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STACKING BLOCKS IN CHIMPANZEES AND HUMANS

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Block manipulation in chimpanzees and humans was examined as an index of cognitive development. The object-manipulation tasks can be a non-verbal scale of comparison among primates including humans. The tasks were conducted in a face-to-face situation and the pattern of manipulation was analyzed. The first task focused on physical understanding involved in stacking blocks of different shapes. The subjects were required to stack up variously shaped blocks by selectively using an appropriate orientation for stacking. The result showed that chimpanzees are capable of learning the efficient strategy of stacking variously shaped blocks as well as human children of 2-3 years of age. The second task examined imitative ability in the context of stacking blocks. The subjects were required to stack colored blocks in an order that was identical to a model made by human tester. Although human children of 2-3 years old succeeded to make a copy of model stack, chimpanzees showed greater difficulty in learning the rule of copying the arbitral order of colored blocks. These results were discussed in terms of their tendency in learning rules of different domains. In order to investigate the rules spontaneously used by chimpanzees and humans, a new task was introduced to test sorting behavior with blocks of different shapes and colors. The result showed that chimpanzees share a rudimental form of sorting behavior with human children. In sum, a series of block-manipulation task illuminated the similarities and differences in cognitive development in chimpanzees and humans.

Keywords: chimpanzees, stacking blocks, cognitive development, face-to-face tasks