

DO CAPUCHIN MONKEYS (*CEBUS APELLA*) AND CHIMPANZEES (*PAN TROGLODYTES*) SHOW ANALOGICAL REASONING WHEN USING TOOLS?

G. Sabbatini¹, V. Truppa¹, B. Gambetta^{1, 2}, A. Hribar³, J. Call³, E. Visalberghi¹

¹*Institute of Cognitive Sciences and Technologies-CNR, Rome, Italy*, ²*Sapienza University of Rome, Rome, Italy*; ³*Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany*

Presenter's Email: gloria.sabbatini@istc.cnr.it

To examine analogical reasoning, 8 capuchins and 8 chimpanzees were presented with a tool problem. Subjects were required to select the longest stick from different sets of three sticks differing in length (functional feature) and handle (non-functional feature) to retrieve a reward from a horizontal tube. Phase 1 included (a) Training I in which each stick had a different handle and (b) Transfer I in which the handles were switched among sticks, so that the functional tool had the same length but a different handle than in the training. Seven chimpanzees and 1 capuchin passed Transfer I and, then, received Transfer II. Phase 2 included (a) Training II in which the same sticks of phase 1 were used with handles switched (in every trial) across them, and (b) Transfer II in which the tube was longer, all sticks had the same new handle and the tool that was the longest during Training II became intermediate in length and non-functional. In Transfer II 8 chimpanzees and 3 capuchins passed. Therefore, whereas the Training II was necessary for capuchins to learn about the functional feature of the tools (irrespective of the perceptual characteristics of the handles), for chimpanzees Phase 1 was sufficient. Our results show that capuchins might apply analogical structures in tool using tasks after varied experience while chimpanzees seem to already have such knowledge or to build it more quickly. Funds: ANALOGY Project (EC-NEST #29088).

Keywords: analogy, tool use, functional features, non-functional features