Reviving the Deconstructive Approach from 70s Through AI and Computational Creativity: The case of Art & Language Group and GPT-3 Methodology

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Abstract

Computational art is a creative field that indicates to a futuristic idea of artificial intelligence, which has become a central topic in computer science, cognitive science and art philosophy with current improvements in the field of machine learning systems. While the GPT-3 methodology brings us the developments in the text-to-image applications, (i.e. DALL·E 2, Midjourney AI, VQGANClip, Disco Diffusion, etc.), the machine and human communication also improved in terms of language processing. In this study, we would like to dive into this phenomenon with an attempt to draw a link between the machine-human interaction and computational creativity through reviving the deconstructive approach of Art & Language Group; a conceptual art movement from 70s. Language was an important tool in this approach, and words played a primary role in their emphasis on ideas over visual forms. With this approach, we would like to present a reflection on the meta level of language and art, and AI being an autonomous tool to convey this. Through the predictions by Art & Language Journal (i.e. future of the past), where artificial intelligence becoming efficient on anthropocentric marvels such as creativity, we suggest an exploration on the fields of computational art and conceptual art, using the case studies of GPT-3 models to analyze the input and output of AI programs with the texts by Art & Language Group. We believe that introducing aesthetic meta levelled data conceived in the 70s by the Art & Language group can enrich the output of GPT-3 Methodology in trans-disciplinary research.

1. Introduction

In this study we're discussing whether an artwork created using generative algorithms in one medium can become an artwork made by an artist. The machine we have chosen is DALL·E , a deep learning machine named after Wall-E and the surrealist artist Salvador Dali.

For our study, we go one step further, from surrealism we jump ahead in time to conceptualism (1965 - 1975). DALL·E is an AI system to create visual images based on text, using the Natural Language Processing methodology (NLP). Therefore, this technology closely related to human language, linguistics and semantics.

The conceptual artists were inspired by the student uprisings of 1968, they turned

against the commercial art market by not producing any more works of art, only language. They also made frequent use of so-called Readymades, a term derived from the artist Marcel Duchamp, which are objects resulting from mass production. Conceptualism was also practised in Africa, even before the term was invented by Marcel Duchamp but that was for other reasons such as enriching and decorating spaces for rituals and dances. (1)

2. Conceptual Art: 1965 - 1975

There are several categories in art, such as visual and performance art, film and literature. Conceptual art became popular in the 1960s, partly due to the student revolts. Artists wanted to go in new directions, no longer conforming to a commercial art market, curators and art dealers. One way of breaking free from the art market was to put the idea first. Sol Lewitt says the following about this:

"In conceptual art the idea or concept is the most important aspect of the work. When an artist uses a conceptual form of art, it means that all of the planning and decisions are made beforehand and the execution is a perfunctory affair. The idea becomes a machine that makes the art." (2)

Appropriation plays an important role in conceptual art, its precursor being the Readymade, a mass-produced object such as a urinal or a bottle-dryer. These objects - which were usually signed - were exhibited in a museum or gallery, so that as Readymade they belong to the category of sculptures that were not made by an artist but were 'selected'. (3) Marcel Duchamp was the artist who introduced this term when he exhibited a urinal in 1917, which he called 'Fountain'. One and three chairs, a work by Joseph Kosuth from 1965, shows the representation of a chair in three different ways: photograph, object and description in language. (4). In 1968 Art and Language was founded in Coventry, which consisted of a group of conceptual artists whose main representatives were Michael Baldwin and Mel Ramsden, who joined later, in 1970. The group studied the representation of art in language, analysing the publications of art critics with the idea that theoretical knowledge of art is not sufficient to judge works of art on their quality. That is why the group specialised in texts written by artists. These texts could themselves be called art. Charles Harrison says about this in the journal Art and Language:

Those who first encountered the work of Art & Language in the role of critic may testify to the strangeness of the experience. Any attempt at exegesis was doomed to self-parody. One either ignored the enterprise or joined it.

An interesting example of the game that Art & Language played with representation and self-reference is Michael Baldwin's work, a mirror he called Untitled Painting (1965). (5) This work can be seen at Château Montsoreau, which houses Art and

Language's extensive art collection, acquired over time by art collector Philippe Méaille.

3. Method

The group was fascinated by the technology of the future; for example, a film shown at Château Montsoreau is an impression of an art exhibition seen through the eyes of an alien. If we extrapolate this topic to the present day, we end up with the possibilities that artificial intelligence offers today to enrich art with new ideas. This also applies to the complex theorising of the Art and Language group. Although the meta levels often require excellent knowledge of the context referred to, it is possible to use AI to explain the texts published in the journal Art - Language until 1999. We have worked with texts that are referred to as 'art' by the group itself. With this we refer to the previously mentioned term Readymade, in which the artist decides to select a product of mass production and call it a work of art. In our opinion, the results of AI could be selected as Readymade, because they are in fact made by a machine. In this way we keep the discussion going, whether art can be made by machines, even if it is something other than a unique painting or a special idea.

3.1 Semantics and Artistic Signifiers

The question of the artiness of text, and the suggestion by the Art&Language group that the words and semantics being an artwork itself, coincide with another controversy about the AI-Art phenomenon today. While for a couple decades AI artworks are being discussed to be artifacts or not, a new methodology that becomes very popular today can be analysed with this point of view. The text-to-image methodology, which became more popular today thanks to the improvements in GPT-3 and its applications such as DALL·E 2 or MidjourneyAI, is a very good example for how linguistics elements or the semantics can be a bearer of an artistic signifier.

3.2 What is a text-to-image methodology? Is it creative?

Text-to image models are the outputs of years of training and NLP (natural language processing) in machine learning and artificial intelligence. In order to create an image, first, the AI needs to "learn" an image, and the first signifier to match that image: a word. So we can think of AI like child who learns simple words first, with a simple image with it. This way, a child can "recognize" an image. For instance, when we see the word "bird", we immediately think of variety of bird images in our head, that we saw until that day maybe a millions of times. Therefore, our neural network has a dataset of the word "bird" in our brain, which starts to process when we start to see this word. Between an image of a bird and the word 'bird', our visual cortex transfers the information like a series of computational elements. This is how perception takes place: through the set of neurons connected to each other in a neural

network. Our brain turns the image (the pixels) into a word by transferring the neurons in the retina into one layer after another layer of neurons, that are connected by synapses. (6)

Therefore, there's a dual relationship with creativity and perception. This process works in a similar way in machines as well, through programs and codes. Creativity is the flipside of this process, which is turning a concept into something out there in the world. Thus, after the algorithm becomes capable enough to recognize an image with image captioning - hence a text, it starts to "create" that image from its dataset that it learned until now.

4. Results

Examples of DALL·E with the texts from Art&Language Group:

In order to recreate the texts from Art & Language group, and to revive this conceptual approach, we would like to generate the Art Language Journal texts with DALL·E.

ARTIST'S LANGUAGE 2

Michael Baldwin

Consider a painting-like thing. It consists of sixteen panels each measuring 48 x 68.5 cm. They are hung edge to edge, four wide and four deep, so as to form a continuous surface. The ground colour of the block of four – two wide and two deep – at the top left is orange, the four below pink, the top right the same pink, and bottom right grey. The surface is thus quartered. Through the centre of each panel a vertical and a horizontal strip, about 20 cm.wide, runs from edge to edge forming a cross. The horizontal strip which runs across the four panels comprising the top row is blue, on the next row down it is violet, then blue and finally violet on the bottom row. The vertical stripe which runs through the four panels on the left is grey, next right it is red, then grey and then orange on the far right. The horizontal stripes are overlapped at the centre of each panel by the verticals, so that the colours of the former just show through.

Consider also the proposition that this image – this painting-like thing – is genetically connected to – we might say implicated in – a pornographic text. The two are linked by some artist's writing. A claim like this invokes a narrative and some sort of analysis of the artist's writing that makes the link. The narrative involves several portraits and several dreams.

The story begins with some intractable pictures. They formed themselves eventually into furniture. And they did this rather mysteriously. A single photographic image of an open book, largely legible but coloured so as to give the appearance of high-genre abstract painting – shadowy and Rothko-like – but also figurative in the sense that some still-life representati…
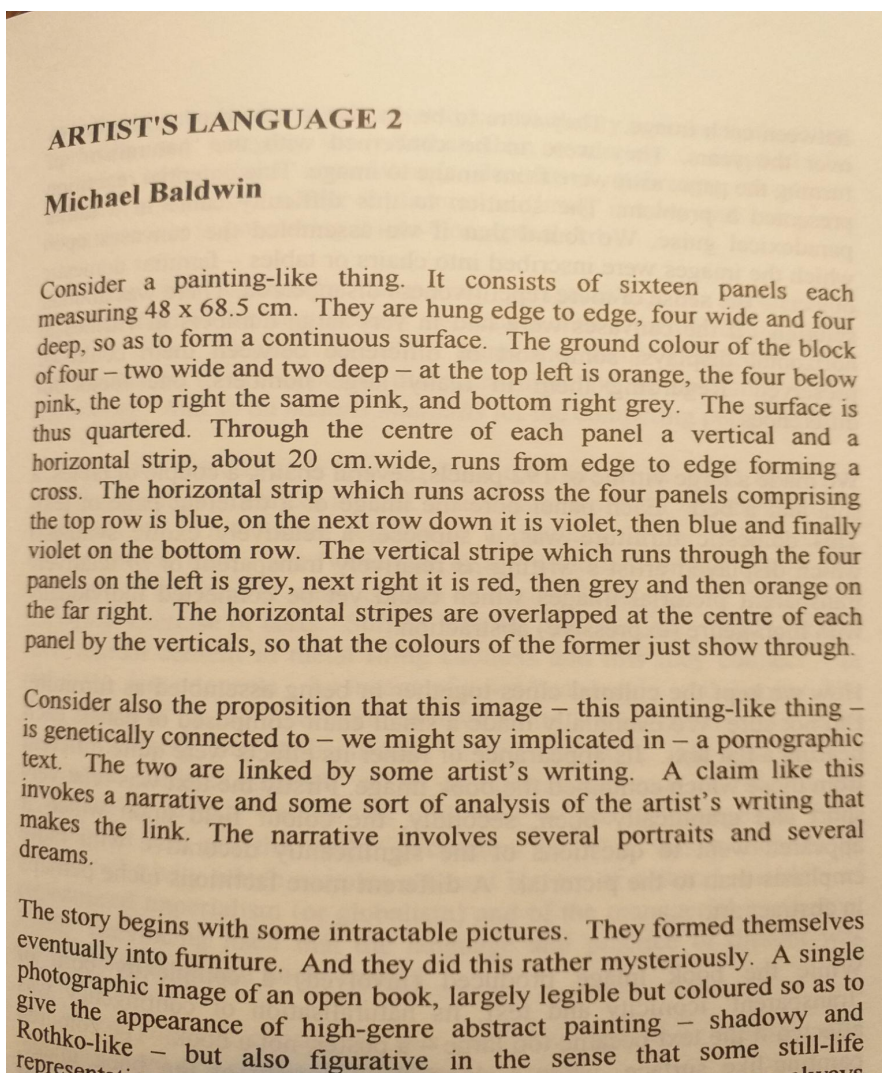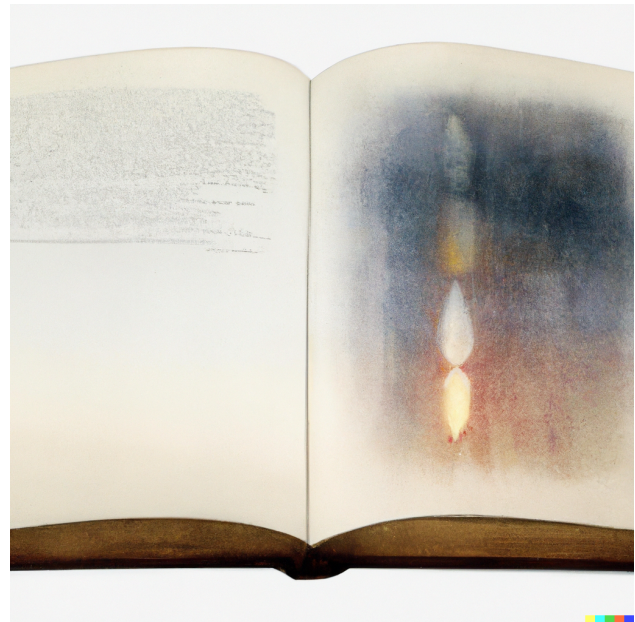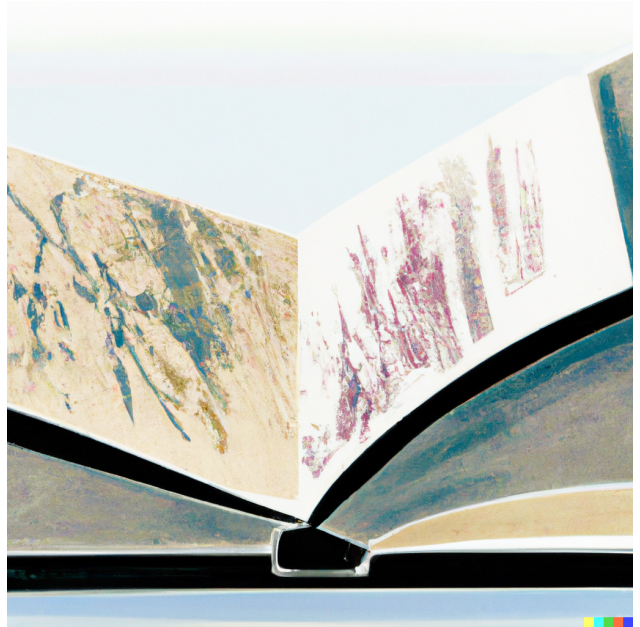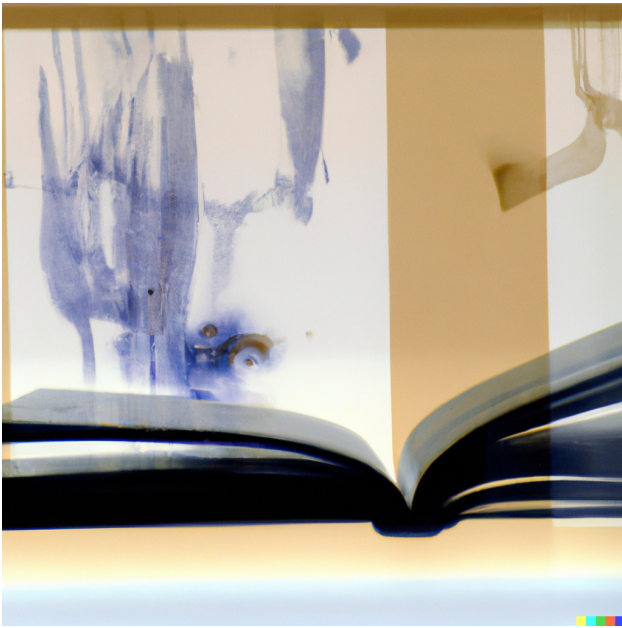
image: the text by Art & Language group.

Here's the text from Art & Language group that we used to fed into DALL·E 2:

"A single photographic image of an open book, largely legible but colored so as to give the appearance of high-genre abstract painting, shadowy and Rothko-like"

Here are the images DALL·E 2 created:

In these examples, we use the description texts from Art & Language Group as an input, and visualize them through the cross-modal translation. This is particularly interesting as these text are not considered some input to describe an artwork, but artworks themselves. Even though these texts or "conceptual artworks" are not visuals on purpose, when we input them into text to image algorithms, we can see that they create a certain form of visual representation. Thus, it can be argued that even a conceptual text has the means of creating this form of representation through the neural networks, and through our brain. In other words, turning texts (signifiers) into pixels and shapes (see 3.2).

Furhermore, one can argue if these text inputs of Art & Language Group can be considered as metadata. Metadata is "data that provides information about other data", but not the content of the data, such as the text of a message or the image itself.(7) Often referred to as data that describes other data, metadata is structured reference data that helps to sort and identify attributes of the information it describes. In *Zen and the Art of Metadata Maintenance*, John W. Warren describes metadata as "both a universe and DNA."

In this case, the outputs that are generated by DALL·E 2 are representative of the previous data of images that are used to train the neural network of GPT-3 models. The language of metadata is written to be understandable to both computer systems and humans, a level of standardization that contributes to better interoperability and integration between disparate applications and information systems. In this way, we use the text to create the visual representation of it, and for that we use DALL·E 2, to explore how we can use metadata in AI. As GPT-3 improved a lot in the recent years, we can use this model to create the visualisation - therefore the artiness of the text with the collective representation of semantics.

4.1 What is GPT-3?

GPT-3 is short for **Generative Pre-trained Transformer 3**, which is an autoregressive language model that uses deep learning to produce human-like text. GPT-3 is a very crucial language prediction model, because it provides a system that computers can **understand humans**.

To communicate with computers, we developed "codes" and programming languages. We attached and linked every set of information into "bits", which are simply sets of "ones" and "zeros" to make a connection between a task and the processor of the computer. We have improved the computer algorithms to understand us, and to imagine with us.

By this way, we have created a collective memory that can turn the text into real semantics for both humans and computers, and also got one step closer to creative artificial intelligence, in other words, making "artificial" creativity real.

In this study, we wanted to build a triangular discussion with AI, language and art. And text-to-image methodology and therefore GPT-3 has been our main case study to translate the Art & Language Group's conceptual texts into visual representations, but of course, GPT-3 also has limitations in terms of "understanding" the language and creating a neural network's own meaning about human language. A next level to build a connection with this deconstructualist style of art and language and apply it to AI art genre, could be the symbolic AI methodologies. Unlike GPT-3, Symbolic AI is a type of AI that understands the world by forming internal symbolic representations of that same world. Symbolic AI mimics the way humans reason and learn, by creating rules to manipulate those human-readable symbols. (8)

5. Conclusion

The conventional definition of "art" and "artiness" was highly challenged in 1960s and 1970s, with conceptual art movement. While the artworks started to get more "meta", the artists also looked into different perspectives to make a statement, beyond the mainstream perceptions and presumptions of aesthetics. During those years, especially with the contribution by deconstructivism, linguistics had a big influence on art movements and artists, in various fields from literature to painting, design, sculpting, visual arts and architecture. Deconstruction theory denotes the pursuing of the meaning of a text to the point of exposing the supposed contradictions and internal oppositions upon which it is founded—supposedly showing that those foundations are irreducibly complex, unstable, or impossible.(9)

Today, we think that reviving these discussions around text, language and art is very relative in terms of Artificial Intelligence, because today we are having the same

discussions around the topic of AI art, and artiness or creativity of this medium, –or this genre. In this transdisciplinary field of AI art, where an emotionless entity creates artworks by using human language, as academics we need alternative and new approaches to understand and analyse this phenomenon.

We believe that this case study of Art & Language Group and text-to-image models can help to explore these new opportunities in the academic literature of creativity, cognitive science, computer science and art philosophy.

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