

**DEVELOPMENT OF STACKING AND LINING UP BLOCKS IN CHIMPANZEES: A STUDY WITH A MOTHER-REARED INFANT AND A HUMAN-REARED INFANT**

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Development of stacking and lining up behavior with blocks was investigated in chimpanzees to clarify the influence of different rearing environments. The subjects were 2 female infant chimpanzees born in the same year and kept at the Itozu-no-mori Zoological Park, Japan. One was reared by her biological mother in a group of 6 chimpanzees and the other was reared by human male caretakers from birth. Starting at 1 year of age, 15 wooden blocks were introduced to them for 30 minutes in a room (approximately 10 m<sup>2</sup>) at intervals of 2 to 3 months and their behavior was videotaped. In the room, the mother-reared infant was accompanied exclusively by her mother and the human-reared infant was accompanied exclusively by her primary caretaker. In the former case, the mother herself was reared by humans and was fond of manipulating blocks and good at stacking and lining them up. There were a considerable number of opportunities for the infant to see her mother stacking and lining up blocks during the 30 minutes of each session. In the latter case, the caretaker repeated the block-stacking behavior from the 10th to 20th minute of each session. Results from the observations for up to 4 years showed much earlier onset of attention to the other's stacking behavior and successful stacking of blocks in the human-reared infant. This suggests an advantage of the human environment for the development of object manipulation through social interaction, even in a cross-species relationship.

Keywords: object manipulation, rearing environment, mother-infant, social interaction