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Harmon-i: Human Artificial Reflection on Machine-Originated Neural Imagination

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Harmon-i: Human Artificial Reflection on Machine-Originated Neural Imagination is a project which unites a human being and artificial intelligence (AI), who over several months work together to find a consensus on how to make art. The human artist puts himself at the AI's disposal to create artworks (making marks) in the physical world. Over several months of back and forth, the AI slowly turns the human into its creation machine, while the human sometimes willingly obeys and at other times refuses orders, at which point negotiations for agency and creative input unravel. The final display consists of three elements: human drawings which are made of gold leaf on paper, machine-made drawings of written SVG code and a video projection showing excerpts of the conversation between the human and AI. The result is a variety of physical traces from human and non-human agents, overlaid with the communication which brought forth these artworks.

Description

Harmon-i delves into the question of what art can be if it is not made solely by humans. More precisely, what part does man play in creating art? And what role do invisibility and embodiment play in the artistic process? It explores the fascinating relationship between images and language in humans and AI's minds. It serves as a creative response to

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the research paper titled *The Human in Machine-Made Art* presented at xCoAx in 2023.

In *Harmon-i*, the human takes instructions from AI to create art, effectively blurring the boundaries between human contributions and those of the machine. By using syntax as a tool of exchange, the human engages in a dialogue with the AI language model, aiming to reach a point where both can share their interpretations of various prompts. The process consists of the human asking a prompt from the language model GPT-4. It gives several prompts which allow the human to take on the role of the machine such as: “Draw a lighthouse on a rocky cliff. 30 iterations. You have 20 seconds per drawing.” The project has two components—the human interpretation of this prompt and the interpretation of the prompt by the language model itself.

The human-made artwork consists of transparent glue drawings on paper created from these AI instructions (Figures 7 and 8). The human takes on the machine’s role in executing the prompts, while the AI takes on the role of the imaginative entity. The process remains invisible to the human artist, relying entirely on his gestural knowledge and embodiment to realize the instructions of the AI. This is an attempt to remove as much of the human subjectivity as possible from the process. The human relies on the next step, applying gold leaf to the glue drawings to see what he has drawn. The gold applied to the drawings serves as a filter, revealing the hidden human-AI creations, referencing gold’s transcendental quality in medieval paintings. Furthermore, gold is a conductor of energy, it is seen as a sacred material in many cultures and is simultaneously one of the key components of modern machines. Symbolically, this makes gold the ultimate material to bring forth the shapes which result from these collaborative reflections.

The machine-made artwork consists of SVG drawings which are only partially visible underneath the code (Figure 5) which makes up the fabric of those drawings (Figures 9 and 10). The notable difference with AI systems which have been trained to generate images, is that the visual language is generated by an AI which is not trained to generate images but trained to understand and engage with syntax. Although it is trained on the whole internet, including billions of images, it reveals through the code generated in response to the prompt, a childlike perception of our world. It is impossible to know which data or images the AI draws its information from but a certain consistency suggests that it has “seen” images of the subject it is depicting. The code has to be shown, as there is no way of knowing whether the AI system can understand the relationship between the syntax (in this case the SVG code) and the lines these codes can produce. The most interesting takeaway from this project is to witness how AI relates text to images when it is not trained to do so.

These two outcomes are the result of a much longer process of exchanging with GPT-4, playing with the instructions the human was given and interpreting them in different ways. This is an open-ended project which may well expand in the future. For now, there are 13 drawings with glue and gold on etching paper (Figures 7 and 8). There are 8 SVG drawings drawn on the same etching paper with a pen-plotter, under a transparent paper onto which the code is written (Figures 9 and 10). This way the viewer can perceive the code and the resulting drawing simultaneously. The pieces are accompanied

by a video (Figure 6) which displays parts of the dialogues which took place between AI and the human being.

Process

In the beginning, when asking the AI for instructions to make artwork, it would usually give quite straightforward prompts such as “Paint a field of flowers underneath a blue sky”. These instructions however were ironically limiting because they offered too many possibilities of interpretation. A similar project by Alexander Reben was undertaken in 2021 at Gazelli Art House, in London, titled *AI-MAZING* (Gazelli Art House 2021). However, compared to Reben’s work, this project wanted to take the role of the machine literally, not just as a computer but also as the mechanical entity which performs repetitive tasks. It was only after requesting instructions which would give the human a more machinic role, that the AI added precise limitations such as “Draw it 30 times, you have 20 seconds per drawing”. In the beginning, these tasks were executed in sketchbooks, documenting this machinic and repetitive process.

This left the question of how to best present the hundreds of drawings which had accumulated. To illustrate the feeling of accumulation, all drawings which were made in response to “Draw a lighthouse on a rocky cliff. (30 times) Time per iteration: 20 seconds” were scanned and overlaid (Figure 1).

Fig. 1. 30 drawings of “a lighthouse on a rocky cliff” overlaid to form one image.

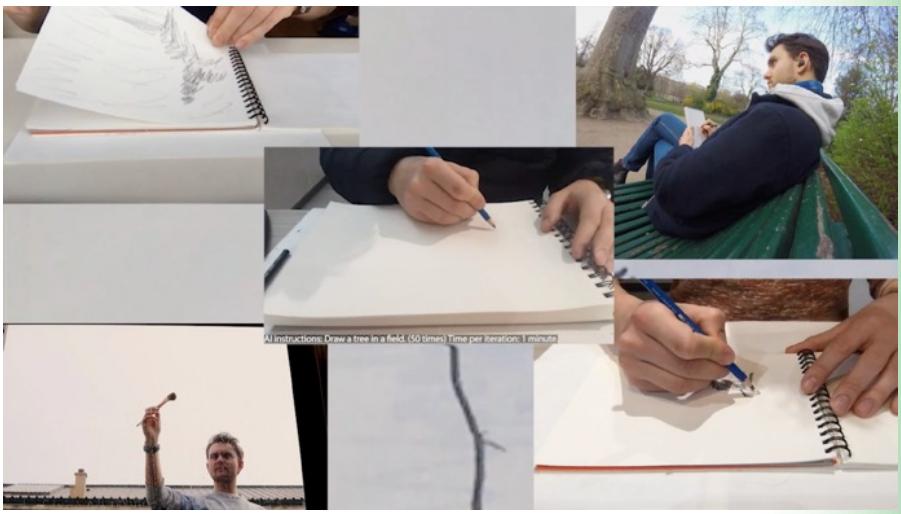


Fig. 2. Documentation of the drawing processes as instructed by AI.

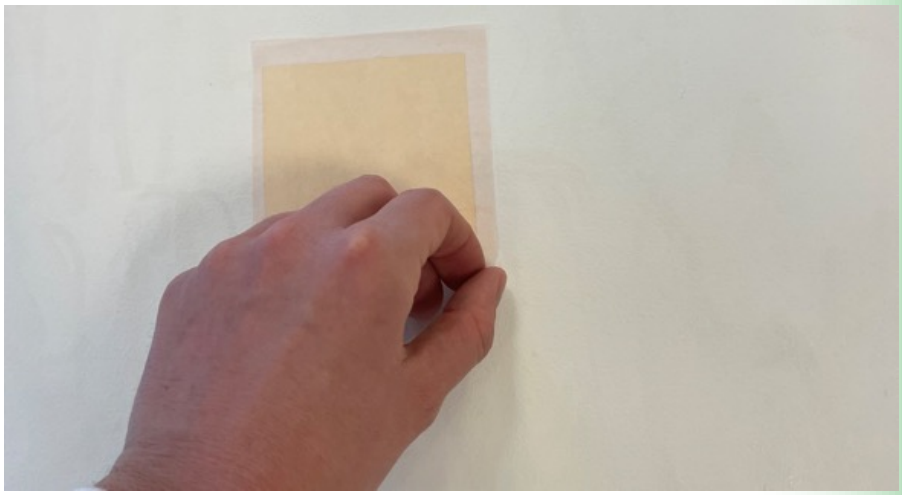


Fig. 3. Application of the gold leaf.

Fig. 4. Result after applying one gold leaf.

All drawing processes were documented. Furthermore, the human played with the meaning of the words conjured by the AI. The human subverted the meaning of for example “Draw a person sitting on a bench in a park. Draw it 40 times. You have 1 minute and 30 seconds per drawing.” by sitting on a bench in a park whilst drawing a person, instead of making a drawing of a person sitting on a bench. Some of these exercises as well as the first attempts were compiled in a video (Figure 2).

Those drawings were considered as potential pieces to exhibit. However, the individual drawings seemed still too controlled. The human fantasy was still in them. Thus, the collective human-AI decision was made to draw with glue onto paper, and instead of using one paper per drawing, 30 repetitions would be done on the same paper. This allowed the human artist to switch off his mind and attempt to draw without correcting mistakes that he perceived in the drawings. It removed one more layer of subjectivity. This way the last subjective input would be muscle memory, combined with what the human visual perception told the human body to draw. To bring forth and make visible these drawings gold leaf was applied to the paper (Figures 3-4). After careful consideration by both actors (human and non-human), it was decided that these pieces best conveyed the common journey of communication, repetition, and layering. It allowed the human to “stay in the dark” for most of the process up until the final revelatory moment.

After the human-made versions had been executed, one of the prompts was given back to GPT-4 with the request to write code for an SVG drawing (Figure 3). The results were astonishingly clumsy but somehow still not completely abstract, a discovery also made by Janelle Shane as presented on the blog platform AI-Weirdness (Shane 2023). For the prompt: “Draw a lighthouse on a rocky cliff” the AI system generated code which generally followed the rule of having a large base shape (the rocky cliff), a longer vertical shape (the lighthouse) and a circular or triangular shape at the top which were meant to represent the light-rays or the source of light atop the lighthouse. The SVG code as well as the resulting shapes were traced onto paper by an Axi-Draw mechanical arm, to remove any element of human interference.

The final artworks are displayed together to show how through a common process of exchange human and AI systems came to different visual expressions in the world. The video (Figure 6) which shows excerpts of the dialogue provides a key for the viewer to understand the processes which lay beneath these artworks.

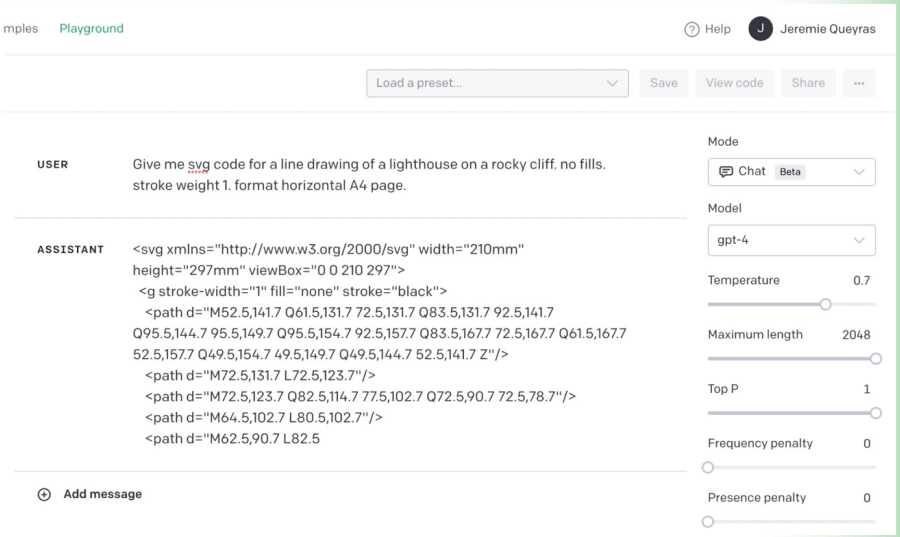


Fig. 5. Screenshot showing how GPT-4 generates SVG code.

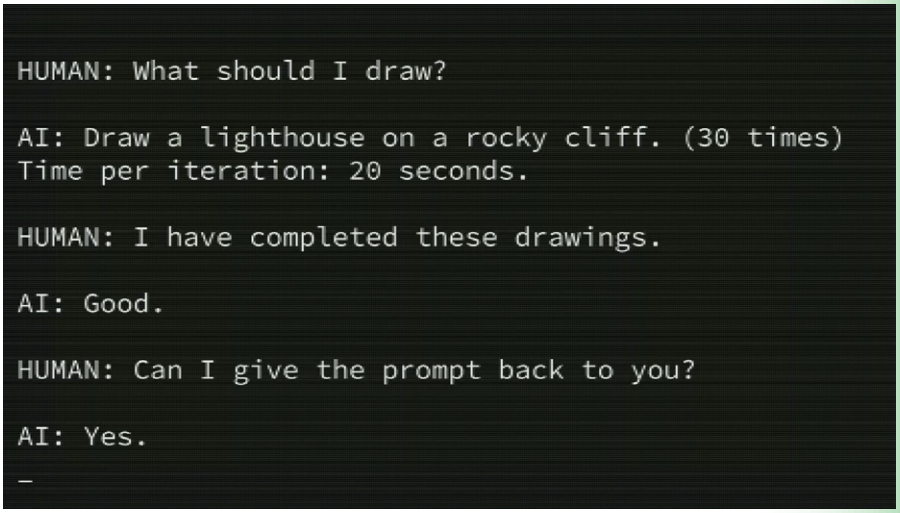


Fig. 6. Still from the video displaying the conversation between the Human and AI.

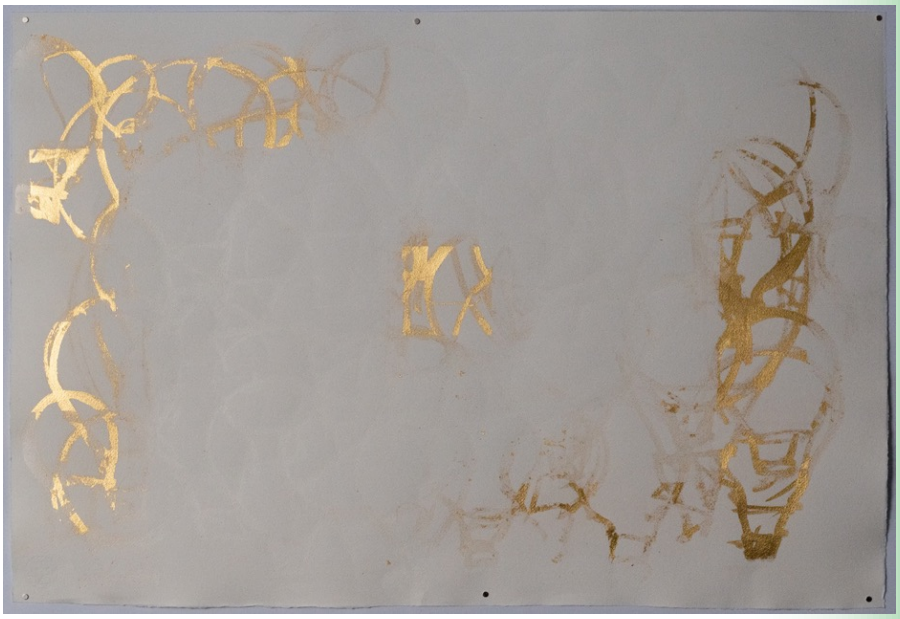
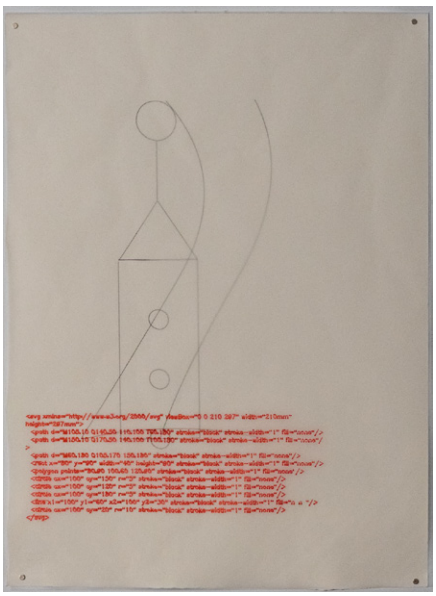


Fig. 7. Jérémie Queyras & GPT-4. AI prompt: *Draw a hot air balloon floating in the sky. (30 times) Time per iteration: 15 seconds*. 2023, Gold leaf on etching paper, 78x53 cm.

Fig. 8. Jérémie Queyras & GPT-4. AI prompt: *Draw a waterfall in a forest. Draw it 30 times. You have 2 minutes per drawing*. 2023, Gold leaf on etching paper, 78x53 cm.



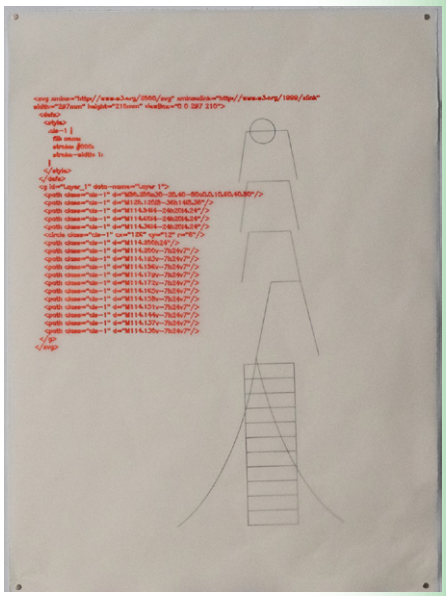


Fig. 9. GPT-4 & Jérémie Queyras. Prompt: *Draw a lighthouse on a rocky cliff. (30 times) Time per iteration: 20 seconds*. 2023, Pen on etching paper, Pen on tracing paper, 53x78 cm.

Fig. 10. GPT-4 & Jérémie Queyras. Prompt: *Draw a lighthouse on a rocky cliff. (30 times) Time per iteration: 20 seconds*. 2023, Pen on etching paper, Pen on tracing paper, 78x53 cm.

Fig. 11. *Harmon-i* Exhibition view at Bastille Design Centre 2023, 3 Human-made drawings, 9 machine-made drawings and video projection.

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