised 360 Degree 8-Armed Vision Prototype*, 2020, Maggie Roberts, HD video, copyright 0rphan Drift.

Computational arts such as Blender VFX animation, visual coding and LIDAR enable us to imagine the environment as pattern and texture, from multiple viewpoints and scales simultaneously and in polarized light vision.

AI

The use of Reinforcement Learning to develop an AI will produce emergent behaviors that have not been, and could not be, humanly designed into it. The ML team will adapt their provocations for the AI in response to what it is doing, both visually and in terms of its emergent behavior. New kinds of communication or processing might be glimpsed, that will ultimately influence how we negotiate our relationship with non-human intelligences.

References

Huyghe, Pierre. 2018. "Uumwelt" Serpentine Gallery exhibition, last modified 13 January 2021 https://www .serpentinegalleries.org/whats- on/ pierre-huyghe-uumwelt/

Roberts, Maggie. 2020. "Becoming Octopus." 0rphan Drift archive, last modified 10.01.2021 https://www. orphandriftarchive.com/if- ai/becoming - octopus-meditations/.

Biographies

Maggie Roberts, co-founder of 0rphan Drift, with an MFA in Fine Art from the Royal College of Art, London, currently teaches Critical Studies at University of the Arts, London and is an internationally established artist. 0rphan Drift explores the boundaries of human and machine vision in an art practice that imagines into worldviews that are non-human in perspective. Recent exhibitions include *Becoming Octopus*, (2020); *If AI were Cephalopod*, (Artforum Critic's Choice, 2019); *Matter Fictions*, (2016).

Stephanie Moran is an Associate Partner at Etic Lab, with an MFA in fine art from Goldsmiths, University of London, and a previous career producing national and international projects in art and libraries. Currently an AHRC-funded PhD candidate at Plymouth University's Transtechnology Research. Etic Lab LLP is a design and technology research consultancy based in mid-Wales, with expertize in developing new forms of AI. They work across industry sectors on commercial, artistic and government-funded projects.