

Dream-Inspired Art, Comparing Human and AI Approaches

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Résumé de l'article

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Dream-Inspired Art, Comparing Human and AI Approaches.

Yasuhito Nakasato

This article discusses how I documented my dreams for two months, with the goal of uncovering how dreams are stored in my brain and gaining insight into the unconscious processes that lead to their creation. In exploring the relationship between dreams and art, I sought to understand the creative potential of dream-inspired art. Informed by my exploration I created art inspired by my dreams using Adobe Photoshop and Dall-E, an artificial intelligence tool. By comparing the aesthetic qualities of my digital art with those generated by Dall-E, I share the insights I have gained into the potential for AI in the creative process. This artistic exploration has broader implications for our understanding of the creative process, the role of the unconscious in art, and the relationship between humans and AI. Future research could further explore the potential for dream-inspired art and the role of AI in the creative process.

Keywords: *Art; Dreams; Consciousness; Unconsciousness; Artificial Intelligence*

I have always been fascinated by my dreams. They are often vivid, exciting, and feel like more than just a random assortment of images and memories. Instead, it feels as though my unconscious mind is intentionally creating these dreams, piecing together a cohesive narrative that often feels more real than reality itself. There are times when I wake up from a dream and feel as though I have been transported to a different world altogether. I can recall the colours, and even the emotions that I experienced during the dream as if they were tangible things. In fact, some of my dreams have been so vivid that I have found myself struggling to distinguish them from reality.

I have come to realize that my dreams are not just random fragments of my memories pieced together by my subconscious mind. Rather, I feel as if they are a window into a deeper level of consciousness, a place where my mind can explore ideas and emotions that I may not be consciously aware of. It seems as if my unconscious mind is trying to communicate with me through my dreams, sending me messages that I may not be able to receive

during my waking hours. And so, I find myself eagerly anticipating each new dream, eager to see what my mind will reveal to me next. Overall, I believe that my dreams are a valuable source of insight and self-discovery. They offer a glimpse into the inner workings of my inner life and provide a unique perspective on my experiences and emotions. While some may dismiss dreams as mere fantasy, I feel that for me, they are a powerful tool for understanding myself and the world around me. To support my ideas, Carl Jung states "The dream is specifically the utterance of the unconscious" (Jung et al., 2017, p.13) which gives me confidence that this artistic musing is one of consequence and relevance to many.

Writing down my dreams

The process of documenting my dreams began by writing them down on paper the day after or within the following days, akin to maintaining a diary. However, recalling dreams in their entirety proved difficult due to the inability to completely remember all the details. Another challenging part was how to interpret the



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dreams, since they often featured a mixture of Japanese and English. Writing down the dreams in one language versus the other could alter their meaning. Therefore, interpreting and comprehending the dreams in either language required a certain level of linguistic proficiency. For the purpose of my artistic musings, I would like to share a few of the more vivid dreams that I was able to recall and document.

02/23/23. In my childhood neighborhood, there was a concert being held inside an abandoned building. Interestingly, the audience was situated on a boat. I made an attempt to enter the building to enjoy the concert, but instead, I somehow stepped into my neighbor's yard. To my surprise, I noticed that there were people filming for a TV commercial, which made me embarrassed since I was only wearing a swimming suit. But I had assumed that I was ready for the concert. In an attempt to remedy my situation, I asked one of the TV crews for a bath towel. However, my request was not understood by the female member of the film crew. In the midst of this, I ran into my father, feeling shy and awkward about my appearance. I expected him to help me out of the situation, but instead, he simply said "Have a good day" and left. Soon after, I found myself in another dream where I encountered a former colleague who was painting mountains. Initially, her painting was plain and simple, like a doodle, but eventually turned out to be beautiful with intricate details.

03/08/23. I saw fictional black cats with beaks and I was frightened, trying to avoid them and running away until I found myself in a crowded space. But one of them managed to find me and approached me before I woke up.

Explorations of dream imagery with Photoshop and Dall-E

After I had completed documenting my dreams, I selected one dream that intrigued me the most and decided to use it in a digital re-creation experiment. First, I would engage in a digital image creation with Photoshop using a selection of images found with Google Images and then, I would compare the result versus text-to-image renderings produced by artificial intelligence DALL-E. According to Sarah Kofman (1988), "As in art, considerations of figurability are fundamental; dream thought is utilizable in its abstract form and must be put into pictorial language" (p.37). As a graphic designer and Adobe Creative Cloud user, (especially Photoshop and Illustrator) I possess the necessary skills to execute the project. As an artist, I endeavor to create digital works that reflect my subconscious mind, a facet that I feel is uniquely human.

To bring my vision to life, which was based on the dreams I shared on February 23rd, 2023, and March 8th, 2023, I used my own illustration skills with Photoshop to create Imaginary Mountains and Black Cat with A Beak (Figure 1 and 2) along with images found on the browser Google through specific keyword searches.

Figure 1. Created by Yasuhito Nakasato on February 23rd, 2023. Title: *Imaginary Mountains*. Medium: green paper, pen and Adobe Photoshop. Doodling mountains are evolving into more realistic depictions.





Figure 2. Created by Yasuhito Nakasato on March 8th, 2023. Title: *Black Cat with A Beak in My Dream*. Medium: Adobe Photoshop. I picked a photo of a black cat from Google Images, then used Photoshop to add a beak to its mouth.

For *Imaginary Mountains*, with vague memories or the dream yet animated with powerful lingering emotions, I initially doodled lines and mountain shapes on green paper, which I then scanned and imported into Photoshop. After selecting random images of leaves and sky from a search on the Google platform, I copied them onto layers in Photoshop and placed them in front of and behind the mountains I had drawn to enhance depth and atmosphere. Additionally, I adjusted colours and perspectives to ensure visual coherence and realism.

Still remembering the anxiety caused by the strange cat, for *Black Cat with A Beak in My Dream*, I selected the images of a black cat, a crow, and a pedestrian crossroad from Google Image searches. I then copied the images into Photoshop and placed them in layers removing the background surrounding the black cat, and deleting all of the image except for the crow's beak. Then, I adjusted their colours and finally, I erased the black cat's right cheek from our view in order to match the beak (Figure 3).

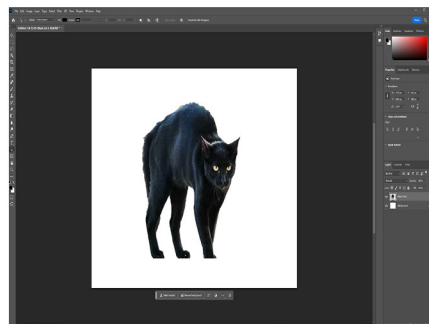
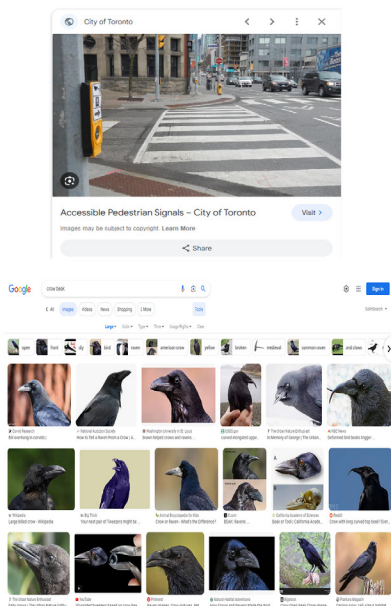


Figure 3. Created by Yasuhito Nakasato on March 8th, 2023. Medium: Adobe Photoshop. In the process of creating my imaginary character *Black Cat with A Beak in My Dream*.

Figure 4. Created by DALL-E, on April 21st, 2023. I entered some key words into DALL-E: 'aesthetics,' 'only green colours,' 'real mountains.' DALL-E then took a few seconds to create an image. However, when I didn't like the initial image, I tried again, resulting in a new one. After 3 attempts, I finally chose this image.



For the second round of visualization experimentation, I utilized the AI text-to-image application DALL-E. By providing keywords that I felt best described the visual experiences I had experienced during my dream such as; "black cat with its beak, new creature, imaginary" and "aesthetics only green colours, real mountain" DALL-E generated its own interpretation of the visuals I had experienced during the specific dreams I had highlighted. (Figure 4 and Figure 5).

After using DALL-E, I felt like I was exploring a new world of creativity. It was fascinating to see how the computer could turn simple words into colourful pictures but somehow, they were so different from my own renderings in Photoshop. And yet, I know that both Google and DALL-E's algorithms use similar digital image database. It made me think and wonder about how powerful, or useful, AI technology can be in helping us create things we never imagined before.

Figure 5. Created by DALL-E, on March 31st, 2023. I entered some key words into DALL-E: 'black cat with its beak,' 'new creature,' 'imaginary.' DALL-E then took a few seconds to create an image only at once. However, when I didn't like the initial image, I tried again, resulting in a new one. After 5 attempts, I finally chose this image.



When I compared my digital art created during the first round of visual experimentation with DALL-E's interpretation of my keywords created during the second round of visual experimentation, I could observe more clearly how DALL-E worked. For instance, DALL-E used complex algorithms to generate four images simultaneously. After inputting keywords 'black cat with a beak', DALL-E presented me with four images from which I selected one to save for myself. On the other hand, in my own digital art-making process, I was primarily guided by my own visual instincts, memories and emotions.

Figure 6. Minato Ward, Tokyo, 1994. DALL-E generated image.



In a desire to push further my artistic musings, I became curious about how DALL-E could recreate my childhood memories using data available online. Entering keywords such as "Tokyo," "Minato Ward," "Kita Aoyama," "Park," and "1994" in both English and Japanese, I hoped to see images reminiscent of my early childhood years in Japan. However, the results were rather disappointing and unrelated to my memories. The resulting images created by DALL-E did not resemble my hometown at all. Despite utilizing techniques such as colour contrast, angles, depth, dimensions, and aesthetic viewpoints within 30 seconds, DALL-E's dataset and algorithms proved limited and unable to meet my expectations. (Figure 6). This reminded me of a statement by Bau Liu (2023) who aptly wrote, "It has been argued that AI is better at imitating existing artistic styles or structures than creating new ones" (p.816).

Following this experiment, I decided to capture the essence of my childhood through my subconscious memories and my own artistic rendering; I choose to draw solely using pens, ink and paper. I also made the decision to initially avoid reference photos. Additionally, I incorporated a personal touch by inscribing my fingerprints directly onto the paper; this repeated mark was a way to make the resulting image unique, and to show that it was created by me. Unlike the quick process of creating digital art with DALL-E, my method took much longer and

caused some pain in my fingers and hand from gripping the pen firmly. However, seeing the progress of my drawing excited me (Figure 7).

After comparing my drawing with DALL-E's images, I appreciated my art more than ever because it fully reflected my random memories. As Bau Liu (2023) notes, "Of course, it is to be expected that the creativity of AI art still has its limitations now. A significant proportion of what AI art has achieved so far is within the existing human artistic disciplines" (pp.815-816).



Figure 7. My Childhood Memories of Minato Ward, Tokyo, 1994. Hand drawing by Y. Nakasato (2024)

Reflecting on my artistic explorations

While documenting my dreams, I found the process to be therapeutic. I did not have to think about what to write, but instead just let my memories flow out naturally, whether they were accurate or not. It was like doing dishes or meditating, where I did not have to follow a step-by-step process. My documentation method was more spontaneous and less structured. I did not force myself to write extensively, but instead, I found that the key to writing down my dreams was to relax and allow whatever came to mind to be recorded.

During my comparison of my creative process with that of AI, I made a noteworthy observation regarding the issue of time. While it took me nearly an hour to produce an artwork, DALL-E was able to generate its own artwork and showed me four images within less than 30 seconds. Obviously, the high-performance computer software DALL-E can process information and existing databases much faster than I did. Furthermore, it did not slow down; it maintained its fast pace. On the other hand, I got tired and could not continue working without taking breaks, stretching my body, resting my hand, or having something to eat or drink.

When considering the use of AI in creative works, it is prudent to acknowledge the controversy surrounding its development. Bostrom (2014) argues that the development of superintelligence could lead to machines that surpass human cognitive abilities in many domains, including creativity. Miller (2019) points out that, "in the future machines will be fully creative and may even surpass us" (cited in Leonard, 2021, p.28). However, Marcus (2018) provides a critical appraisal of deep learning and emphasizes the need for a more nuanced understanding of AI's capabilities. He argues that while AI can be proficient in certain domains, it lacks the general intelligence and creativity of humans. Through this artistic musing, I have had the opportunity to become more familiar with using AI and I believe that it can generate ideas or inspiration for artists, or aid in the technical aspects of art creation, such as colour selection or composition. The application of AI in art creation can bring new opportunities and expand artistic expression. However, as seen in the comparison of My Childhood Memories of Minato Ward, Tokyo 1994, we also need to carefully consider the role of AI in art creation and to acknowledge its limitations as an assistant to human creativity.

My study on dream-inspired art and the comparison between human and AI approach has provided valuable insights into the creative process. Through documenting and analyzing my dreams, I have gained a deeper understanding of the subconscious mind's influence on art expression. Creating art inspired by my dreams both semi-manually and with the assistance of DALL-E, has highlighted that while AI too like DALL-E offer rapid generation of artistic outputs, they bring a generic yet fascinating and intriguing perspective to the creative process. The comparison between my own hand drawing, my crafted digital art and that generated by AI has emphasized the limitations and yet relevance, of embracing both human intuition and technological capabilities in art making. My artistic musings have deepened my interests in examining the intersection between technology and creativity, paving the way for further exploration and experimentation in my artistic endeavors.

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