

Grab your copy of the *Right Click Save* book!



Articles Subscribe

RIGHT CLICK SAVE   

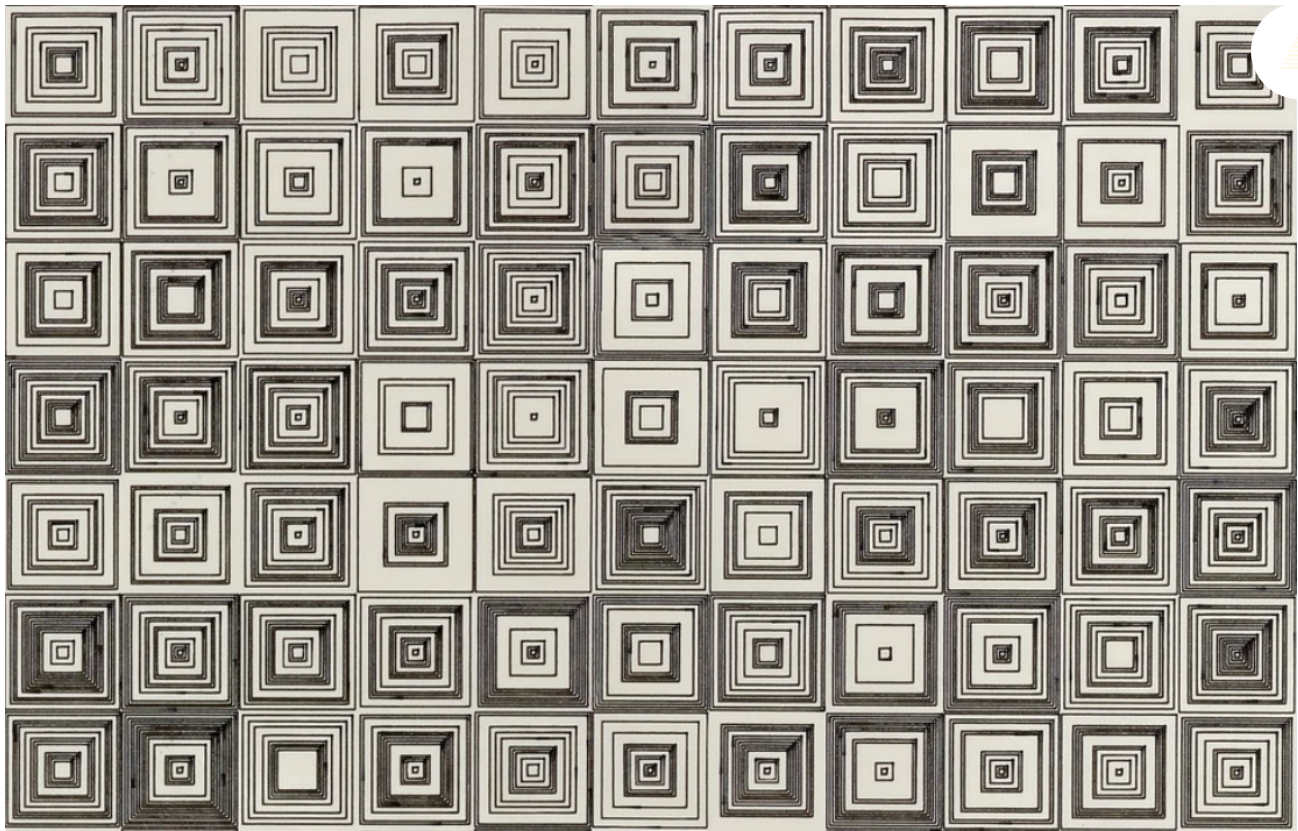
Home ► Interviews

Interviews

August 26, 2022

AN INTERVIEW WITH VERA MOLNAR

The pioneering artist speaks to Zsofi Valyi-Nagy about
NFTs, generative art, and the machine imaginaire



Credit: Vera Molnar, De La Serie (Des) Ordres (detail), 1974. Courtesy of The Anne and Michael Spalter Digital Art Collection

Following the recent passing of **Vera Molnar**, this interview has been republished with a new introduction by Zsofi Valyi-Nagy. *Right Click Save* pays tribute to the artist, whose life and work will always be a guiding inspiration.

On December 7, 2023, we said goodbye to Vera Molnar just a month shy of her



hundredth birthday. “100 would have been perfect for a coder,” my friend Cléa texted me the next morning. But that’s just it — Molnar wasn’t a coder, and it was with some reluctance that she accepted her legacy as a pioneer of digital art. She was not a savvy programmer, nor did she claim to be one. She wanted to be remembered simply as an artist, a painter at heart, who was an early adopter of the computer as a tool to make pictures.

Molnar used computers creatively and innovatively, but she never gave them free rein; her works are the result of an ongoing dialogue between woman and machine. Even when her lines are drawn with the robotic arm of a computer plotter, they retain an organic quality, as if drawn by hand. They also defy the binaries of digital versus analog, and human versus machine-made. As we discussed in the following conversation in August 2022, one of her significant early works with the computer was titled *1% de désordre* (“1% of disorder”) (1976), a topic she would continue exploring until the end of her life. Molnar wasn’t interested in perfection, but rather in imperfection — the insertion of randomness and disorder to disrupt the orderly grid or the symmetrical square.

Leaving us at 100 would have been too perfect; 99 leaves behind 1% of disorder.



Vera Molnar at her home/studio in 1961. Photography by François Molnar.
Courtesy Vera Molnar Archives (used with the artist's permission)

As one of the earliest artists to experiment with an electronic computer, Vera Molnar



received a surge of attention for creating her **first NFT** at the age of 98. Now recognized as a pioneer of generative art, it wasn't until 1968 that she first gained access to a mainframe computer. However, she had already spent a decade developing an “imaginary” computer, the machine imaginaire, which was a systematic process for generating series of abstract geometric drawings governed by chance and combinatorial mathematics. Oscillating between the plotter and the pencil, her work questions the relationship between hand-drawn and machine-drawn lines. Zsofi Valyi-Nagy wrote her doctoral dissertation about Vera Molnar and the relationship between computer graphics, abstract art, and gender in postwar Europe. The two women held conversations, in their native Hungarian, from 2017. In this exclusive interview, Valyi-Nagy speaks to Molnar about early computers, NFTs, and the meaning of generative art.

Zsofi Valyi-Nagy: So, Vera, there's this publication called *Right Click Save*.

Vera Molnar: I don't know it.

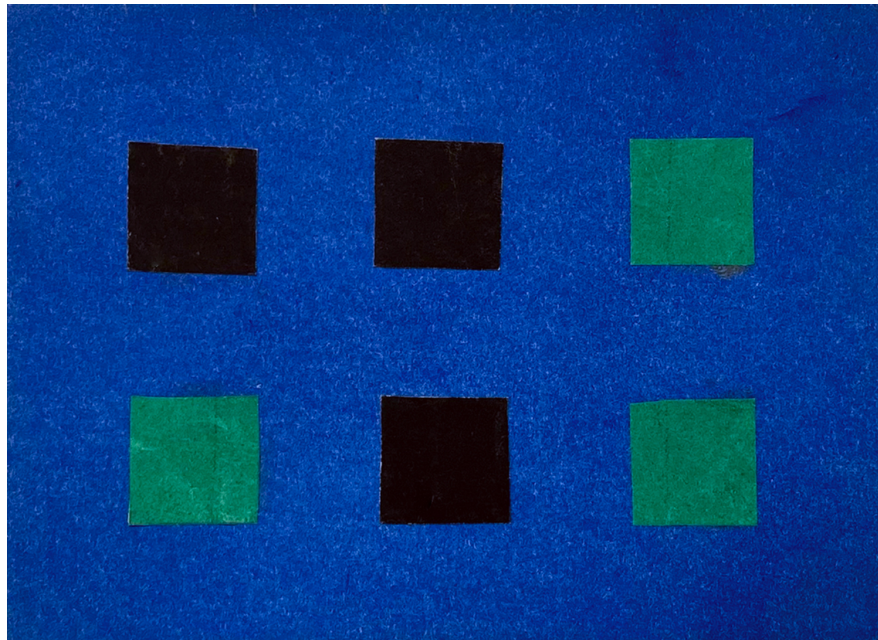
ZSVN: It launched earlier this year, and it's online only. So there's no print version of it. But what it means is...



VM: ...Anyone can see it from anywhere in the world.

ZSVN: The magazine recently ran interviews with *Frieder Nike* and *Herbert W. Franke*, who passed away recently. I'm sure you heard?

VM: I hadn't, but that's too bad. I really liked him.



Vera Molnar, *Étude 3 noirs, 3 verts carrés* ("Study 3 Black, 3 Green Squares"), 1949. Courtesy of The Anne and Michael Spalter Digital Art Collection

ZSVN: What does the word "generative" mean to you, if anything? And do you think it accurately describes your work?

VM: First of all, I don't know what "generative" means. It's an English word, isn't it? What does it mean?

ZSVN: It depends on who you ask, of course. But it refers to art made using an algorithm. So, it can



refer to artists working with computers, but not necessarily.

VM: I understand. Great. This also applies to the period before computers.

So let's say that you can take two different approaches to making art. One starting point is [to say]: "I'm a sanctified genius, I know everything, and everything I make is genius." Picasso said, "*Je ne cherche pas, je trouve*" ("I don't seek, I find"). The other approach is the total opposite of this. It's a lot more modest: "I would like to understand, to grasp." And this [approach] very quickly turns to algorithms. One of my first works made using an algorithm was for the cover of a collection of works by the composer, **Pierre Barbaud**. It was still handmade, of course, [with the] *machine imaginaire*.

Ever since my childhood — okay, maybe that's an exaggeration, but for a really long time — I've had this idea in my head: "*Je ne trouve peut-être pas, mais je cherche*" ("I may not find, but I seek").



Vera Molnar, Draft for cover of Pierre Barbaud, *La Musique Algorithmique*, c. 1968. Courtesy Vera Molnar Archives (used with the artist's permission). The design features a reproduction of Molnar's collage, *Quatre éléments distribués au hasard*, 1959

ZSVN: Can you explain the concept of the *machine imaginaire*?

VM: Instead of starting from “I am a genius and every work I make is a masterpiece,” I instead come up with a system with which [...] I can check what changes were made and what that [change] provoked in me. It’s an experimental method, [taken] step by step. The computer is fantastic for this purpose. The computer isn’t dumb. So I called [the process] *machine imaginaire*.

So I wake up every morning to the thought: *et si?* (“What if?”) And I could only imagine this [kind of

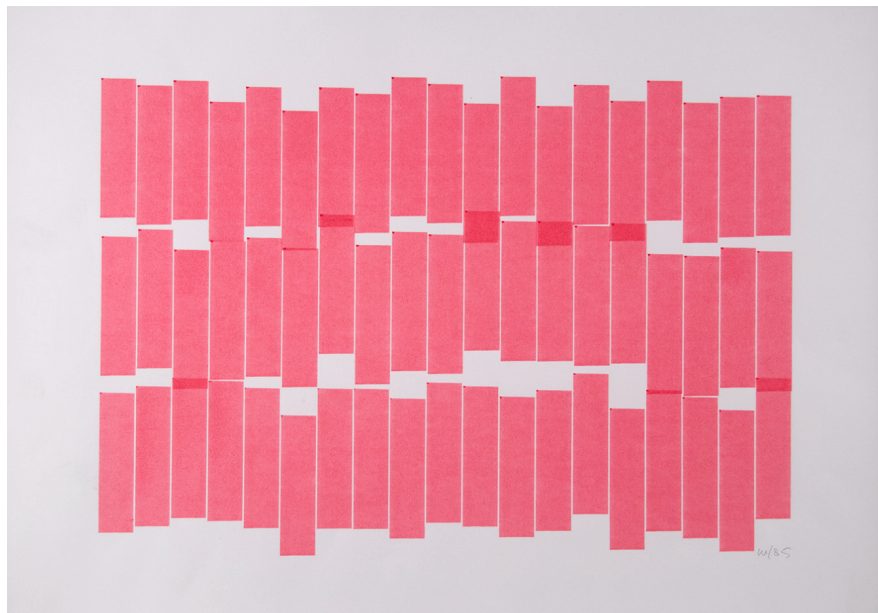


approach] with algorithms, or laws, or rules of the game. Naturally, the computer was a blessing for this, but even before the computer you could start thinking about, or *with* [algorithms]. So I guess my mind was just always set on that.

You could say I am a computer gone wrong, that turned into a woman. [Laughs]

ZSVN: What do you mean?

VM: Well, I can talk, walk, eat, drink. Computers don't do any of those things. They just work.



Vera Molnar, *Untitled*, 1985. Courtesy of The Anne and Michael Spalter Digital Art Collection

ZSVN: So the *machine imaginaire* is like a scientific experiment, where you are testing a



hypothesis. It's a way of making the creative process more "objective." But when you came up with the concept, around 1960, were you already familiar with computers even before you could access them?

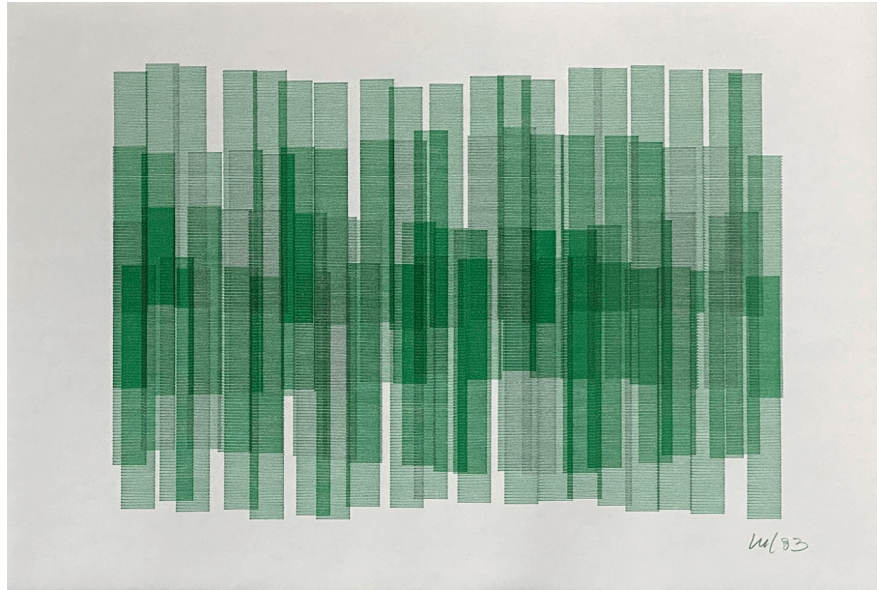
VM: Exactly. Something else that had a profound effect on me was Bell Laboratories [in New Jersey], the Mecca of scientific research into experimental aesthetics. The scientists there made something that had a huge impact on me — an artificial Stradivarius [violin]. I have always been drawn to things that aren't natural but made by humans, ever since I was little. One intelligent person made the artificial Stradivarius and another computerized it, then another programmed it to play Bach. I love anything that is artificial, that wasn't created by God, but by intelligent people.

ZSVN: What would you say to people who say you aren't a "real" computer artist because you didn't write your own programs, your own code?

VM: Yes, well, that's okay. [Laughs] At the time, I enrolled in a **Fortran** course, and I did learn Fortran. I could even punch cards. But I was never that big of a programmer.

In life, you can't do everything. You always have to choose. And for me, my primary interest was always painting — putting blobs onto a piece of paper in some sort

of order. And *then* the algorithm comes in.



Vera Molnar, *Lignes ou formes* ("Lines or shapes"), 1983. Courtesy of The Anne and Michael Spalter Digital Art Collection

[...] I did learn [to program]. But when I could ask for help, I always [did]. I learned Fortran, then I learned **BASIC**, and then I said: "That's it." Naturally, it would be better if I were highly skilled at programming, but you can't have it all. My situation was strange in that, compared to my colleagues, who all came from the technical or scientific side, I came from the Fine Arts Academy. This is a different brain. But I'm really happy that I came into contact with all of these things. And, in a way, this is part of the point for me — that I'm a computer gone wrong, or a computer who turned out great, if you like.



ZSVN: I think it's important to acknowledge, though, that anyone who works with programming in any capacity rarely works in complete isolation. Collaboration is always a part of it. If there's someone else in the lab or on your online forum, people always ask: "Hey, do you know how to do this?" or "How would *you* solve this?"

I wanted to show you what I've been up to at Humboldt University in Berlin. **Dr Stefan Höltingen** and I found the computer that you worked with at A.R.T.A [Atelier de recherches techniques avancées] at the Centre Pompidou [in the late 1970s], the Tektronix computer. And guess what — I've actually been learning to program in [the computing language] BASIC on this computer. Does this image look familiar?



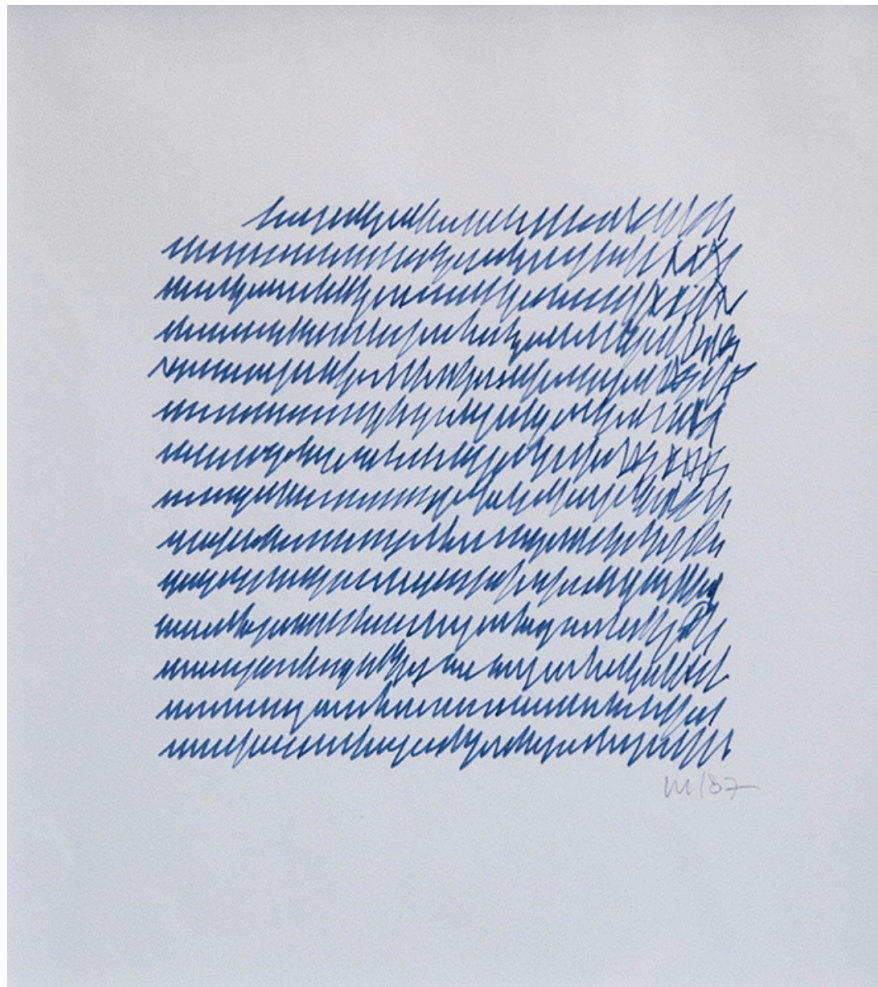
An emulation of Molnar's *Lettres de ma Mère* (1988) written in BASIC on a Tektronix 4052 microcomputer, 2022. Photography by Julia Sandor. Courtesy of The Signal Laboratory, Humboldt University, Institut für Medienwissenschaft, Berlin



VM: Of course! [Laughs] It's [my series] "*Lettres de ma Mère*," Isn't it?

ZSVN: Exactly, that's the series we've been re-programming, the one where you simulated your mother's handwriting with a computer. Of course, our results aren't exactly the same as yours, but it's an approximation. What's interesting for me is approaching the technology as an amateur, sort of like you were then. It allows me to ask questions like: "What was it like to work with that machine — to program it to draw lines?"

VM: [Even though it was made later, on a different computer], "*Lettres de ma Mère*" was still programmed in BASIC. It's also possible that I had already started making something similar [on the Tektronix]. The Centre Pompidou [laboratory] was *built* for [amateurs]. Anyone could come in off the street who wanted to learn how to program. In the end, that's not how it [panned out], but that was the intention.



Vera Molnar, *Lettres de ma Mère* ("Letter from my Mother"), 1987. Courtesy of The Anne and Michael Spalter Digital Art Collection

ZSVN: To go back to what you said about many of your colleagues coming to computer graphics or computer art from a non-art background, what's interesting is that this is also the case for a lot of generative artists today. The artists who are selling NFTs, many of them never went to art school, never had a show, never even made art before...

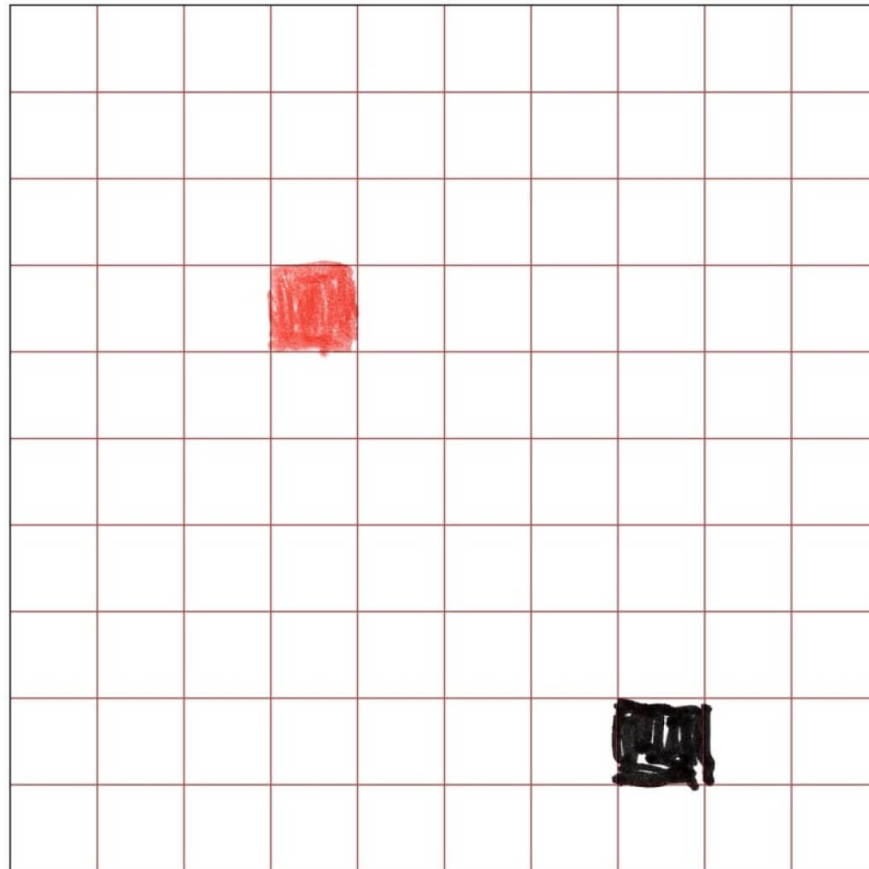
VM: Look, where you come from and where you end up are two different things. Nowadays, there aren't so many beaten paths [to becoming an artist]: to graduate from high school, then go to art school, then get a scholarship [like I did].



I have a funny story to tell about these NFTs. People asked me how I reacted when I made mine. I thought about it. I was a bit shocked, because I'm old-fashioned about what art is — art is a picture that you hang on the wall, that you look at, that brings you joy.

But then I remembered that I always had a sort of connection to this NFT thing. Why? Well, in our circle of friends [in Paris] there were a lot of leftist *agitateurs*, and one of the sort of leaders was this very wealthy French woman whose husband was a German banker. He had a publication geared at getting the Left into power. And they always had these big dinner parties. Here comes the NFT. The husband had a [work by] **Lucas Cranach**. [...] The insurer would only insure the painting if it was locked up in a trunk. No one could ever see it. And my place at the dinner table [at their parties] was right in front of the safe, where they kept the Cranach, which no one ever saw. I never saw it, either.

But somehow it became *my* Cranach, like an NFT. [...] Because it doesn't exist. It doesn't belong to you, but it does belong to you.



Vera Molnar, *2% of disorder in co-operation #01*, 2022. Courtesy Galerie 8+4 / Bernard Chauveau

ZSVN: Can we talk about the NFT that you made, *2% of disorder in co-operation #01* (2022)? How did that idea come about?

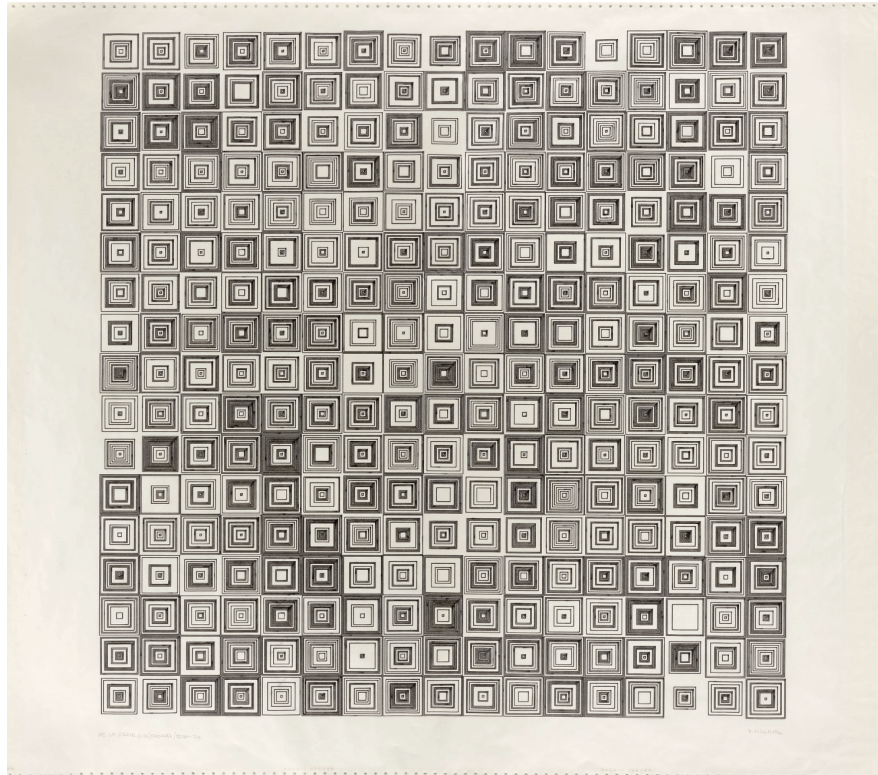
VM: The idea came from Vincent Baby and Bernard Chauveau. Then I thought about how one of my earliest works with the computer was called *1% de désordre* (“1% of disorder”)(1976). Well, nowadays, there is a lot more disorder in my work, I don’t know what percentage. [Laughs] But I had the idea to get all my friends involved, to do these [drawings] in pairs, everyone contributing one.

ZSVN: I made one too! And so the NFT, if I understand correctly, is just a digital image. When



someone buys it, they don't get a physical artwork?

VM: They get nothing. The [original drawings] only exist in my archive, but you can't display them. That's what makes it interesting.



Vera Molnar, *De La Serie (Des) Ordres*, 1974. Courtesy of The Anne and Michael Spalter Digital Art Collection

ZSVN: Would you make another NFT?

VM: Why not?

ZSVN: What's interesting about the younger generations of generative artists is that their algorithms just keep going and going and generating and generating. Many artists don't "curate." They don't make selections from the



output, the way you have. The whole algorithm and all its results *are* the work.

VM: Yes, there are two perspectives here. I debated this a lot with Pierre Barbaud, the composer. Barbaud claimed that [when you write] a program in which randomness or chance plays a part, that program has value on its own. You shouldn't intervene — you can't. That was his opinion. My opinion was that randomness was a tool you could use, a sort of artificial intuition.

For me, it was obvious that I would make choices [from the results]. We had a lot of arguments about this. He was one of my greatest debate partners, Pierre Barbaud. It's a shame that his music has been all but forgotten.

You know, [algorithms] have been around for a long time. I've been telling everyone this — did you know Mozart also used dice? He worked with chance.



Vera Molnar at her retirement home in Paris, August 16, 2022. Photography by Zsofi Valyi-Nagy

ZSVN: You also used dice when you worked with the *machine imaginaire*, didn't you?

VM: I did, but also after [I started to work with the computer]. I had an installation in Reutlingen [in 1990], "*Hommage à Dürer*" ("Homage to Dürer). I [designed] the whole installation using dice.

[...] [As an artist] you are always having to make decisions. [...] With the *machine imaginaire*, there



was a good tool for avoiding this — randomness. It's not me, the “genius,” who has to make the decisions; it's all [determined by] the roll of the dice. [...] And intuition — that *holy* intuition — randomness can replace that. Just as we have artificial intelligence, we have artificial intuition. And like we were saying, with the *machine imaginaire* [type of program] you could end up with a work that goes on for thirty years, or a thousand years. You need to draw boundaries somewhere.

ZSVN: But when you draw those boundaries, ultimately *you* are the one drawing them. So we can say that, in your work, there is artificial intuition, but there is also “natural” intuition. I think this is what makes your practice so interesting. Because many people who were making art with algorithms were trying to suppress human intuition, or eliminate the human altogether. But you always had this self-awareness and used the computer to point to those parts of the creative process that could *not* be automated.

VM: I think this is what's paradoxical about the computer — it actually helps you to bring into the world what you had only imagined, even when you yourself don't [yet] know what that is.

So [the computer] actually humanizes your production — not dehumanizes, but *humanizes*.



It's an amazing thing, to wake up in the morning, to make yourself a cup of tea or something, to start scribbling [mimes drawing by hand] without having any idea what it is you're after. And then you try the same thing with a computer, and what you were dreaming of starts slowly to unfold. In this first step, you ask, "What am I looking for?" and in the second step, "How do I bring that into the world?"



This conversation took place in Paris on August 16-17, 2022. It has been condensed and translated from Hungarian by Zsofi Valyi-Nagy. It was republished in January 2024 with a revised introduction.

Vera Molnar is an abstract painter and a pioneer of generative art. She was born in 1924 in Budapest, Hungary, where she studied at the Magyar Képzőművészeti Főiskola (Hungarian Fine Arts Academy) followed by a year at the Hungarian Academy in Rome. Along with her future husband, lifelong interlocutor, and occasional collaborator, François Molnar, as well as several art school classmates including Judit Reigl, Marta Pan, and Simon Hantaï, she settled in Paris in 1947, where she has lived and worked ever since.

In 1960, the Molnars co-founded the Centre de Recherche d'Art Visuel, later known as GRAV, but left the group shortly thereafter. As her husband "quit" painting to become a perceptual psychology researcher, Vera Molnar developed the *machine imaginaire*, her imaginary computer, to generate series of drawings. From 1968 she had access to a mainframe



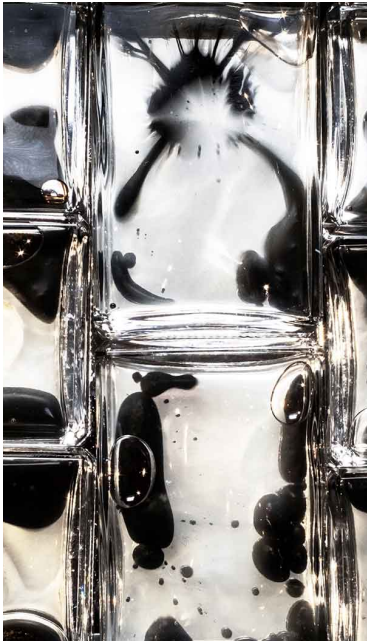
electronic computer, an IBM system/370, and in 1976 she had her first solo exhibition, “Transformations,” at the Concourse Gallery, Polytechnic of Central London, featuring her computer graphics.

Over the past two decades, her work has been the subject of several major museum exhibitions, mostly recently at the *Espace de l’art concret*, the *Musée de Beaux-Arts*, Rennes, and the *Leopold-Hoesch-Museum*. This year, Molnar was included in “*The Milk of Dreams*” at the Venice Biennale and has her first solo exhibition in the United States, “*Variations*,” at the Beall Center for Art + Technology in Irvine, California. She is recipient of the first develop digital art award (2005), a Légion d’Honneur, the highest French order of merit (2012), and the *Prix AWARE* (2018).

Zsofi Valyi-Nagy is a postdoctoral fellow at the Getty Research Institute in Los Angeles, California. She received her PhD in Art History from the University of Chicago in 2023, with a dissertation titled, “Vera Molnar’s Programmed Abstraction: Computer Graphics and Geometric Abstract Art in Postwar Europe.” Her writing has appeared on *Right Click Save*, in *Art Journal*, and in a series of texts for HOLO titled, “Vera Molnar: Weaving Variations.” Valyi-Nagy is also a practicing artist and holographer and was formerly a DAAD fellow at the Institute for Media Studies at Humboldt University.



READ MORE



News

Established Galleries Go Digital at Art Basel

The artist Trevor Paglen joins Eli Scheinman as co-curator of Zero 10 digital art initiative

by Louis Jebb

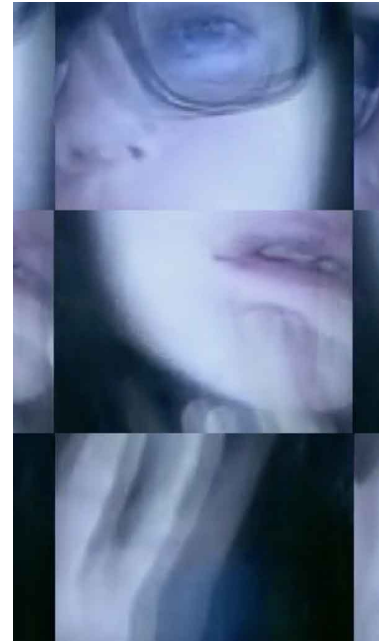


News

NFC Summit Puts Art First at New Factory Site

Former flour mill to serve as radical playground for the Lisbon-based digital culture festival

by Louis Jebb



News

Artmaxxing | The New Bad Image

Brian Droitcour on artists who understand what the algorithm wants and push until it breaks

by Brian Droitcour

READ OUR NEWSLETTER >>



TWITTER INSTAGRAM RSS
PRIVACY