Selection of Clay in the Jomon Period

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The Jomon people obtained and made use of clay in various aspects of their lives, such as making pottery, clay figurines, clay earrings, or as building materials. It is probable that when doing so, they have selected the clay and temper according to their natural environment, social environment, the function of the artifact, or their liking. This paper focuses on such selection process, especially on the selection of clay (matrix).

First, the chemical composition of Jomon pottery and clay figurines was examined using X-ray fluorescence. Then, degree of argillization was calculated based on the chemical composition of the major element through applying the Norm Calculation used in Petrology. In the case of Funadomari site in Hokkaido (Late Jomon), it was revealed that both the clay used for pottery and for constructing pit-dwelling floor could have been obtained near the site. However, the clay used for pottery has shown a higher degree of argillization. Therefore, it can be concluded that the Jomon people selected clay according to its use.

In addition, the case of Kawaharada site in Nagano pref. (Middle Jomon) and several other cases have shown that the chemical composition of the clay can be divided into several groups in accordance to pottery types and pottery forms. Although some pottery were imported from areas of different geological features, most pottery were produced near the site. It was also revealed that among pottery produced near the site, different clay obtaining spots existed for different types of pottery.

By conducting additional examinations from the same point of view, it is expected that the resource exploitation strategy and selection criteria of the Jomon people will be better understood.