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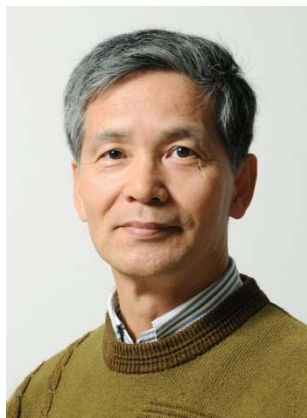
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L'origine des nombres

Mardi 14 mai

What is uniquely human ?

par Tetsuro Matsuzawa, Professeur, Université de Kyoto, Japon



Tetsuro Matsuzawa has been studying chimpanzee intelligence both in the laboratory and in the wild. The laboratory work, known as "Ai-project", has been focusing on the language-like skills and the concept of numbers in a female chimpanzee named Ai in the Primate Research Institute of Kyoto University, Japan. Ai project started in 1978. Matsuzawa has also been studying the behavior of wild chimpanzees since 1986. The research site is Bossou and Nimba, Guinea-Conakry, West Africa. Bossou chimpanzees are well known to use a pair of mobile stones as hammer and anvil to crack open oil-palm nuts. His long-term research on wild chimpanzee tool use revealed interesting topics such as handedness, critical period of learning, learning mechanism called "Education by master-apprenticeship", cultural variation in adjacent communities, and so on.

Résumé de la conférence

This talk aims to summarize the existing evidence for the symbolic representation of number in chimpanzees. Piaget raised the question about the developmental basis of the concept of number, while this study raised the question about the evolutionary origins. I have studied the chimpanzees both in the wild and laboratory. Laboratory studies showed that chimpanzees can represent, to some extent, both the cardinal and the ordinal aspect of number.



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[Résumé de la conférence de T. Matsuzawa, suite]

Through the medium of Arabic numerals we compared working memory in humans and chimpanzees using the same apparatus and following the same procedure. As a result, three young chimpanzees outperformed human adults in memorizing briefly presented numerals. However, we found that chimpanzees were less proficient at a variety of other cognitive tasks including imitation, cross-modal matching, symmetry of symbols and referents, and one-to-one correspondence. In sum, chimpanzees do not possess humanlike capabilities for representation at an abstract level. The present talk will discuss the constraints of the number concept in chimpanzees, and illuminate some unique features of human cognition.

See the home page: <http://www.pri.kyoto-u.ac.jp/ai/>

Lecture proposée

Matsuzawa, T. (2009). Symbolic representation of number in chimpanzees. *Current Opinion in Neurobiology*, 19, 92–98.



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Bossou Jire Family



Ayumu