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Cultural diffusion rate estimated from radiometric dates

Takayuki OMORI[1*]

[1]The University Museum, The University of Tokyo

Date of culture diffusion has often been discussed in order to well understand the cultural transition and chronological secuence on archaeology and anthropology. In the case of almost Paleolithic studies, the date is based on radiometric dating, and various scenarios of cultural diffusion are drawn. However, the more we target the order period, the more reliability of the dates is decreased, resulting in rough scenarios.

In this paper, we focus on diffusion rate of several cultures, apart from the chronological studies. Research Team B02 ”Reconstructing the Distribution of Neanderthals and Modern Humans in Time and Space in Relation to Past Climate Change”, directed by Minoru Yoneda, is part of the project of ”Replacement of Neanderthals by Modern Humans”, and is collecting the information on radiometric dates in Levant, Europe and Africa between the Middle to Upper Paleolithic period. The collected data have been recorded in the B02 database ”Neandat”. Using this data, we attempted to reconstruct the Paleolithic chronology, and to simulate population dynamics so far.

Added to these, we try to estimate cultural diffusion rate with radiometric statistic analysis, and summarize the estimated rates of the specific culture groups (esp. lithic industries). The purpose is to reveal characteristic appearance of each cultural group, and find out the difference between the groups. Here, we will discuss the calculation of the cultural diffusion rate, and present summary of each cultural group.

Keywords: radiometric date, diffusion rate, paleolithic