

CHIMPANZEES' USE OF CONSPECIFIC CUES IN MATCHING-TO-SAMPLE TASKS

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In the current study, we modified a traditional computerized Match-to-Sample (MTS) paradigm such that two chimpanzees could participate in a single task, providing us with a novel window onto socio-cognitive processes. In our task, input from both subjects was necessary to complete a single MTS trial, with one subject (the model) performing the first half of the trial, and the other (the observer) completing the trial using the model's actions as discriminative cues. Subjects took turns being models and observers, and were given a series of both symbolic and non-symbolic MTS tasks. Performance on social matching tasks was compared to that attained by the same subjects on identical MTS tasks but without the social element (i.e. performed individually). We found that both subjects were able to use the cues provided by a conspecific model to complete non-symbolic MTS tasks, and one of the two subjects, named Ai, was able to complete symbolic MTS while using the model's touch cue to determine the sample's identity. Ai displayed a significant decrease in performance when required to combine social cueing and symbolic representation processes. The compound effect of these processes on performance was significantly greater than the sum of their individual effects, which may suggest that they are supported by independent and domain specific cognitive processes rather than a shared social symbolic representational system. Our study establishes a novel paradigm for examining social interactions and social learning within a highly controlled and automated setting.

Keywords: Social cognition, Observational learning, Matching-to-sample, Symbolic representation