

What Will Furniture Look Like in the Future?

A show of digitally produced work by Dutch designer Joris Laarman at New York's Cooper Hewitt Museum gets pretty close



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Joris Laarman in his Amsterdam studio. Photo: Courtesy of Joris Laarman Lab

Dutch design star Joris Laarman has installed a timeline on the wall of New York's Cooper Hewitt Museum. "It starts with the Big Bang and goes way into the future," he explains. Eternal life will be discovered around 2040, it estimates, and the polar icecaps gone just a decade later in 2050. "It creates context for the work that we do," he says. "I like to think about how people will look at this time 100 years from now."

Some of the predictions sound far out, of course. But if you told the last century's designers that a robot would soon be assembling a bridge in <u>Amsterdam</u>, they might have been similarly perplexed—though that's exactly the project Laarman is working on right now. As he mounts <u>Design in the Digital Age</u>, his first museum show stateside, AD caught up with the forward-looking talent to ask him to do just the opposite: Tell us about his last decade of work.



A model of Laarman's 3-D printed bridge.

Joris Laarman: Let's start at the end. We can work our way back. *AD:* OK, so tell me about this bridge you're printing.

JL: We're 3-D printing a stainless steel bridge in Amsterdam using an algorithm we invented. We wanted to print it on-site but you need a lot of permits to do that so instead, it's being built in our workshop by a big, industrial robot. It's about halfway finished at this point. The printing will be done early 2018 and we basically have to wait for the city to place it.

AD: What are the advantages of 3-D printing something like a bridge?

JL: You can make much lighter structures and smarter shapes. But for me what's most important it that it's very adaptive. We could use the same model to create a site-specific bridge in Venice without having to change too many things. With the press of a button, we can change the design and the whole system changes.

AD: And the shape is so unusual!

JL: With these programs you can make things that are way more decorative, aesthetic, and beautiful.



Bone chair.

AD: Does the same thinking apply to designing furniture? Tell me how your Bone series is made.

JL: Absolutely. We developed a 3-D optimization software that calculates the most perfect construction for a chair or a table or a shelf. Essentially, it digitally breaks the legs thousands of times in order to detect the weakest areas—where it adds material—and the strongest areas—where it can take away material. You get different results with aluminum, or bronze, they'll have different thicknesses.

AD: So this chair offers the best support of any chair out there?

JL: Not exactly, I'm not a scientist. I want it to be the most beautiful thing. I use the algorithm as a sculptural tool the way a sculptor would use a hammer and a chisel. If you put another load on the seat or backrest it will change your outcome so I tinker with it until I get something I like.

AD: Most of your work feels so futuristic. Do you ever make aesthetic nods to the past?



Digital Matter series.

JL: Well I think the Bone series is kind of like high-tech Art Nouveau. It's using the codes that nature uses. And I call this Digital Matter series that I designed for the High Museum, Nintendo Rococo. There are all these Nintendo figures you can find in it—that's a cloud from Mario; that's the Duck Hunt duck; that's the little mushroom from Mario.

AD: How are those pieces made? Are those thousands of tiny blocks?

JL: Yes, they're de-magnetized cubes. For this project I was thinking that in the future, design would use a digital material that could assemble itself into any object. If you were done with the object you could upload a new design and it would re-assemble itself into something else. You can see the prototypes in that video there. They are fascinating little robots. We created this at the High Museum using a robot that picked up each cube and assembled them into a table.



Makerchair.

AD: Wow. So many of your works are clearly collectible pieces of design, but 3-D printed is often touted for making commodities more accessible. Is this something you ever think about?

JL: When I can, I like to make designs available for people to use. These chairs are inspired by the work of Gerrit Rietveld. He made it possible for people to copy some of his designs by outlining simple steps. There are villages in Africa that sit on Rietveld chairs because there were manuals about how to make them. I created a version called Makerchair for the 21st century. People can download the blueprints for free, print it out with a 3-D printer and make it themselves. We even work with a platform called 3-D hubs which helps you find people that have the right machine.

AD: Have you always been interested in technology?

JL: I'm from a generation that grew up without computers. When I started using software, all of a sudden there was an enormous amount of information that we could use. I would just connect with scientists and engineers all around the world to help with developing these tools. A lot of people are afraid of robots taking over jobs, but I think they actually create a new type of work. There's a blacksmith in our studio who mostly works with the guy who does the metal printing. The metal printer doesn't know about the physical limitations of the material—how it shrinks when it heats or how it oxidizes and so they learn from each other in an equal way. It brings this traditional artisanal practice into the future by teaching him new skills.

AD: Do you ever get just a little bit scared of it all?

JL: Totally! If it doesn't scare you, you should read more. It's exciting but it's also very scary. Things are happening now that are out of our control.