

【Grant-in-Aid for Specially Promoted Research】

Humanities and Social Sciences



Title of Project : Primate foundation of language and altruism

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Research Project Number : 16H06283 Researcher Number : 60111986

Research Area : Psychology, Experimental Psychology

Keyword : chimpanzee, Comparative Cognitive Science, Cognitive development, Language, Altruism

【Purpose and Background of the Research】

The project aims to elucidate the evolutionary foundation of human nature. Understanding the primate foundation of symbolic representations and altruism is essential for the true comprehension of human family, parenting, education, and sociality. From this perspective, the purpose of the present project is to examine the characteristics of cognitive functions of humans by 1) conducting research on chimpanzees and bonobos, the closest living relatives of humans, and orangutans and other large mammals as their out-group, 2) merging studies in laboratory and in the wild, and 3) focusing on cognitive development and transmission of skills, knowledge and values across generations.

【Research Methods】

The applicants will carry out the comparative studies of chimpanzees, bonobos, and orangutans in captive experimental at the Kyoto University Primate Research Institute, Kumamoto Sanctuary, and BJ island and OUI in Malaysia. In parallel to these captive studies, we will do the longitudinal studies in the wild. Chimpanzees are known to have outstanding ultra-short-term memory to remember items in front of their eyes at a glance. However, they are far behind us in terms of naming task to use symbolic language. In a general sense they do not actively give hands to help others or share valued items. The present research focuses



Figure 1 Chimpanzee

Stone tool use in wild chimpanzees on the power of human imagination, especially the language capability and the altruistic behavior.

【Expected Research Achievements and Scientific Significance】

In the parallel effort of field work and laboratory work, our studies will illuminate the cognitive functions of chimpanzees, bonobos, orangutans, and other large mammals. Thus the research will provide the further understanding of the evolutionary basis of imagination, language, altruism that are uniquely human. This may be able to provide the solution for the problems of family, parenting, education, and sociality, those we are facing in our modern societies.



Figure 2 Orangutan mother and infant

【Publications Relevant to the Project】

Matsuzawa, T. *et al.*, eds. (2006) *Cognitive development in chimpanzees*. Springer
Matsuzawa, T. *et al.*, eds (2011) *The chimpanzees of Bossou and Nimba*, Springer

【Term of Project】 FY2016-2020

【Budget Allocation】 361,200 Thousand Yen

【Homepage Address and Other Contact Information】

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