

Attempt to systematize physiological anthropology

from viewpoints of "theoretical physiological anthropology" and "experimental physiological anthropology"

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【 Outline of survey 】

The purpose of this study is to systematize physiological anthropology by integrating “ theoretical physiological anthropology ” with “ experimental physiological anthropology.” It is conducted by introducing a new concept, theoretical physiological anthropology, into the experimental data newly accumulated and current research results accumulated to date by researchers in the field of experimental physiological anthropology. For experimental physiological anthropology, data will be accumulated during a 5-year research period by focusing on some keywords in physiological anthropology (physiological polymorphism, systemic coordination, functional potentiality, techno-adaptability and environmental adaptability), and an attempt will also be made to clarify the mechanisms of action. Cerebral function will be measured with a time-resolved continuous spectroscopy, and autonomic nervous activity will be measured using blood pressure and pulse rate. In addition, salivary cortisol and immunoglobulin will be measured. Absolute measurements will be used for all indicators. For theoretical physiological anthropology, modeling of the relation among genotypes, the environment/culture, and phenotypes will be conducted by taking account of the keywords. Proposals for the system of physiological anthropology will also be offered by establishing its concept and methodology. We attempt to contribute to a new development of physiological anthropology by establishing a system of physiological anthropology based on experimental/theoretical physiological anthropology.

【 Expected results 】

To date, no attempt has been made to systematize physiological anthropology, and few studies have been conducted that recognized the keywords of physiological anthropology. In light of this, systematizing physiological anthropology based on experimental and theoretical physiological anthropology is expected to restructure the field. As a result, the relation among 1) genotypes, which are innate factors, 2) modifications by the environment and culture, and 3) the resultant phenotypes will be clarified, and this will contribute to the understanding of man.

【 References by the principal researcher 】

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The visual effects of wooden interiors in actual-size living rooms on the autonomic nervous activities. *J of PHYSIOLOGICAL ANTHROPOLOGY and Applied Human Science*. 21 (6) 297-300 2002

【 Term of project 】 FY 2004 - 2008

【 Budget allocation 】 78,900,000 yen

【 Homepage address 】 <http://www.ffpri.affrc.go.jp/labs/kassei/>