



Akimoto Kohei, senior managing director of Aoyoshi Co.

Aoyoshi developed its first welfare-purpose spoons in 1986 at a time when the local industry of Tsubame was suffering a slump. There was one catalyst that spurred Aoyoshi to start manufacturing these products. Yoshiro Aoyagi, then the president of Aoyoshi (now chairman), was privately manufacturing tableware for his daughter, who suffered from a hand disability as a result of polio. Based on this experience, Aoyagi thought spoons for people with hand disabilities would benefit the public.

However, the spoon did not sell well initially. Sales remained poor because the dominant hand, hand sizes and disability level differed from one person to another, and Aoyoshi was unable to manufacture cutlery in shapes that precisely satisfied their diverse needs. The company worked hard to find product designs and materials that disabled people would find easy to use, pursuing a process of trial and error. During this time, the company became aware of a new material that had been developed by Mitsubishi Heavy Industries, called “shape-memory polymer,” which changes shape freely and endlessly with the application of heat.

# Cutlery for All

Located in the cutlery producing center of Tsubame in Niigata Prefecture, **Aoyoshi Co.** has received a lot of attention in recent years for its manufacturing. In particular, Aoyoshi is well known for its innovative knives, forks and spoons for use by elderly people. Miho Yanagisawa visited the company.

“I thought the material might help realize our idea,” says Kohei Akimoto, senior managing director of Aoyoshi, looking back. “I visited Mitsubishi Heavy Industries to propose a plan for joint development.”

Shape-memory polymer was a material developed by Mitsubishi Heavy Industries, an important player in Japan’s high-growth period, for use in engine parts for its mowing machines. Aoyoshi, a small company in a provincial part of Japan, brought Mitsubishi an idea to use this material in the entirely different field of products for welfare. Aoyoshi’s proposal surprised a Mitsubishi official in charge of the technology’s development. However, the official understood Akimoto’s passion for the proposal, and readily agreed to joint product development.

## Cutlery Stimulates Appetite

WiLL-1 (one), a welfare-purpose spoon whose “U-shaped” grip can be freely adjusted

Trade name	Aoyoshi Co., Ltd.
Representative	Kohei Akimoto, senior managing director
Address	5143 Koike, Tsubame City, Niigata Prefecture
Number of employees	41
Website	<a href="http://www.casualproduct.com/top.html">http://www.casualproduct.com/top.html</a>

to fit the shapes of users' hands, was created in October 1991 as a result of the joint product development described above.

Polymer used for the grip part of spoons softens like rubber when it is soaked in hot water at or above 70°C. The softened polymer can be molded easily. The molded polymer is then soaked in cold water at or below 20°C wherein it solidifies. Spoon grips that fit users' hands are manufactured in this way.

The Philadelphia Museum of Art selected this spoon as an exhibit at Japanese Design: A Survey Since 1950, a themed exhibition it sponsored in 1994, based on the high marks it gave to the product's functionality and design qualities. Aoyoshi kept improving WiLL-1 in the subsequent period and won many prizes with it, including the (then) Minister of International Trade and Industry's Good Design Award and the Kids Design Award.

The "light spoon" released in 2004 became the second hit for the company. The type of spoons widely used in Japan are modeled on Western spoons. These spoons are too heavy for elderly people. They are said in some cases to make such people less willing to eat.

To solve this problem, Aoyoshi began developing a spoon that elderly people would find easy to use. Commonly spoons scoop up 25 grams of food each time they are used. This volume is too large for elderly people, who have lost some of their ability to swallow. Recognizing this, Aoyoshi studied the sizes of Japanese people's mouths and the chewing ability of elderly people, flattened the spoon shape, and brought the volume of food scooped per spoon



The WiLL-1 and (inset) WiLL-3 range of tableware by Aoyoshi. The WiLL-3 range was developed especially for children with disabilities.

use down to 18 grams. The company also reduced the weight of the spoons by hollowing out their grips. Demonstrating its ingenuity, Aoyoshi also created an assortment of spoons with necks angled in various ways. The spoons allowed users to bring food to their mouths from the best angle.

## In Search of Functionality and Beauty

Both the WiLL and "light spoon" series of Aoyoshi products catch the eye with their use of many brilliant colors and streamlined designs that create a soft impression while offering high functionality.

"I think Japanese people have a sophisticated aesthetic sense when it comes to food," notes Akimoto. "We lose our appetite when we find unappealing tableware on a nice dining table. We hope to help disabled people enjoy eating their food more by listening to the opinions of many more tableware users and reflecting their requests in our products in the future," adds Akimoto.

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*Miho Yanagisawa is a freelance writer.*