xCoAx 2022 10th Conference on
Computation, Communication, Aesthetics & X
2022.xCoAx.org
Coimbra, Portugal

Ecology of Worries

Caitlin & Misha aka

Caitlin Foley
caitlinandmisha@gmail.com
UMass Lowell, Lowell MA, USA

Misha Rabinovich
caitlinandmisha@gmail.com
UMass Lowell, Lowell MA, USA

Ecology of Worries is an animation featuring variously evolved critters that are driven to speak by machine learning algorithms trained on actual human worries. The creatures' performance of the worries spans a gradient of intelligibility, reflecting on the evolution of machine learning systems and whether or not we should teach a machine to worry for us. The animated characters are also representations of our collective worries, given life and evolved through evolving algorithms. The critters are trained using an archive of thousands of recorded worries from people in the US and abroad which we began collecting in 2016. The emotionalization of events by the media is engendering worries that swirl inside us, trapping us in manufactured anxieties. We have been asking people in our communities what they are worried about and find they have a plethora of concerns at the ready. This process is an opportunity to collect various types of worries and consider similarities in emotional cycles across communities.

Keywords Communication, X, Algorithms, Artificial Aesthetics, Artificial Intelligence, Audiovisuals, Generative Art

DOI 10.24840/xCoAx_2022_29

Description

Worrisome shifts in the USA's politics triggered our interest in collecting worries. Leaders were drawing the culture inward while souring relationships with longstanding allies. The COVID-19 pandemic goaded us to continue the project to this day. There are many social situations where it is unacceptable to express these thoughts, yet we all have them. The public is invited to record worries anonymously at https://worries.io as these are being continuously incorporated into our artworks such as the *Worries Bash* and now *Ecology of Worries* video/animation.

Ecology of Worries engages machine learning in several ways. The animating worries themselves are generated by a recurrent neural network (RNN) as well as the general pretrained transformer (GPT-2). The lip synching on the creatures is done via Adobe Sensei Artificial Intelligence (AI), which is being integrated into the Creative Suite software. Despite these automated approaches to generative artwork, the creatures themselves are hand-drawn and lovingly textured with familiar yet surprising household surfaces. This combination of machine-generated and hand-made drops these characters into an uncanny valley but not because they look real. Indeed, these fantastic animals look totally imagined, and yet the way they perform their concerns—and indeed the concerns themselves—feel like they could be real, as real as the worries swirling inside us all. This combination is what gives the critters the distinctly *unheimlich* (un-homely, uncanny) vibe, which stirs curiosity in the human viewers.

Training is the aspect of machine learning that engages the most important political dimension of this technology (the other one being access). Silicon Valley frat bros scrape photos of their classmates, or grab celebrity faces from the wild to train their AI. Even well intentioned people often do the easy thing without anticipating problems down-stream. Biased data imbues the machines with the biases of their creators. The wide deployment of AI by social media companies across much of the world has made the voices of Alexa, Siri, and Google Maps ever more recognizable. *Ecology of Worries* defamiliarizes the peppy digital assistant voice—and even the intention of this sentience—by training these creatures to worry about our communal woes.

The project speaks to questions of machine learning, autonomy, and agency, as well as makes space to play with ideas of artificial life and emergence. The Eliza effect, discovered in the late 1960s, led people to perceive a chat bot as intelligent and worth confessing to. *Ecology of Worries* flips the dynamic to have the machines confess to us and put us in an awkward, thoughtful, and yet hilarious state of mind. The overall experience is generative because the work creates space to explore a cultural ecology of a hybrid, human-machine sentience of empathy. The worries become uncanny through a juxtaposition of familiar and abstract concerns.

Fig. 1. *Ecology of Worries* video asset https://vimeo.com/396338290/e6644e84c3