

Dashi Karakuri Festivals and Monozukuri

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Karakuri is a Word Unique to Japan

Karakuri is a word unique to Japan which is not found in any foreign language. Although its verb form “*karakuru*” can be found in both the *Myogoki* (1268), Japan’s first dictionary from the Kamakura period, and *Setsuyoshu*, a dictionary from the Muromachi period, there is no listing of the noun form (*karakuri*). Therefore, it is assumed that the word *karakuri* was not widely used until the beginning of the Edo period.

The word *karakuri* has a wide variety of meanings. The word is used for “clock,” “loom,” and other mechanical devices as well as to describe the operation and movement of strings and rods (*sashigane*), devising of things through ingenuity, or “device,” “mechanism,” or “trick.” In a more narrow sense, the word is used as an abbreviation for *karakuriningyo* (*karakuripuppet*) to mean a mechanized puppet which uses strings and springs which are hidden from view.

Forerunners of Karakuri

Created in the Nara period, the south-pointing chariot represents the first mechanical *karakuri*. According to the *Nihon Shoki* (*The Chronicles of Japan*), Vol. 26, Emperor Tenji was presented with several south pointing chariots in year 666 which took Chinese Buddhist monks Zhi Yu and Zhi You nine years to construct. In addition, information



Fig. 1 Mechanical South-pointing Chariot (created by the author)

about a forerunner of *karakuri* also appears in the *Konjaku Monogatari shu* (Anthology of Tales from the Past), Vol. 24 from the Heian period. One of the stories talked about how Prince Kaya, a skilled craftsman since childhood, made a doll in the shape of a boy and set it up in the rice fields during a year of drought in Kyoto. Holding a jug upraised in both hands, the doll would lift the jug and spill water down on its face when the jug was filled with water. People enjoyed watching the doll in action and would constantly pour water into the jug which resulted in the fields receiving enough water (the *Konjaku Monogatari shu* referred to this *karakuripuppet* as a *kamae* (structure)).

From the Heian period to the Muromachi period, *kugutsushi* (puppeteers, also referred to as *ebisumai*) walked from town to town manipulating small puppets on a box hanging from their necks (*kubigakehakomawashi*). *Kugutsushi* that performed *tsujishibai* (street plays) in the course of distributing talismans from Nishinomiya Shrine were well known. There are records from the Azuchi-Momoyama period including those which tell about when Oda Nobunaga invited Tokugawa Ieyasu and offered him a gold and silver *karakuri*, and how Toyotomi Hideyoshi sat his son Hideyori on his knees, and the two played with a *karakuri* puppet which spun around when coins were inserted into it.

Historical Development of *Karakuri Ningyo*

The different types of *karakuri ningyo* are *zashiki karakuri* (tatami room dolls), which were used in homes, *butai karakuri* (stage dolls), which were used in theater, and *dashiki karakuri* (festival float dolls), which were placed on festival floats. Here, we will examine how *zashiki karakuri* and *butai karakuri* spread to the common people of the Edo period.

Zashiki karakuri, which include tea-serving dolls, were widely produced from the beginning of the Edo period. During the early Edo period, the dolls were expensive and therefore were only for some members of the upper class, including feudal lords, aristocrats, and wealthy merchants. However, *zashiki karakuri* started to be noticed by the masses as things capable of attracting customers to stallholders, show tents, etc.

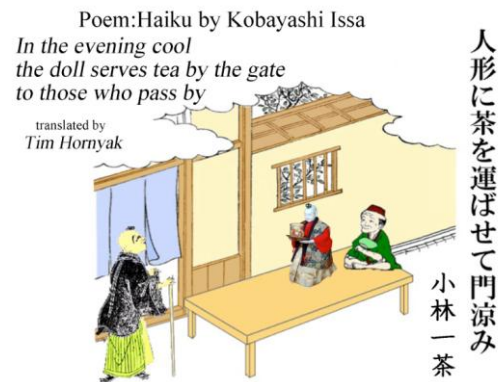


Fig. 2 A poem about a tea-serving doll

Figure 2 shows a pictorial representation of a *haiku* (poem) written by Kobayashi Issa (1763-1828) about a tea-serving doll. Preferring to write poems about everyday life experienced by common people, it can be said that his writing about a tea-serving doll serves as proof that the majority of people at that time knew what tea-serving dolls were.

Prosperity of *Butai Karakuri* (Takeda Karakuri Theater)

Opened by its first-generation proprietor Takeda Omi in 1662 (year 2 of the Kambun era) with its first performance, the Takeda Karakuri Theater is what allowed Japanese people to start enjoying the world of *karakuriningyo*. Spanning four generations and a period of 100 years, the Takeda Karakuri Theater held performances across Japan and earned its popularity.

An example of one of the performances can be seen in

the *hikifuda* (promotional flier). Named *Norizome Hairyono Koma*, this performance first features a *karakuriningyo* that rides a horse around in a circle. The doll then gets off the horse and crawls through a narrow basket, swings on a wooden bell hammer, jumps onto a real living dog (Chin), and finally runs away backstage. There were around 15 *karakuri* performances each day with *kyogen* play for children and dances performed between performances. They were very popular among common people and performed throughout Japan. *Karakuriningyo* performances featuring dolls such as *dangaeriningyo* (stair-walking dolls which are capable of moving down stairs), *mojikakiningyo* (writing dolls), *henshinningyo* (dolls which feature a transformative aspect), *gyakutachiningyo* (handstand dolls) and *yumihikiningyo* (arrow shooting dolls) were invented as Takeda Karakuri Theater performances and enjoyed by the masses. As they spread interest about *karakuriningyo* to the public, *Butaikarakuri* performances represented by Takeda *karakuri* aroused curiosity and interest in the devices and made the public interested in how they were created.



Fig. 3 Takeda Karakuri Theater *Hikifuda* (translated into modern Japanese by the author)

Evolution/Transformation of Takeda Karakuri Theater

It is said that the interest of the masses also shifted away from Takeda Karakuri Theater, which spanned four generations over 100 years and took the world by storm, as time went by, and towards shows featuring *ikiningyo* (realistic dolls), *kagozaiku* (woven bamboo figurines), and *kijin/henjin* (freaks/odd people). However, I see that

Takeda Karakuri Theater evolved/transformed into other performing arts as well as festival events. More specifically, as shown in Fig. 4, Takeda Karakuri Theater was passed on, transforming into

ningyojyoruri/bunraku (traditional Japanese puppet theater) in Osaka, *kabuki* (Japanese dance-drama) in Edo (Tokyo), and the *dashikarakuri* festival in Owari (Nagoya) which features a *karakuriningyo* performance on the

upper tier of the festival floats. It is well known fact that Takeda Omi and Kyoto's Yamamoto Hidanojo of the *butaikarakuri* world

were involved in *ningyojyoruri*. Furthermore, *kabuki* performances of the Edo period fascinated the general public through the use of *keren* (stagecraft tricks including *butsudangaeshi* (pulling of someone into a Buddhist altar), *chochin nuke* (entrance of character through a paper lantern), *chuzuri* (use of strings to make actors fly out over the audience), and *toitagaeshi* (revolving door used to present one actor as two separate characters). The performance style in which the actors behave like puppets was also inherited from Takeda Karakuri Theater. It can be said that *kabuki* of the Edo period developed by widely adopting artistic techniques from *butaikarakuri* performance.

DashiKarakuri Festivals

Figure 5 features a map showing areas throughout Japan where *dashikarakuri* festivals are held (Ref: *Hikiyama no Ningyogi*. Author: Kosei Yamazaki). Although *dashikarakuri* can currently be seen at religious festivals held in 80 regions throughout Japan, approximately half of them are held in Aichi Prefecture with 80% held in the Chubu region of Japan. The oldest festival among festivals which feature *karakuriningyo* placed on all *dashi* (festival floats) is the Nagoya Toshogu Festival.

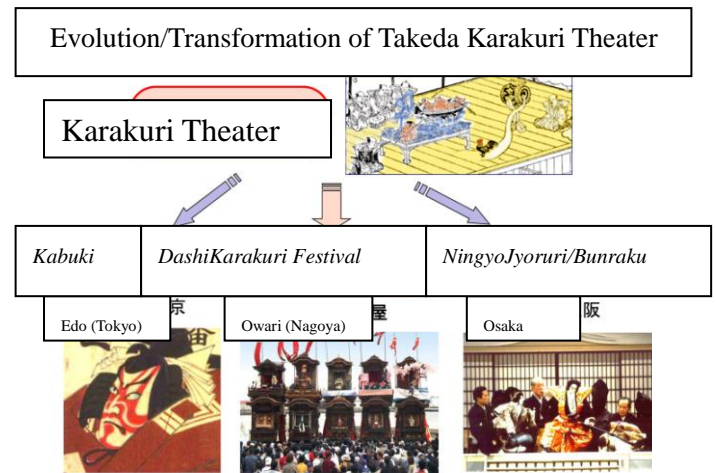


Fig. 4 Evolution/Transformation of Takeda Karakuri Theater

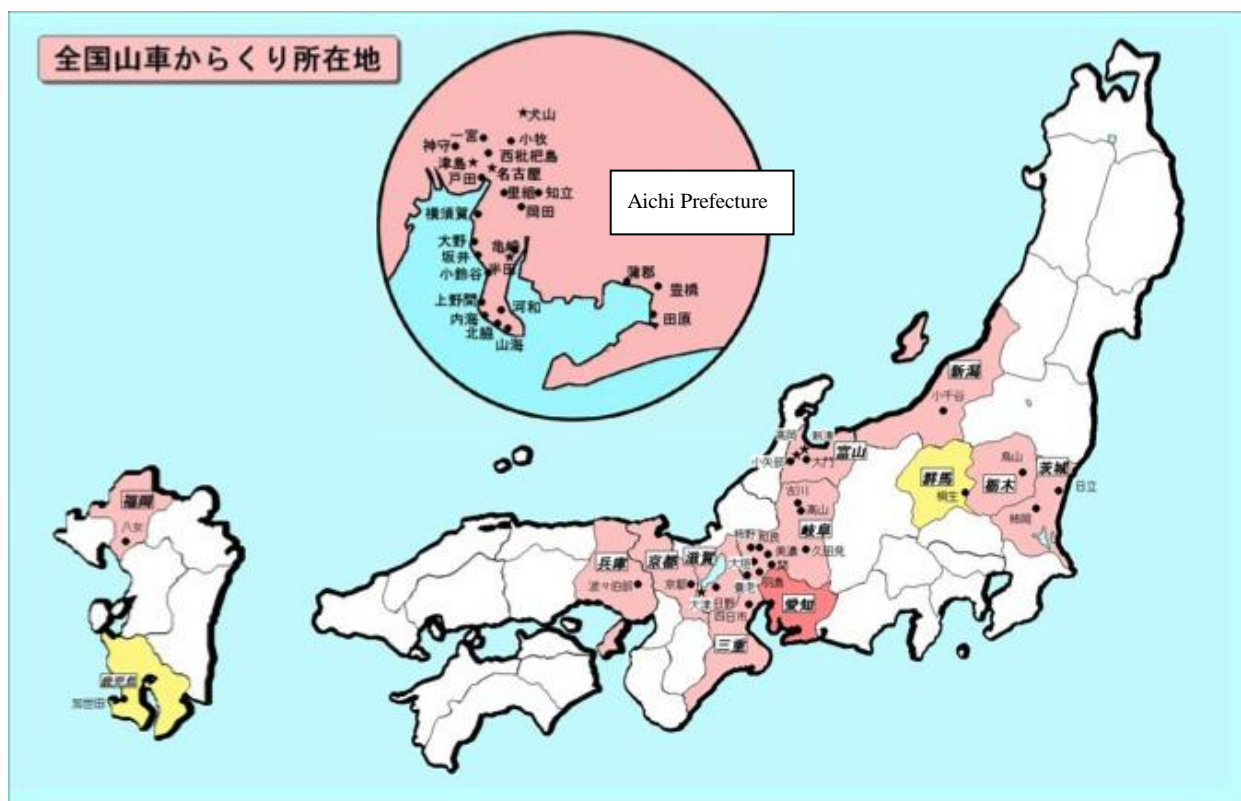


Fig. 5 Map showing areas throughout Japan where *dashikarakuri* festivals are held

The *dashikarakuri* used in the Nagoya Toshogu Festival, a festival celebrated at a Shinto shrine in which Tokugawa Ieyasu is enshrined, started to be used when the participating town of Shichikencho designed two large two-wheeled wagons made to symbolize poet Saigyō Hoshi and cherry blossoms in 1619. This marked the beginning of *dashikarakuri* festivals. At its peak during the Tempo era, the Toshogu Festival is said to have featured nine magnificent *karakuriningyo* festival floats (all nine cars featured *karakuriningyo* starting around 1707), flags, guards, portable shrines, and other attractions in a parade consisting of 7,000 people. Although the festival unfortunately came to a halt due to damage incurred during World War 2, its splendor was spread throughout areas of the former Owari Domain where it continues to thrive even today. There are many festivals which have been held continuously for more than 200 years, including the Inuyama Festival, with this year marking the 382nd time that the festival will be held, Iwakura Festival, Handa Kamezaki Shiohi Festival, Tsushima Fall Festival, and Toda Festival (Nagoya). Although there are many *dashikarakuri* performances which are created based on themes from fairy tales, myths, *noh* dramas, *kabuki*, etc., there are also many which continue *butaikarakuri* from Takeda Karakuri Theater and other sources in its original form.

Map showing areas throughout Aichi Prefecture where *dashikarakuri* festivals are held

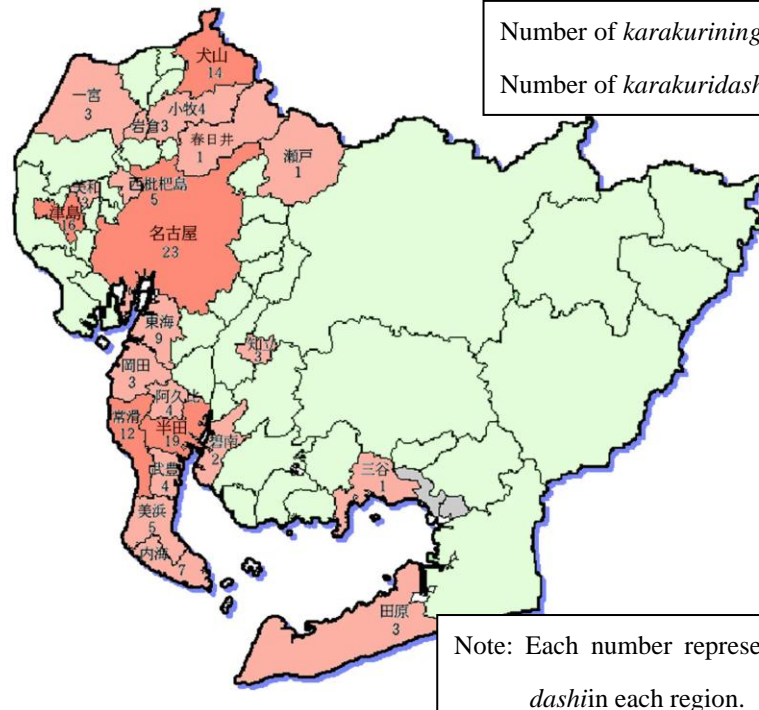


Fig. 6 Map showing areas throughout Aichi Prefecture where *dashikarakuri* festivals are held

Role and Significance of *DashiKarakuri* Festivals

There are many traditional festivals in Japan, including Gion Festival in Kyoto, Tokyo’s Sanja Festival, the KishiwadaDanjiriFestival of Osaka, Hakata Dontaku Festival, and Aomori Nebuta Festival. Although these festivals connect the local people and serve as something for them to live for as well as contribute to the tourism industry, as with other types of festivals, *dashikarakuri* festivals, in which *dashi* appear in full force at regional shrines presenting *karakuriningyo* performances, competing for applause and cheers from spectators, have come to play the following major roles in addition to connecting local communities and families and helping tourism.

(1) In addition to being events that transmit culture and art, *dashikarakuri* festivals continually makespectators interested in scientific technology and continually cultivate creativity. Although the KosenRobocon event was adopted in 1988 as an opportunity to put creative education into practice, we can probably say that *dashikarakuri* festivals have played the same role for several hundred years.

(2) *Dashikarakuri* performances pass on several hundred years of wisdom and skills used for the purpose of deeply impressing spectators, making them clap and cheer. So not only are they valuable

from a mechanical perspective but also from a perspective of adding emotional value.

Dashikarakuri performances point the way to people-driven robotic design.

(3) Viewing the wonderful *karakuriningyo* performances at festivals held once a year which bring families and members of the community together has led to Japanese people liking robots, the creation of everyone's favorite hero Astro Boy, and promoted the adoption of robots for industrial use which still continue to be most prevalent in the world in terms of number.

Karakuri and Monozukuri

As stated at the beginning of this text, the word *karakuri* does not simply mean *karakuriningyo* wooden robot. It has a broader meaning which includes Japanese clocks, looms, and other mechanical devices.

It is well known that Sakichi Toyoda's efforts to improve wooden looms (considered to be *karakuri*) were connected to the development of the automotive industry, including today's Toyota Motor Corporation. However I would like more people to know that the *dashikarakuri* festivals held annually in Aichi Prefecture and other parts of the Chubu region, which I have described in this text, serve as a source of industrial technology in the region.

In addition, efforts for improvement and dedication have been actively taken at manufacturing sites throughout Japan since the start of the 21st century based on the keyword *karakuri*.

Karakuri Kaizen (Improvement through *karakuri*), a registered trademark of the Japan Institute of Plant Maintenance, is an activity which addresses (1) the joy and interest of devices, (2) low prices and (3) high reliability resulting from creating simple mechanisms. The concept of *Karakuri Kaizen* has also spread to various Asian countries in recent years. The image on the right shows a model of the unpowered

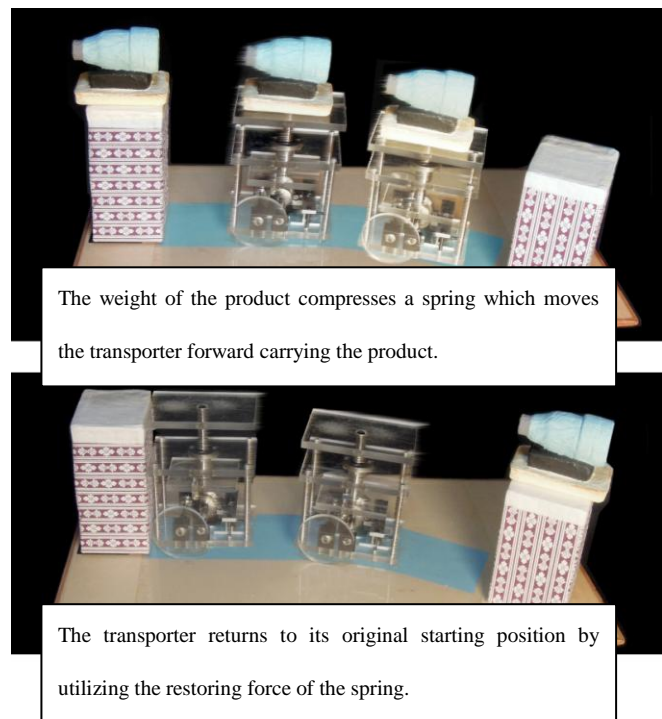


Fig. 7 Unpowered transporter: Dream Carry model

transporter, Dream Carry, which is typical example of *Karakuri Kaizen*. It was invented by Shigeharu Ikeda, who was at the time an employee of Aisin AW Co., Ltd. that cleverly put the gravitational force of products to use, getting the idea from a tea-serving doll that he saw during his childhood. Receiving the Grand Prize of the First Monozukuri Nippon Grand Award held in 2003, this invention uses the gravitational force of the product placed on top throughout the entire operation, carrying a product from the ending point of one production line within a factory to the next production line using a driving force and spring energy to return the empty transporter to its original position. There are now many versions of this unpowered transporter which are currently in operation at over 30 locations.

Establishment of a *Karakuri* and *Monozukuri* Permanent Exhibit

Nogaku Theatre, Ningyo Johruri Bunraku Puppet Theater, and Kabuki Theatre were registered as UNESCO Intangible Cultural Heritage assets in 2002, 2004, and 2006 respectively. Later, Washoku (traditional dietary cultures of the Japanese, notably for the celebration of New Year) was registered followed by Washi (craftsmanship of traditional Japanese hand-made paper). Yama, Hoko, Yatai, float festivals in Japan were registered in 2016.

With Aichi Prefecture serving as the core, the Chubu region has turned into a world center for industrial technology over the span of several decades.

I claim that the source of this industrial technology lies in the *dashikarakuri* festivals which have delivered traditional *Edo karakuri* performance to the present day. Therefore, I would like to suggest the establishment of a permanent exhibit in Aichi Prefecture with the theme “DashiKarakuriFestivals and Monozukuri.” This would provide information

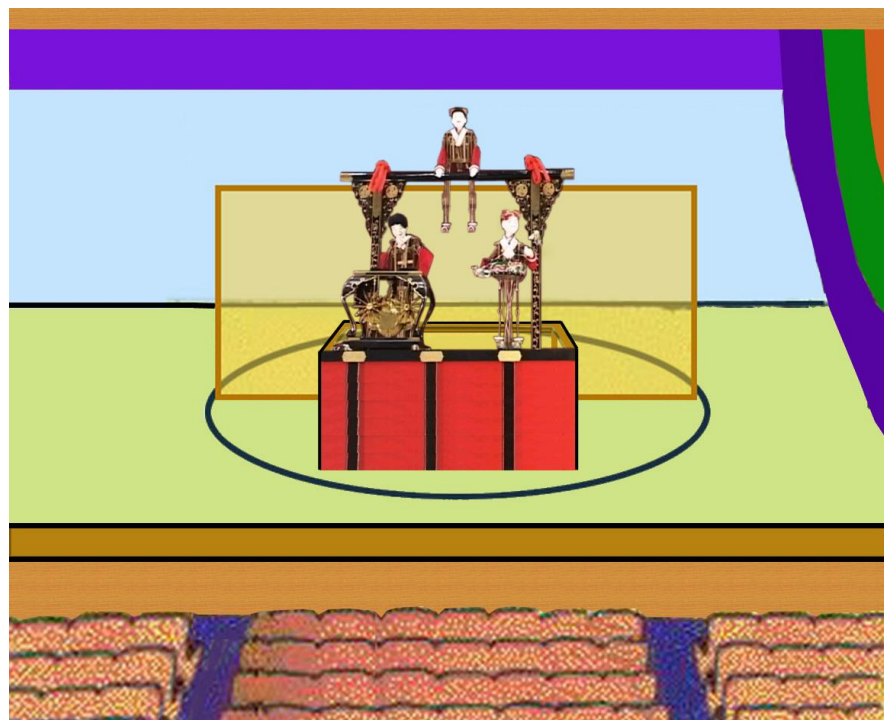


Fig. 8 Permanent exhibit where *dashikarakuri* can be performed

about the historical details behind the manufacturing industry, including clock, loom, machine tool,

and transportation machinery manufacturing, which has developed in this region since the Meiji period, feature an exhibit showing examples of *KarakuriKaizen*, and a permanent exhibit with a stage highlighting the interesting aspects and enjoyment of *karakuriningyo* performance. Since there are many *dashikarakuri* that exist in this region, it will probably be possible to create *karakuri* performance programs that change each week, commissioning performances by various festival preservation associations.

With a rotating stage which allows for preparation of the next *karakuri* performance out of view, I want this to be a place where audiences can fully enjoy *karakuriningyo* performances. The majority of *dashikarakuri* festivals are held from April to June and during October in the fall. Although I have also been interested in *karakuriningyo* for more than 20 years, I have only seen 20% of the *dashikarakuri* found in the region. This is also one of the reasons why I would like to see the establishment of a permanent exhibit where *karakuri* performances can take place.

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