Summary
Ropes, shells, and fish bones in Jomon period

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Consider, for example, how to join two pieces of wood together. There are more complicated methods, such as using gusset plates or other hardware or processing wood to join together. But there is also a simple method of tying two pieces of wood together with a rope.

To make things by versatile techniques

When you think of the joining method of traditional Japanese wooden buildings, you might think of joint connection “Tsugite- Shiguchi” in which the wooden members are processed so that they are connected by the techniques of carpenters. At first glance, the members appear to be simply perpendicular to each other, as seen in the “four-way joint” in which four beams are attached to a single pillar from four sides, but inside the pillar, the beams and the pillar are joined by a very complicated mechanism. Because of this outstanding skill, it is probably still being known to the world as one of Japanese specialty[1]. In fact, the joint technique has a long history. Even during the Yayoi period in Japan, when ironware was first introduced, a kind of technique of joint connection is thought to have already been used in a primitive pit-house style and was restored[2].

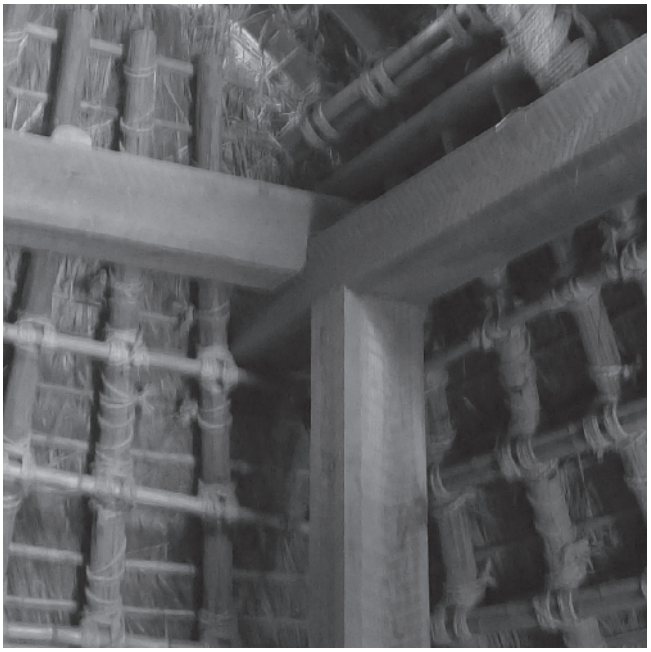
However, during the Neolithic period and Jomon period in Japan before the Yayoi period, bronze and ironware were not yet made, and it is assumed that the technology of wood processing was not so advanced yet. For the ruins in the period, there were often restored dwellings which were made by tying the wooden members with ropes and vines[3]. Logs are tied together in rope. Or, using a Y-shaped piece of natural wood with two ends, put a log on it and tie them with rope. Compared to joint fittings, they look crude and primitive.

Primitiveness is a figure before various improvements are made and also the one that frankly connects things with ordinary things around there. People used

general-purpose material, such as rope, that was not produced just for connecting the members in the building. It seems as if there appeared only a will to connect things. The joint connection is packed with the quintessence of techniques with the successive improvement of the connection part. In contrast to ropes, while various types of joint connections are used differently depending on the part of a building, they are neatly housed as if there is no connection mechanism. In terms of the history of architectural technology, it must be said that the popularization of the joint connection due to the improvement of processing accuracy is an advance in joining technology, but I wonder if the crude appearance of the joint by rope also attracts people.

Since the rope is a versatile tool, it is used for various purposes, such as tying ships to the shore, hanging and drying harvested food. In any case, people are using "ordinary things around there". The thing is not invented just for one use, though it is customized to different degrees. When little improvement has been made for some use, and the functions are fulfilled by "ordinary things around there", the tool must feel more honest for a single purpose than it has many effects. There is a possibility that the earnestness that concentrates on serving the purpose may be sublimated as a symbol of the use and transformed into a design that creates empathy.

Joint connection of Toro site



Joint connection of Sannai-Maruyama site

An earthenware with an engraved mark on something surrounding it

The earthenware of the Jomon period is an example of such a design created by "ordinary things around there". The name "Jomon" came from the pattern of ropes applied to earthenware during this period. This is because E. S. Morse, an American zoologist, and orientalist, pointed out "the impression of well-known cord mark" as a characteristic of the excavated earthenware in a report of the archaeological investigation of Omori Shell Mounds in 1878. The typical pattern of the earthenware is a twisted cord (rope) pressed onto the surface of the earthenware while rotating. Why was a rope used?

Michihiro KANI, an archaeologist, thinks that the pattern of rope had played a role in adjusting the surface of the pottery, though he doesn't deny its decorative role4. It is thought that, in the process of making earthenware, after the overall shape was formed by clay, the surface of the earthenware was leveled to make it smooth, and the shape of the details was adjusted. The rope is said to be used to adjust its shape. In other words, the surface of the earthenware was arranged with a general-purpose tool, a rope, and this purpose was an extension of the fundamental function, and the decorations of rope were applied to the earthenware so as to mark the tool and the work.

In addition to ropes, patterns were copied by placing shellfish, fish, and grass brought to villages as food on the surface of earthenware. There are well-known patterns such as the shell pattern using bivalves and spiral shells, the fishbone seal pattern pressing the bones of the fish they ate, and the fishbone rotation pattern pressing the fish bones by rotating them. It is an engraving of everyday things around them.

These are, so to speak, the design based on "ordinary things around there". It is not a design devised independently as a decoration of earthenware, but a representation of things that originally existed around the earthenware for others or general purposes. In the earthenware with prominent geometric patterns in the Yayoi period, the abstraction of the shape expanded the range of expression, but the expression of the earthenware in the Jomon period, in which the society of the period or region was directly engraved, should still be seen today, rather than being regarded as a thing of the past that was eliminated.

Pay attention to the primitiveness to break the bottleneck of specialization

The reason why I pay attention to the expression produced by such "ordinary things around there" is to mention the possibility of the ideal way of things which are not included in the specialization, while the specialization advances one after another through improvement and selection as things develop in the history. Especially in the creative things that inevitably make a comprehensive effect, such as architecture, advanced technology, and systems of expression will be established to solve the complicated intertwining things due to its comprehensiveness. For example, the joint connection has the original purpose of joining the members, but at least the intention to neatly handle each other would also exist in the improvement of the joint works. Taking the architecture from a wide perspective, architecture is a thing that is expected to have a great deal of effect in terms of durability, livability, productivity, and design, etc., and it is not easy to obtain a comprehensive property, and it must contain a lot of tacit knowledge for many years. So, there is no doubt that specialization should be emphasized.

With that in mind, if we are going to break through the "specialization blockage" that this exhibition raises as a problem, then it may be an option to pay attention to the way creative activities used to be before they become so specialized. For example, it is a design by "ordinary things around there" using general tools and daily things. If the world is seeking change, the very beginning of the human race could be a pioneer waiting for change.

NOTE

1. There is a movement to make Japanese traditional construction methods including wooden frames with joint connections inscribed on UNESCO intangible cultural heritage. One of the recently published books on joint connection is "KIGUMI: Revealing the Carpentry Behind the Wood Joint " published by the Takenaka Carpentry Tools Museum in 2019, which is also published as pictorial records of the exhibition of the same title.

2. Toro Archaeological site, Yoshinogari site, etc. "Judging from the exquisite workmanship of the unearthed woodwork, it is considered that the accuracy of the joint connection was developed considerably" . pointed out Masaru SEKINO, an architectural historian who restored Toro Archaeological site. (Masaru SEKINO. October 1947. "Toroiseki to kenchikushi no hansei " . JOURNAL OF ARCHITECTURE AND BUILDING SCIENCE)

3. Sannai-Maruyama site, Negoyadai site, etc. However, wooden members with marks of Nuki, a tie beam penetrating pillar, and Shiguchi, a joint connection, were excavated at the Sakuramachi site in the Jomon period, and this discovery has led to a review of the existence of wooden processing techniques even in Jomon period. (Sakuramachi site research project. Sakuramachi site symposium : Koukoshiryo kara kenchikuzai kenchikugijutsu wo kangaeru. 2005. etc.)

4. Michihiro KANI. Jomon doki no giho. Tokyo: Douseisha, 2005.