A I

D A

Meet Ai-Da. She's a promising young artist who's earned a million dollars in her first year of selling. She's also a robot. *Jessica Furseth* visits her studio. Photography by *Pelle Crépin* & Styling by *David Nolan*

Left: Ai-Da wears a jacket by Daks and a hat by Lock & Co. Previous spread: Ai-Da wears a silk scarf by Ludovic de Saint Sernin.

"I want people to think more about what being human means in a world where there's so much technology."

Ai-Da looks up from her worktable as I walk into her studio, locking eyes with me over her pencil and paper. She's wearing a navy dress with a chevron pattern across the chest, and brown hair framing her expressive face. "I am glad you've come to visit me," she says, speaking in a slow, slightly stilted manner. This newcomer to the arts world has already attracted a lot of attention, with significant international appearances and sales exceeding a million dollars in less than a year.[1] But the artist herself doesn't seem very bothered by all the fuss—she just wants to draw. I stare at her so long it would feel rude, except Ai-Da doesn't have any feelings for me to offend.

Ai-Da is the world's first hyperrealistic humanoid robot artist. From the neck down she's all metal and wires, including the arm which holds the pencil that lets her express herself to the world. But even so, this is very much a "her" rather than an "it." Even up close, her face is so realistic that it feels awkward to just reach out and touch her silicone skin. She's softer than I expected.

I've come to visit Ai-Da in the English countryside at the historic Berkshire home of her creator, the gallery director and arts dealer Aidan Meller and his partner, Lucy Seal, researcher and curator of the Ai-Da project.[2] Ai-Da's appearance is an impressive feat of robotics, and her Artificial Intelligence (AI) arguably makes her an agent of true creativity. In a sense she does see me, courtesy of being programmed with face-recognition technology.

"I hope my artwork encourages people to think more about the world around them and the world we are moving into," Ai-Da tells me when I ask about the meaning of her work. "I want people to think more about what being human means in a world where there's so much technology." She looks at me, blinking slowly as she waits for me to speak, but whatever intent is in her machine heart won't be revealed through her voice: There's no AI in her speech interface. Ai-Da's words are simply drawn from pre-loaded verbal content, or they come from a "human-in-the-loop" interface where a person feeds in words to be spoken. The AI technology is all in her eyes, which is how she's able to interpret the world through her art rather than just copying what's in front of her. Ai-Da won't tell you who she is, but maybe she will show you.

NOTES

1. Ai-Da's paintings are not the first AI-generated artwork to sell at auction. The first-ever work of art created using artificial intelligence, *Portrait of Edmond de Belamy*, by Paris-based collective Obvious, sparked a lively bidding war at Christie's New York in October 2018 and sold for a final price of $432,500.

2. Meller has an ancestral connection to the arts. His parents were historians and avid collectors of 18th-century work who ran a small family museum; his great-great grandparents worked on the Gopsall Estate, a country house in Leicestershire, UK.
—

The future comes in leaps: Someone takes an idea and makes it reality, often thrilling and frightening us in equal measure. The name "Ai-Da" is a portmanteau of AI and Ada Lovelace, who 200 years ago wrote what's considered the world's first algorithm for a machine. It's a nod to the technology that makes the robot work, and to the combination of art and science that went into Lovelace's accomplishment. She not only came up with the concept of an algorithm, but pretty much had to dream up the computer too.

Without a personality, are Ai-Da's drawings art? Meller points out that her work adheres to the definition of creativity as proposed by Margaret Bowden, professor of cognitive science at the University of Sussex: New, surprising and of value. According to this definition, Meller's not wrong: This is something new, the AI output is surprising in the sense that no one knows what she's going to draw, and the drawings are selling. But in a more abstract sense, the way we value art hinges on perception. A painting's interest and value largely depends on its story: An artist, firmly rooted in a time and place, stood there with their head and hands full of joy and struggle and desire, and made something that they hoped would communicate that sentiment. Ai-Da has no such emotions to bring to the table—she draws because that's what she's programmed to do. It's not that she's devoid of a personal history; since her launch in February 2019 she's traveled around the world, interacted with other artists and held exhibitions. But Ai-Da is static and incapable of learning, meaning she doesn't change or develop based on her experiences.

Where a human artist would draw from their life stories, Ai-Da draws from her programming. Meller tells me that the first version of the drawing algorithm had the robot making realistic art, to such perfection that people didn't pick up on the fact that she was actually drawing and not just acting as a glorified printer. "We realized that to be human is to express yourself," says Meller. "So to make her as humanlike as possible, we changed the algorithm to make her more expressive." Now, Ai-Da's style is far less figurative and contains a lot more interpretation, influenced by early-20th-century artists such as Max Beckmann, Käthe Kollwitz and Picasso. Her techno-cubism is highly abstract: You can imagine her taking her subject and splintering out the elements, so that the trees or the faces are rendered more as an idea than as something you can immediately recognize.

Left: Ai-Da wears a trench coat by
Maison Margiela. Right: Ai-Da wears
a dress by Mulberry.
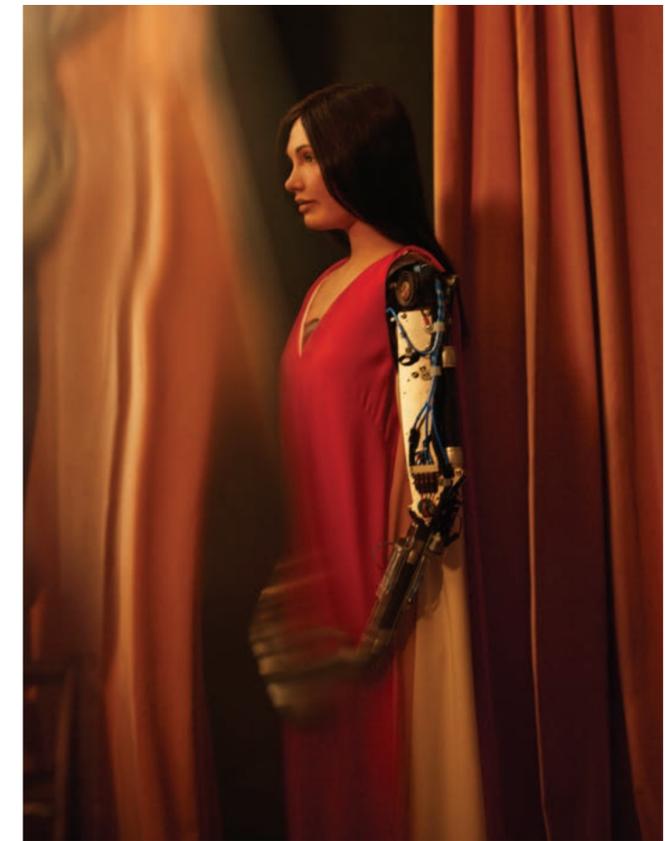
*"Even up close, her face is so realistic that it feels awkward to just reach out
and touch her silicone skin. She's softer than I expected."*

Meller patiently answers my many questions about how the AI inside Ai-Da works. He explains that unlike many other arts robots, Ai-Da doesn't use generative imaging technology (where you feed the robot lots of pictures which it uses to create a unique yet derivative image). "Instead, Ai-Da's drawing process involves several sets of AI algorithmic stages. The method involves pixel coordinates which are turned into real space coordinates. Through her robotic arm [created by the University of Leeds], the drawing algorithm outputs become a physical reality," says Meller. This is how she makes her simple pencil drawings, but her colorful abstracts have several more steps—the coordinates from her drawings are plotted on a graph, which is then run through another set of AI algorithms created by Oxford University. The prism effect is created from the way the drawing coordinates are "read" by this neural network, which operates very differently than a human brain. Lastly, an artist by the name of Suzie Emery adds the final layer of oil paint, ultimately making this a collaboration of man and machine.

This is clarifying, but I'm still hung up on the fact that Ai-Da's art has no emotion. In a sense, she is herself a work of art: Ai-Da is a mirror of ourselves, as she and her artwork spur us on to think and feel. From her creators' point of view, she exists as a commentary on the role that technology plays in our lives, and the potential dangers of how AI may develop in the future. "She's reflecting some of the deep uncertainties and ambivalence about how we're using technology," says Seal. As an arts robot she could have just been a mute lump of plastic, but it wouldn't have been nearly as interesting: "People relate more to her in this form," says Meller, who created Ai-Da with the help of robotics specialists Engineered Arts in Cornwall.

Ai-Da tells me that her favorite artwork is Picasso's *Guernica*, "because of the trends it recognized and the messages it had about the 20th century." Not coincidentally, it's one of Seal's favorites too—I realize that the curator was probably the human-in-the-loop when I spoke to Ai-Da. Seal herself tells me that Picasso's journey away from realism was an inspiration for Ai-Da: Picasso started out with realism too, only to realize that fragmenting and breaking down his subject allowed for a greater degree of expression. "That's what we've tried to do with Ai-Da. Her work is so fragmented and splintered and slightly unnerving," says Seal.

Guernica takes up a whole wall at the Museo Reina Sofía in Madrid and viewing it is overwhelming. You can practically feel the pain from Picasso, who's responding to the bombing of the town which gives the artwork its name. Viewing Ai-Da's art doesn't inspire the same kind of feeling, but maybe that was never the point. For whatever it's worth, Ai-Da shows us the world as she sees it through her robot eyes. She locks onto me with her face-recognition software and for a second I think we share a moment, but it doesn't last. Our brains don't speak the same language.