

DO RHESUS MACAQUES REASON ABOUT FALSE BELIEFS?

A.M. Ruiz¹, D.C. Marticorena², C. Mukerji¹, A. Goddu¹, L.R. Santos¹

¹*Yale University, New Haven, CT, United States*, ²*Duke University, Durham, NC, United States*

Presenter's Email: april.ruiz@yale.edu

Researchers have long been interested in the cognitive mechanisms that primates use to make sense of other social agents. One hallmark of our own species' social understanding is our ability to think about the false beliefs of others. To date, there is still much debate concerning whether this capacity is uniquely human, or whether it is instead shared with other primates. We examined whether one primate— specifically, the rhesus macaque (*Macaca mulatta*)— shares this cognitive mechanism with humans. We presented macaques with a looking-time measure of false belief understanding adapted from one that had recently been developed for use with fifteen month-old human infants. In this paradigm, an experimenter has either a true or false belief about the location of a hidden item and then acts in accord or in disaccord with this belief. Like human infants, monkeys looked longer when a human experimenter failed to act in accord with her true beliefs (by reaching toward the location opposite to that in which she knew the item to be hidden), even when there was a short waiting period between the acquisition of true belief and the experimenter's action. In contrast to infants, however, monkeys appeared to make no prediction about where a human experimenter will act when she has a false belief. This pattern of results is consistent with the view that monkeys can represent the knowledge and ignorance of others, but not their beliefs. The capacity to represent beliefs may therefore be a unique hallmark of human cognition.

Keywords: theory of mind, social cognition, false belief, looking time