

NOTHING COMES OUT OF THIN AIR

KATHARINE
WIMETT



Roberto Matta, *Locus Solus*, 1941/1942. Oil on canvas, 74.5 × 95.5 cm. 201 Donation of the Ulla and Heiner Pietzsch Collection to the State of Berlin. Photo by Lorenzo Serafino Pennati.

¹ As of October 2022, anyone can access Midjourney with a Discord social media account. Craiyon and Stable Diffusion are accessible with a web browser and no user account is necessary. One must apply for access to DALL·E 2, but it seems everyone is now admitted within a week. Midjourney and DALL·E 2 have limited the number of free user prompts, more “credits” can be purchased.

² Eda Kavlakoglu, “AI vs. Machine Learning vs. Deep Learning vs. Neural Networks: What’s the Difference?,” IBM blog, May 27, 2020, <https://www.ibm.com/cloud/blog/ai-vs-machine-learning-vs-deep-learning-vs-neural-networks>.

³ Aditya Ramesh, Prafulla Dhariwal, Alex Nichol, Casey Chu, Mark Chen (DALL·E 2 researchers), “Hierarchical Text-Conditional Image Generation with CLIP Latents,” April 13, 2022, <https://arxiv.org/pdf/2204.06125.pdf>.

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There is a magical quality to witnessing the production of pixels when using artificial intelligence image generators such as Craiyon, DALL·E 2, Midjourney, and Stable Diffusion.¹ Most often in a web browser, a user types in a prompt, a string of words describing what they imagine, clicks “generate,” and waits as the model works behind the scenes. Surprisingly convincing imagery illustrating the requested prompt then appears.

AI image generators are transforming our relationship to imagery, but these often unexpected combinations of objects plau-

sibly pictured don’t appear out of thin air; they are the result of a neural network.² One way AI image generators are trained is by feeding the system vast databases of images. The system links what these images might contain and mean to corresponding text descriptions. As the neural network receives and generates more data, the system readjusts its internal settings to produce more accurate predictions: in this case, accurate—meaning legible—imagery as defined by human evaluations.³

Despite the advanced technology at play, these AI generators don’t always produce completely legible images. The incoherency that can occur in AI-generated images carries a striking visual resemblance to the paintings, drawings, and collages of the Surrealist movement. Both Surrealism and the technology of AI image generators rely on the role of chance in creation. Meaning making is produced by the viewer, who may experience a strong or tenuous reaction to what they see.

The painting *Locus Solus* (1941/1942) by the Surrealist Roberto Matta (1911–2002) carries a striking resemblance to an enigmatic AI-generated image. *Locus Solus* combines multi-perspective planes with distant swirling ominous forms and embryonic portals, a concatenation of the vaguely familiar. Matta came to

⁴ Martica Sawin, “Roberto Matta: The Early Years,” Latin American Masters gallery press page (1997), <https://www.latinamericanmasters.com/press/roberto-matta-the-early-years>.

⁵ André Breton, “Manifesto of Surrealism,” *Manifestoes of Surrealism* (1924), trans. Richard Seaver and Helen R. Lane (Ann Arbor, MI: University of Michigan Press, 1969), pp. 27–28.

⁶ The relationship to automatism and use of an artist’s style is present for instance in @xacide’s prompt via Midjourney: “A painting of an angel kissing a demon, poster art by Roberto Matta, apocalypse art, hellish background, psychedelic art, nightmare, fire wings, anatomical details, full body, skulls, ligaments, connective tissue, heaven.”

⁷ Hélène Smith (1861–1929) was a Swiss medium. In 1900, the psychologist Théodore Flournoy published *Des Indes à la planète Mars* containing Smith’s automatic writings and drawings, some of which were based on her communications with a Martian. It is said that Breton was incredibly inspired by this publication.

⁸ Katharine Conley, “Surrealism and Outsider Art: From the ‘Automatic Message’ to André Breton’s Collection,” *Yale French Studies*, no. 109 (2006): p. 136. *JSTOR*, <http://www.jstor.org/stable/4149290>.

define his paintings as a “psychological morphology,” the transformation of objects that might only be witnessed in one’s dream space untethered from two- or three-dimensional structures.⁴ Matta initially trained in architecture before joining the Surrealists at the request of André Breton, the movement’s preeminent authority. Matta possessed a true gift for making the invisible visible: some have interpreted his work as the visualization of the imperceptible, interconnected technology that increasingly surrounds us.

Writing an input for an AI image generator is generally referred to as “prompt engineering.” The community of people using the generator and social platform Midjourney refer to this practice as “prompt craft.” “Craft” suggests control, wrangling through trained skill. In writing a prompt for an AI image generator, the writer, in response to each successive image set, easily slips into a process of editing and revision: a calculated writing rhythm that ends up mimicking the machine’s own iterative process.

The creators of early neural networks were concerned with emulating the human mind; the Surrealists, however, were more interested in operating like machines. In the pursuit of unconscious creation, the Surrealists, including Matta, often utilized a technique they referred to as automatism. The aim of automatism was to write, speak, or draw at the speed of thought without editing oneself. André Breton, who authored not one but three Surrealist manifestos, once described Surrealist artists and writers as modest recording instruments: “We, who have made no effort whatsoever to filter, who in our works have made ourselves into simple receptacles of so many echoes, modest *recording instruments* who are not mesmerized by the drawings we are making.”⁵ One finds a similar kind of unfiltered, meandering thought in Midjourney’s archive of members’ prompts, which are accessible and searchable on the platform.⁶

The practice of Surrealist automatism sought to relinquish control, initially inspired by the automatic writings and drawings of mediums who claimed spirits outside of themselves or beings from other planets were the true authors of their works.⁷ Throughout his life, Breton was interested in art brut, or “outsider art,” made primarily by mediums and the mentally ill. People he termed “primitives,” in that they possessed a child-like naiveté, taking a seemingly unadulterated approach to creating.⁸ By collapsing class distinctions within the movement, however performative this was in practice, Breton sought to move away from concrete authorship. The Surrealists believed that by removing themselves as the authorial subjects and creating as objective observers, they too could produce unadulterated works. For instance, in the 1920s, the Surrealist Max Ernst utilized Dadaist collage techniques to create illogical combinations of clippings from magazines, product catalogs, book illustrations, etc.

AI image generators are very much a product of our time, of reuse culture, in which the authorial subject is inherently called into question. The language of authorship becomes even stickier when describing a user’s relationship to the AI image generators. Does a human user “create these images” or “produce alongside the image generator”? Prompt craft, simply the writing of phrases,

9 It is said that Sigmund Freud’s *The Interpretations of Dreams* together with the crime fiction volume *Fantômas* were enshrined in a makeshift altar at the short-lived Bureau of Surrealist Research in Paris. David Lomas, “Becoming Machine: Surrealist Automatism and Some Contemporary Instances: Involuntary Drawing” *Tate Papers*, no.18 (Autumn 2012), <https://www.tate.org.uk/research/tate-papers/18/becoming-machine-surrealist-automatism-and-some-contemporary-instances>.

10 Aditya Ramesh, “How DALL·E 2 Works,” <http://adityaramesh.com/posts/dalle2/dalle2.html>.

11 Katharine Conley, “Surrealism and Outsider Art: From the ‘Automatic Message’ to André Breton’s Collection,” p. 139.

is a way to reify authorship. Prompt craft instates a hierarchy of skill within the medium by implying that some people are “better” at writing prompts, at manipulating the algorithm to produce what they imagine they want. Complicating the matter of authorship further, every image produced by DALL·E 2 is stamped in the lower right-hand corner, the most common location for an artist’s signature. In the place of a scrawled name are five squares in a spectrum of color, a logomark.

In contemplating authorship, Dadaists and Surrealists pondered the question: If art is not within the reach of will, how is it different from chance? Freud, whose ideas highly influenced both movements, maintained “that seemingly chance events ... were governed by a strict order of psychic determinism.”⁹ In other words, Freudian rationale suggested that nothing in the mind is undetermined, that everything has meaning—or at least that meaning can be made. In an explanatory essay, one of the researchers of DALL·E 2 elaborates that the system “prioritize[s] modeling the high-level semantics that make images meaningful to humans above other details.”¹⁰ The few recognizable elements are what perhaps imbue these generators with a mystifying quality to humans. But exactly how much work do we do on our part to accept that the output—rendered images—has fulfilled our prompts? In the same way, Surrealist automatism may have simply been a method for generating randomness, the work of art requiring the viewer to conjure a meaningful association.

A society of accelerated cultural reuse marked by an inundation of images requires the shared activity of sorting. Just as our personal data continues to be collected and sorted in order to predict our consumer behavior, AI models have progressed from categorization to prediction. Simultaneously, there is a cultural emphasis on the articulation of desire—that by visually representing, writing out, or announcing our desires, we can manifest our wishes into reality. Personal manifestation and technological prediction have more to do with behavior modification, our desires in part being shaped by the brevity of what we unconsciously/consciously realize can be accomplished. In the same way that the neural network is constantly reassessing its programming, so too do we rework our desires in such a way that we can be predictable. Humans and machines now progress in tandem, both limiting and expanding the operations of the other.

The namesake of Roberto Matta’s painting *Locus Solus* is a 1914 novel by Raymond Roussel. The story takes place in the outskirts of Paris, where an eccentric scientist leads a group of visitors on a tour of otherworldly exhibits containing strange objects of fascination. Our progression into an ever more digital world inherently means that we pass culture less and less through physical objects. Instead, it is in the digital realm that these AI-generated images possess the ability to elicit a revelation in the viewer, what André Breton called “latent possibilities.”¹¹ However, what degree of authorial control, if any, can be found within predictive technology? The overwhelming production of images by AI may accelerate cultural fragmentation, diminishing any potential of a shared visual language. Faced with this scale of production, will a consensus emerge—akin to the value we place on Surrealist art—with regard to AI-generated works?

What follows are experiments from October 2022, created with three of the AI image generators: Craiyon, DALL·E 2, and Stable Diffusion. Whereas Surrealist automatism attempted to approach creation without preconceived notions of a finished product, these experiments work backwards from a completed painting. They seek to replicate Roberto Matta’s *Locus Solus* by attempting to describe this highly dynamic and complex work with text prompts. These outputs vary significantly in the different generators, but the user is consistently presented with a series of square-formatted, correlated images.



Image created with the artificial intelligence image generators Craiyon (left) and DALL·E 2 (right). The written prompt: “Painting of scaffolding with swirling storm clouds in a field.”



Image created with the artificial intelligence image generators DALL·E 2 (left) and Stable Diffusion (right). The written prompt: “Oil painting of multiperspectival transparent structures in combination with opaque planes and translucent washes in a non-Euclidian space including volcanoes; a highway with a vanishing point, fields, above are storm clouds with small bubbles, these bubbles contain embryonic landscapes, color palette of dark blue; gray; beige; light blue; grayish blue; lime green; black.”