

Monkeys demonstrate self-awareness in computer game

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(PhysOrg.com) -- It has been widely assumed that only humans are aware of their own thinking, but a new study in macaques by US scientists shows some monkeys are also self-aware.

The study was carried out by Professor John David Smith of the Department of Psychology at the State University of New York and Georgia State University's Dr Michael Beran, and the results were presented at the American Association for the Advancement of Science (AAAS) meeting in Washington DC, at a session organized by the European Science Foundation.

The macaques were taught to decide if the density of a small box on a

computer screen was either sparse (S) or dense (D). If they used the joystick to move the box to the correct letter a treat was dispensed, while if they made the incorrect choice they got no treat and the game paused. They could avoid the pause in the game if they instead moved the box to a third option, a question mark, if they were unsure of the density of the box.

The results showed the monkeys preferred to pass and move on by selecting the question mark if they were unsure of the correct answer. This option avoided the pause and allowed them to get to the next treat more quickly but did not result in a treat.

Other studies have shown that human subjects also use the pass option if presented with similar problems they find too difficult.

The results suggest the macaques, which are Old World monkeys, understood when they were uncertain and therefore liable to make an incorrect choice and were aware they did not know the answer. When capuchins, which are New World [monkeys](#), were given the same task they did not take the pass option.

Professor Smith said it is not certain if this kind of thinking ability emerged only once and only in the Old World primates, the line which leads to humans and apes, but that the ability of humans to be aware of our own thinking was “central to every aspect of our comprehension and learning.”

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