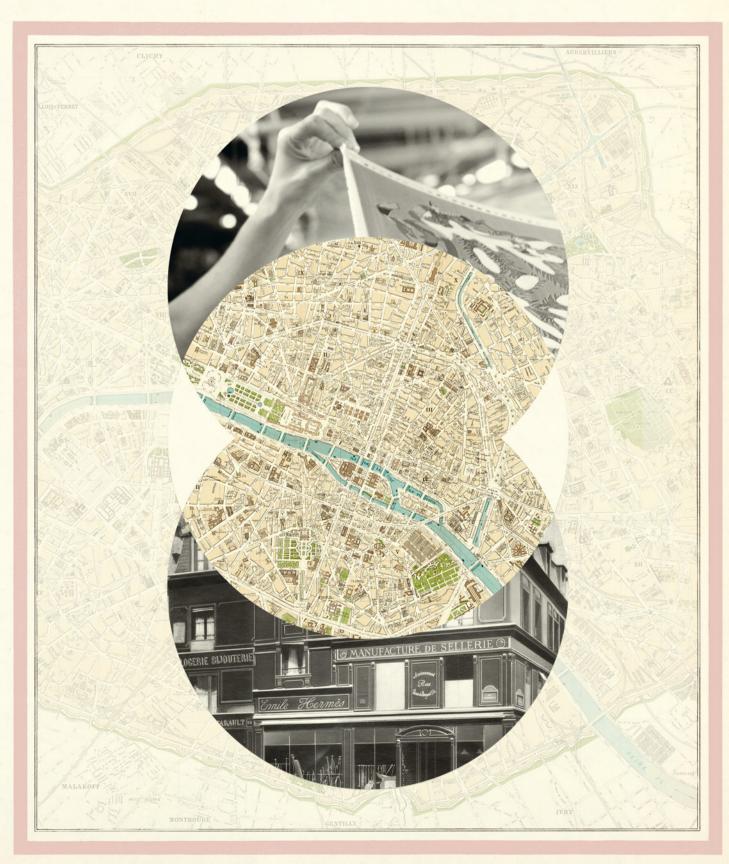
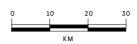
## Le Monde SPRING-SUMMER 2020 Nº 76 CI HEITHES

PART. 4



KARUMI, THE ALLIANCE OF BAMBOO AND CARBON

By Mari Hashimoto\*











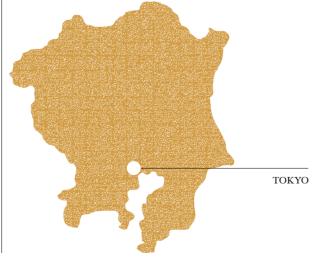
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**T** apan is a land of forests. The relationship between the Japanese and woods began with the history of the archipelago. In ancient times the Japanese saw deep forests, giant trees, waterfalls and possibly rock formations as the realm of the sacred. This sensibility endured, even after the adoption of Buddhism, and that is why the wood of holy trees was chosen to sculpt the divine figure of Buddha. One need only walk between the pillars that line the external corridor of the world's oldest wooden construction, Hōryū-ji, a 7th-century temple in Nara Prefecture, to have the striking sensation of being immersed in a forest of giant trees.

Chuzo Tozawa (75 years old), the director of Hinoki Kougei, a wooden furniture company based in Saitama Prefecture, perpetuates the heritage of that eminent lineage of wood craftsmen. In his first dealings with the furniture teams from the world of

Hermès Maison, he was given 3D models \*Mari Hashimoto is as well as plans and photographs of prototypes of a bench and two stools designed by architect Álvaro Siza. "I was sure that the Eisei Bunko Museum, they would want to ask me about the furniture visible on the plans, and I could see

an editor and writer specializing in Japanese art. She is deputy director of





T O K Y O

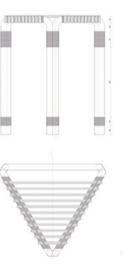


Bamboo bench with removable cushion in bullcalf

that this would be a real challenge. The stools were simple in form, as if designed with a single stroke of the pencil, but the final result, in rattan, struck me as somewhat crude, rudimentary. I immediately understood that, in order to make good the initial idea, I would need to use bamboo and not rattan. And as I am what I would call a 'master of the advanced first step', I first wanted to have a concrete object to present at our first meeting, an object that could help us decide how to move the project forward. I spoke with workshop veterans and we concluded that we would need to curve the bamboo. The object took shape immediately."

In 2013, Chuzo Tozawa saw the sketches and plans by Charlotte Perriand featuring in the exhibition Charlotte Perriand et le Japon during the Biennale Internationale du Design in Saint-Étienne. He decided

these pieces that she had not been able to produce at the time due to technical limitations. Among them was a chair with its frame and seat in curved bamboo. At first Chuzo Tozawa had only a drawing to work with, but he managed to obtain, in an auction, an actual model that had been made in the intervening years, on which one of the strips was broken. He realized that the material used, a split bamboo cane about four millimetres thick, was clearly not strong enough, and that to use the same process to repair it would very likely result in identical damage. Tozawa subsequently had the idea of superposing and gluing together several fine strips of split bamboo before modelling and strengthening the result with carbon fibre. While this was the first time he had worked with bamboo, he had already tried the carbon-wood combination a number of times. After to apply himself to making seven of several attempts and prototypes, his efforts



Technical drawing of the triangular stool, design: Álvaro Siza



The winter bamboo canes are harvested in the forests of Kagoshima and Kyoto between November and February

finally bore fruit. Chuzo Tozawa was now certain that the plans proposed by Hermès were feasible.

A week later, at their first meeting, Tozawa slowly brought out a square stool that he had concealed under his feet and placed it before his interlocutors. They were stunned. The "master of the advanced first step" had just presented prototype number zero. Already, at this early stage, the main structure, the form and the techniques used for the Karumi set of furniture, now available, were nearly all present.

"The triangular stools and the square one gave me no trouble. But, from the start, I knew that the structure of the bench would be a real challenge. An armature with a diameter of two centimetres for a length of 120 centimetres was never going to work. So the joins on the prototype were strengthened and held in place by rattan rope, which wasn't provided for in Álvaro Siza's project.

My head told me it couldn't be done, but I was fascinated by the black-and-white drawings I had been shown. That's why I ended up agreeing to do the bench, and pretended that it would be child's play!"

It took another year of trial and error, efforts and hesitations, before the solution was found. The rods of Moso bamboo (or winter bamboo) are gathered in the forests of Kagoshima and Kyoto between November and February, when their level of humidity is lower, then split into fine strips two millimetres thick, from which the water and oil are extracted. Ten of these fine strips are layered and pressed together. To make the incurved parts of the furniture, the strips are heated and bent, one by one, taking great care to get exactly the right angle. The glue, which was developed specially for these creations, is applied on each side of the strips in a very fine layer, in order to obtain a piece of glulam bamboo.



Triangular stool in bamboo

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T O K Y O A P A



The technique for strengthening the bamboo with carbon fibre was invented for the needs of the construction process.

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The edges of the pieces of wood to be used | we invented new ones. We chose to do for the stools are sanded in order to create a cylinder with a diameter of 20 millimetres. For the bench structure, the piece is cut in two lengthways, then a groove is traced along the centre of each part, into which carbon fibre is inlaid. Finally, the two pieces are assembled and glued together and the edges are sanded to form a cylinder with a diameter of 22 millimetres. This technique was invented specially for the occasion.

Making this simple yet refined design calls for great precision, a bit like passing a thread through the eye of a needle. At each stage of the creative process, the position, the size and the angle must be the same, with not even a millimetre of difference. Chuzo Tozawa created special machine tools for certain phases of this operation. "Some obstacles could not be overcome using the existing machines, so | battles, the bow was a warrior's main

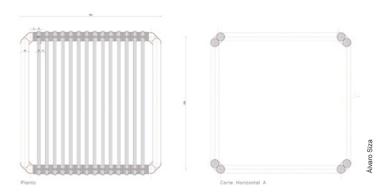
everything ourselves. Our supreme ambition is to create beautiful objects. That's why, even if it increases the technical difficulty, if there is a way of making an even more beautiful object, then we feel bound to use it."

Ever since Chuzo Tozawa entered the profession and became a joiner-carpenter specializing in the construction of temples and shrines, he has always wanted to keep improving, and has continued along his path, step by step, in order to reach the summit of his art. After setting out to make the chair conceived by Charlotte Perriand, he felt irresistibly attracted to bamboo and the possibilities it offers. Looking at old documents, the artisan discovered that in the old days Japanese bows were made with bamboos assembled and glued together in a very complex way. In great

weapon. There was even talk of a "way of the horse and bow" (Kyuba no michi, a set of unwritten rules that samurai were bound by). Artisans in the 10th century made bows that could stand up to rough weather and the harsh conditions of the battlefield. "When you look closely at an ancient object, you can understand the techniques used to make it. If an artisan managed to make it once a thousand years ago, then why not me? I learnt by studying these models and I take not being able to surpass them as a defeat. I always try to create objects that I would be proud of if they found their way into the hands of an artisan in the future, be it a hundred or five hundred years from now."

There are more than 1,400 species and 116 genera of bamboo around the world. Always green, even in the middle of winter, bamboo is sometimes seen as sacred, notably by virtue of its vitality and rapid growth. Witness the legend Taketori monogatari (The Tale of the Bamboo Cutter), written in the 9th century, in which an old man finds a tiny baby inside a bamboo stem which he has just cut. Within three months, the infant has metamorphosed into a stunningly beautiful young woman, who doggedly refuses proposals of marriage from princes and even the emperor, for she will soon have to return to the Moon, back to her people, escorted by celestial beings.

The objects made by Chuzo Tozawa for Hermès are called *Karumi*, which is one of the four words that define the style of the school of Matsuo Bashō, one of the great haiku masters of the 17th century. The term designates, then, a particular literary style, but it can also be defined as the refinement of an art. It also means "simplicity, lightness, purity" and evokes something lightened, with nothing artificial, devoid of exuberant gestures and excessive lyricism. The pure, dynamic lines of Karumi furniture thus recall the poetic form of the haiku, which is remarkable in its concision.



Technical drawing of the square stool, design: Álvaro Siza



Bamboo is known for its vitality and quick growth. It is always green, even in the middle of the winter.