

016

DO ORANGUTANS KNOW WHEN THEY DO NOT REMEMBER?

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In a series of studies, we evaluated whether orangutans escaped spatial and object recognition memory tests when they did not remember. Five orangutans housed at the Smithsonian National Zoological Park served as subjects from April 2009 to October 2009. In the study, two grapes were hidden in one of four containers (A, B, C, & D). The apes were allowed to choose one of the containers or an escape response, which resulted in one grape. This procedure was used in two types of trials: difficult and easy. In difficult trials, the apes witnessed the baiting in one of four different containers and after a delay, during which all containers were hidden from view, the subjects were allowed to choose one of the four containers. In easy trials, the baiting occurred in front of the subjects and the containers never left the sight of the apes. All the orangutans, at the individual level, were significantly more likely to decline difficult trials than easy ones, and they were significantly more successful at selecting the baited container when the escape option was available than when it was not. This result, together with earlier work (Suda-King, 2008), suggests that apes monitor their own attention and the strength of their memories, which is the ability called metacognition. Further research is necessary to rule out non-metacognitive explanations for the apes' effective use of escape response.

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