

Synthetic research on the transition of the Japanese from the Pleistocene to the Jomon and Yayoi periods

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【Outline of survey】

Since the end of the 20th century, the scientific circumstances for the evolutionary history of *Homo sapiens* have greatly changed. In the world, many results of analyses supporting the ' Out of Africa ' model for *Homo sapiens* have been reported, and, in Japan, it is now required to re-examine the reliability of so-called " Pleistocene " human fossils found so far thanks to the recent hoax of paleolithic stone tools. Further, it has been pointed out that there is a possibility that the commencement of the Yayoi period may date back to the time several hundred years earlier than thought before. This demands modification of the previous concept on the transitional phase from the Jomon to the Yayoi period. Taking of these circumstances into account, the present project aims at clarifying how the physical characters of the inhabitants of the Japanese Archipelago have changed from the Pleistocene to the Jomon-Yayoi transitional phase, and at newly writing a scenario on the formation process of Japanese on the basis of morphological and genetical data. Concretely speaking, 1) the examination of the reasonability of so-called " Pleistocene " human fossils from Japan, 2) the reconstruction of the genealogy of the Jomon people based on both morphological and genetical data, 3) the re-examination of the number of immigrants from the Asian Continent during the Jomon-Yayoi transitional phase, 4) re-examination of the morphological interruption between the Jomon and Yayoi populations, etc. are conducted. The characteristics of this project are as follows: 1) Carried out in the cooperation of morphologists and geneticists; 2) focusing attention on the duration from the Pleistocene to the Yayoi period which is the key time for the formation of Japanese; and 3) attempting not only to describe the diachronic changes in morphological characters and DNA but also to elucidate the causes for such changes.

【Expected results】

In addition to a new scenario on the formation of Japanese to be written on the basis of accumulated ancient human skeletal materials and new techniques in morphology and genetics, it is expected that new three-dimensional data on the structures of bone to be obtained with the most advanced micro-CT apparatus will be the basis of a new research field of morphology in the near future. Further, the DNA data to be directly obtained from the great deal of ancient human bones will disclose new facts which could not be known through the analyses of the DNA data from modern humans alone, and will contribute to the development of a new research field to be called ' ancient DNA anthropology. '

【References by the principal researcher】

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- Mizoguchi Y. 1992 An interpretation of brachycephalization based on the analysis of correlations between cranial and postcranial measurements. In: Craniofacial Variation in Pacific Populations ed. T. Brown and S. Molnar. Anthropology and Genetic Lab., Dept. of Dentistry, The University of Adelaide, Adelaide. pp. 1-19.

【Term of project】 FY 2005 - 2009

【Budget allocation】 76,900,000 yen

【Homepage address】 <http://svrsh1.kahaku.go.jp/jinrui/anth1e.htm>