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A NONVERBAL FALSE-BELIEF TASK IN GIBBONS, CHIMPANZEES AND HUMAN CHILDREN

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After confirming subjects' capability to choose a cup indicated by experimenter's tapping, we conducted a nonverbal false-belief task in gibbons (n=2), chimpanzees (n=6) and human children of 4-6 years old (n=42). The false-belief task consisted of the following steps. 1) The hider hid a food reward in one of two cups (the baiting procedure was hidden from subject's view by a cardboard barrier). 2) The hider took away the barrier and the other experimenter (the changer) covered the hider's face with an opaque paper bag. 3) The changer switched locations of the cups and took off the paper bag from hider's face. 4) The hider, who didn't see the changing procedure, indicated a cup by tapping the location in which the hider originally bated. Thus, the subject should take the cup not indicated by the hider to make a correct choice. Just after the false-belief task, we conducted a similar task by using a paper bag with a large hole on its front, so that the hider was able to see the changing procedure, in order to confirm the subjects' understanding of seeing-knowing relationship. In this case, the subject should take the indicated cup to make a correct choice. The two main results were: (1) although one gibbon succeeded, no chimpanzees succeeded in the false-belief task and (2) the percentage of correct choice was 61-70% in children, 75% in gibbons, and 15% in chimpanzees. The results suggested some sort of similarity in social cognition between gibbons and humans.

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