From lab to life, the ‘new world’

AMSTERDAM

With the help of robots, Joris Laarman injects science into his work

BY ALICE RAWSTHORNE

Day after day, the robot folds a slender sheet of steel in exactly the right place and applies exactly the right pressure to make a chair. As the robot sits in the chair, if it was ever used, the same process may soon be used to produce “real” furniture.

“This is a super-efficient way of making things,” said Joris Laarman, the young Dutch designer who launched the project. “The software is so precise that you can tell the robot how to fold the material into complex shapes with the right amount of force so it doesn’t break or bend the wrong way. We should be able to program the robots to make other things, too, and use other materials. It could create a new world of objects.”

For now, the “baby” robot is doing its stuff as an exhibition of Mr. Laarman’s work at Friedman Benda, a design gallery in New York. The title sums up the show perfectly — “Joris Laarman Lab” — because it features some of the experiments that the artist and his colleagues are conducting at his microfabrication laboratory in an industrial area of Amsterdam.

As well as the robot, there is a prototype of a reimbursement lamp they are developing with a team of tissue generation specialists from a Dutch university. It’s made of a Chinese bamboo’s bamboo, with a firefly’s luminescent core, to make the lamp glow. Then there is the furniture made from a form of 3D printing technology that simulates bone growth. Not all of the experiments work, at least not yet. Mr. Laarman had hoped to include a working model of the kites in his exhibition, only to realize that it was too fragile to ship to New York and by air. Guests might not welcome the arrival of the genetically modified remnants of a rodent and bamboo. But that’s the point. It’s the thrill of experimenting with new scientific discoveries and technologies that motivates him.

Joris Laarman, right, and two Bere Chairs, the first product of the designer’s work with 3D optimization software. Other designs include Heat Wave, a radiator made from boards of concrete, left, and Bridge Table and Aisler Chair, above. Below, a robot producing miniatures Alexander Chair slate the “Joris Laarman Lab” exhibition at the Friedman Benda gallery.

There is certainly a gifted designer, but what makes him truly special is how intuitive he is about biology, software and materials,” said Pauline Antonio, senior curator of design at the Museum of Modern Art in New York. “The objects he designs exist as prototypes for his experiments. He belongs to the new breed of post-designers who long to be instructed by science.”

He isn’t alone. Design and science have always been intertwined. Throughout history, designers have strived to translate scientific advances — from electricity, to the World Wide Web — into things that are useful or entertaining for the rest of us. So many innovations are now emerging from research laboratories that science seems particularly inclusive to many designers, especially young ones.

Mr. Antonio and the agenda of “Design and the Elastic Mind,” the blockbuster show she curated at MoMA in 2008. It included the Bere Chair, the first product of Mr. Laarman’s work with 3D optimization software. Scientific experimentation contributed to some of the projects in “Design by Performance,” an exhibition that opened Sunday at the Z33 gallery in Hasselt, Belgium. It also is the central theme of “Impact,” which is to open Tuesday at the Royal College of Art in London to present recent collaboration between its students and science researchers.

Many of the current crop of science-obsessed designers are seeking to translate scientific advances into practical solutions to urgent problems, such as helping us to live more sustainably, but Mr. Laarman’s approach is more old-fashioned. He is interested in science’s aesthetic potential. “I don’t have an ethical agenda,” he explained. “I just want to create objects of beauty and poetry.”

Unattainable though this may be, it’s a time when design is dominated by social and environmental concerns, it has an obvious appeal to “design-art” collectors, who tend to share his preference for aesthetics over ethics. Their support has helped Mr. Laarman, now 36, but no behemoth that onwards still is not to see proof of his age before serving him adobe on his charmed career.

Having been a “really bad student,” he said, he got in the first few years at Design Academy Eindhoven in the Netherlands, he redefined himself with his graduation project. It was Heat Wave, a radiator made from recycled swirls of concrete. The serene styling and sculpted shapes of material (concrete conducts heat more efficiently than metal) produced what Anish Kapoor, a curator of the Bologna Museum in Berlin, calls “a superb combination of functionality and uplifting aesthetics.”

It’s clear, doesn’t just work as he dreamt. “For three years I was the ‘rocco guy’ even though the radiator was just not about rococó,” he groaned. “Oh man, I had so many opportunities to do rococco things.”

Luckily for him, he could afford to try “yes.” Thanks to the Dutch government’s grants for young designers, he was able to wait for the right approaches. One came from a scientist who thought Heat Wave and suggested that they collaborate. This led to the experiments with 3D optimization software and genetic modification.

“There are so many great ideas being developed in university laboratories that they cherish,” said Mr. Laarman. “I want the studio to grow into a sort of laboratory by doing the experiments that the university doesn’t want to do. It should be a place where other designers can produce pieces on a small scale and where I can translate certain ideas into industrial production.”

He has already started by adapting the formal language of the Bone series for mass-manufactured products, a light for Flos and a chair for Vitra, both of which should be completed next year.

“If these industrial projects are much more difficult and demanding than the ‘experiential’ ones,” he said. “I’ve been working on the Vitra chair for two years, constantly adjusting details to meet their constraints. But I like the experience of doing super-experiential work for a gallery and super-industrial work for super-industrial companies.”

“It's what happens between that's really very interesting to me.”