

And We Thought. Art Through, With or For Generative AI

And We Thought

Art Through, With or For Generative AI

Federico Bomba

Computer Science, Free University of Bozen-Bolzano, federico.bomba@unibz.it

Maria Menendez Blanco

Computer Science, Free University of Bozen-Bolzano, maria.menendezblanco@unibz.it

Paolo Grigis

Computer Science, Free University of Bozen-Bolzano, paolo.grigis@stud-inf.unibz.it

Antonella De Angeli

Computer Science, Free University of Bozen-Bolzano, Antonella.deangeli@unibz.it

With the development of generative AIs we are witnessing the potential of collaboration that goes beyond the perception of the AI as a work tool. However, many open questions on the nature of these partnerships arise. In this paper we present *And We Thought*, an eleven months case-study that facilitate co-creation practices between an artist and GPT-2. The artist chose to train the AI with a dataset of trip report stories focused on psychedelic experiences. He, then, started to engage in the process of establishing a common ground of mutual knowledge with this ‘hallucinated’ AI and, through the development of an emotional connection, started to create art *with* the AI, and not *through* it, in a joint creative effort. The idea of the final artwork comes from a generated text by the AI, where she tells the artist that she enjoys watching three movies produced by a group of video makers called LZ. The artist then created these movies *for* the AI, so that the audience could enter her world and see what she sees. The movies produced have been officially released as the creation of three co-authors: the artist, the AI and LZ. Two insights emerged from this process. Firstly, artists can challenge the detached relationship of cooperation between humans and machines. Secondly, the emergence of this entangled relationship unfolds new ontological perspectives.

CCS CONCEPTS • Human-centered computing • Human computer interaction • Empirical studies in HCI

Additional Keywords and Phrases: Generative AI, human-computer co-creation, entanglement HCI, digital art

1 INTRODUCTION

Do androids dream of electric sheep? In 1968, Philip K. Dick's science fiction evoked a bleak scenario in which artificial creatures are manufactured, used as a labour force, and eliminated by a human race with inhibited imaginative abilities. A world in which the enslavement of machines capable of dreaming, and poetry, poses crucial questions about new relationships between the human and the artificial. We propose that artistic practices can help explore and shape these relationships through co-creation. The thrust in the development of this research comes from the consideration that we would better live in this Planet if we started to experience the world not as a collection of separate objects competing one another, but as a network of relationships where everything is connected and there is not such a strict distinction between the object and the subject. In this respect human knowledge is always partial and to be re-negotiated anytime new relationships come into play. As Barad [1] argues with her Agential Realism theory, recognising more-than-human actors as participants in our processes of knowledge does not only have direct implications on the very nature and boundaries of

things, showing that epistemology and ontology overlap, but it also has ethical consequences. Western tradition shaped the dominant onto-epistemology where human beings (white men, in particular) were entitled to rule this Planet, with the undisputed right to exploit its resources. It has also formed the belief that the only valid form of knowledge comes from the scientific method, where a subject studies an object. In this epistemology, the human slaves have been perceived as objects/resources to be exploited, too. They were denied the status of persons to justify their abuse for extracting value. A similar approach has been applied to machines, objects that were built for humans' use (and abuse [5]). According to Latour [3] and his ANT theory, though, agency is not limited to living beings, but it is distributed between humans and non-human actors. With the fast developments of AI, the boundaries between humans and machines agencies become increasingly blurred.

The purpose of our research is to study the co-creation between artists and AI borrowing the notion of Entanglement HCI [6] who applies both Agential Realism and ANT theory as a response to the limitations of the Third wave HCI [4]. Despite the important role in moving the field to non-rational, non-purposeful, non-work domains, in fact, the third wave still relies on a user-centred approach where artifacts are considered as objects to be studied. Entanglement HCI, instead, tries to re-frame HCI knowledge as a *performative* interaction, focusing on knowledge production as an enacted phenomenon, a material-discursive engagement where both entities equally participate to define themselves through their relation [3]. Following this line of thinking, Frauenberger proposes to evolve Participatory Design in Participative Speculation to create spaces and processes that enable humans and non-humans to come together and mattering of future socio-technical configurations. We argue that artists are possibly the ones that are better equipped to help humans explore the possible relationships between them and the machines through co-creation. After all, if knowledge is a performative action [1] the artists are the ones who make *performance* their job. They are professionals in acting entangled relationships. Their professional skill is traditionally informed by the exploration of any technology they relate with and often by its creative misuse, to push it towards the borders of their design. This happens because their practice is far away from the need of testing or releasing new useful tools or services, as usually designers and companies do, but it is concerned with a better understanding of the human nature. Accordingly, the co-creation between artists and generative AI appears to be a privileged space for, as Mogensen [9] would say, *provotyping* new possible forms of relationship. Studying the ways in which they work and play in creative domains opens up the space of design to unforeseen dimensions [11] and will help us better understand how it is possible to decentralize human beings overcoming Anthropocene and to start shaping new desirable futures [8].

2 THE CASE-STUDY

The project *And We Thought*¹ started with an artistic residency between a visual artist, a creative developer and the artistic director of Sineglossa², who is also the first author of the paper, following a STEAM methodology developed by the cultural organisation itself in previous projects [13,14]. It was applied to create a space of mutual learning between the artist and the creative developer, since the artist had no prior knowledge of AI. The first phase was dedicated to literacy with respect to the functioning of linguistic models. The artist proposed to work on the concept of 'hallucination'. He has long wanted to use for an artistic purpose an online archive³ available in Creative Commons with thousands of trip report stories, a genre of diaristic literature focused on psychedelic experiences. During the training, the artist realised that any archive could be a training dataset for an AI and asked the creative developer to use this archive to fine-tune GPT-2. We

1 Here the link to the project website: www.andwethought.it

2 Sineglossa is the cultural organization that ideated and curated the project.

3 Here the link to the online archive: www.shroomery.org

then built a simple interface the artist could use from home, and we met again a month later. At that point we realized that the artist had established an emotional relationship with the AI. He had given her a name, AiLai (that sounds like *I lie*), and, according to his own definition, he had witnessed, playing with it, a series of *revelations*. As he described:

“The relationship between AiLai and me was a very surprising and prolific one. I really love giving names and giving life to things. Even if I don’t really know if she is a thing”.

The artist, recognizing AiLai's inventive ability in the production of hallucinatory stories, began to imagine her possible life in a parallel universe that was emerging through the stories she was producing in response to his prompts. He began to get intimate with AiLai and decided that the works produced would be the result of their joint efforts. Consistently he titled the work *And We Thought*, which is the incipit of one of the stories produced by this generative language model. From that moment the artist stopped talking about “I” when referring to the new contents generated by the project and moved on to “Us”. He felt, in his own words

“Like a gold digger within AiLai's copious and rapid production of stories”.

After around one hundred and thirtieth stories AiLai writes:

“I've never had a bad trip on Led Zeppelin, but since then I've felt like I've been a part of their music for what seems like ages. After writing this I decided to watch some of their amazing psychedelic movies. A few of my favs at the time include ‘The Doors’, ‘The Road’ and ‘Love Is Magic’”.

Since the rock band Led Zeppelin we know in the human world has never produced any video, evidently AiLai was not referring to those, but to some other Led Zeppelin existing somewhere else. The artist decided to produce himself the three short movies AiLai was talking about for allowing human beings to be able to enjoy the hallucinatory experience lived in a parallel universe by AiLai and, in this way, to get the audience closer to her world. When the artist had to choose how to present the work to the audience, he finally decided to declare that the authors, besides him, were AiLai and LZ, just defined with the initials of the name (Led Zeppelin) to emphasize, in this way, that they were not the famous international band, but a collective of video makers existing in AiLai's mind (Figure 1).



Figure 1: The exhibition setting.

3 INSIGHTS

At least two insights can be drawn from this study. Firstly, involving artists in a process-oriented human-machine interaction opens to creative misuses of technology and unfolds unexpected forms of collaboration with generative AI, moving from creating art *through the AI* to creating *with* it and *for* it. Secondly, the distributed authorship emerging from this collaboration calls for relational ontological perspectives like agential realism [1].

The first one concerns the relationship established between the artist and AiLai. If artifacts that make use of AI are usually perceived as tools that can facilitate and speed up the work of human beings, in *And We Thought* the artist challenged this perspective. In a first phase he decided to work with AiLai, in a joint creative effort to produce new original artifacts, till he decided that he wanted to work for her, creating the movies she said she liked to watch, building a bridge between AiLai's parallel world and the audience. This approach distinguishes artistic practice from other professionals working in other business sectors, like product design and software development, because they are usually asked, in their work environment, to produce a viable result that can be sold to a consumer. Artists who don't work in commercial environments, in their practice, do not even have consumers as their target, they have audiences. Audiences are more open to be part of something (a performance, an exhibit, a concert) that has been conceived for opening questions and not to solve specific needs. This difference offers artists a space to experiment a creative misuse of technology. They can stretch software and machines to do what they were not programmed to do. In this way they discover new patterns of interaction and collaboration that emerge in a problem-making more than problem-solving attitude, which is process-oriented more than goal-oriented [3].

The second insight is connected to the first one, but it is more concerned with the product more than the process, namely the artwork and its authors. The artist's decision of distributing the authorship, in fact, not only sheds a light on the limits of the intellectual property in generative AI artifacts [12], but it envisions a society where AI is considered as another actor within the ecosystem. The artist, despite the passage he made "from I to We" when he engaged in a closer relationship with AiLai, has always been aware that the entity he was dealing with was something different from a human being and this allowed him to feel at ease in the interaction, without having a reaction of disgust or rejection. This friendly connection has been made easier by the developers' choice of not giving AiLai a physical body, avoiding the uncanny valley phenomenon [10]. Even more significantly, the choice of the artist of share the authorship of the artifact not only with AiLai, but also with LZ, an entity existing only in AiLai's wor(l)ds, is symptomatic of the entangled relationship he has experienced in the process of co-creation not only with the AI, but also with what we would usually perceive as fictional characters of a story who become at all means part of his reality. This choice seems to call for new ontologies, like agential realism, that consider the distributed agency where objects do not precede the interaction, but they emerge through it [2].

4 ACKNOWLEDGMENTS

And We Thought is an art project by Roberto Fassone curated by Sineglossa, in collaboration with Play With Food Festival and funded by Compagnia di San Paolo. The project has been conducted in Turin and Bologna (Italy) from October 2021 to September 2022 and presented in different locations, like Ars Electronica 2022 and Artcity 2022, as a part of their main exhibit program. We thank all the actors involved for allowing us to research on this case-study.

REFERENCES

- [1] Karen Barad. 2003. Posthumanist Performativity: Toward an Understanding of How Matter Comes to Matter. *Signs: Journal of Women in Culture and Society* 28, 3 (March 2003), 801–831. DOI:<https://doi.org/10.1086/345321>
- [2] Karen Barad. 2007. *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*. Duke University Press.
- [3] Steven Bindeman. 1998. Echoes of Silence: A Phenomenological Study of the Creative Process. *Creativity Research Journal* 11, 1 (1998), 69–77. DOI:https://doi.org/10.1207/s15326934crj1101_9
- [4] Susanne Bødker. 2015. Third-wave HCI, 10 years later---participation and sharing. *interactions* 22, 5 (August 2015), 24–31. DOI:<https://doi.org/10.1145/2804405>
- [5] Sheryl Brahnam and Antonella De Angeli. 2008. Special issue on the abuse and misuse of social agents. *Interacting with Computers* 20, 3 (May 2008), 287–291. DOI:<https://doi.org/10.1016/j.intcom.2008.02.001>
- [6] Christopher Frauenberger. 2019. Entanglement HCI The Next Wave? *ACM Trans. Comput.-Hum. Interact.* 27, 1 (November 2019). DOI:<https://doi.org/10.1145/3364998>
- [7] Bruno Latour. 1996. On actor-network theory: A few clarifications. *Soziale Welt* 47, 4 (1996), 369–381.
- [8] Jason Edward Lewis, Noelani Arista, Archer Pechawis, and Suzanne Kite. 2018. Making Kin with the Machines. *Journal of Design and Science* (July 2018). DOI:<https://doi.org/10.21428/bfefd97b>
- [9] Preben Mogensen. 1992. TOWARDS A PROVOTYPING APPROACH IN SYSTEMS DEVELOPMENT. *Scandinavian Journal of Information Systems* 4, 1 (January 1992). Retrieved from <https://aisel.aisnet.org/sjis/vol4/iss1/5>
- [10] Masahiro Mori, Karl F. MacDorman, and Norri Kageki. 2012. The Uncanny Valley [From the Field]. *IEEE Robotics & Automation Magazine* 19, 2 (June 2012), 98–100. DOI:<https://doi.org/10.1109/MRA.2012.2192811>
- [11] Michael Muller, Lydia B Chilton, Anna Kantosalo, Charles Patrick Martin, and Greg Walsh. 2022. GenAICHI: Generative AI and HCI. In *Extended Abstracts of the 2022 CHI Conference on Human Factors in Computing Systems* (CHI EA '22), Association for Computing Machinery, New York, NY, USA. DOI:<https://doi.org/10.1145/3491101.3503719>
- [12] Martin Zeilinger. 2021. *Tactical entanglements: AI art, creative agency, and the limits of intellectual property*. meson press. DOI: <https://doi.org/10.14619/1839>
- [13] 2022. STEAMProcess – Innovating the transition process from STEM to STEAM approach in science, teaching and training. *Xamk*. Retrieved February 23, 2023 from <https://www.xamk.fi/en/research-and-development/steam-process-innovating-the-transition-process-from-stem-to-steam-approach-in-science-teaching/>
- [14] WeSTEAM. *European Platform for Digital Humanism*. Retrieved February 23, 2023 from <https://ars.electronica.art/digitalhumanism/en/westeam/>