

REVIEW ON SELF-CONTROL STUDIES IN TWO LEMUR SPECIES: THE BROWN AND THE BLACK LEMUR (*EULEMUR FULVUS* AND *E. MACACO*)

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This presentation will review results of our self-control studies in lemurs from an inter-species comparative perspective. In initial experiments we demonstrated that, in the reverse-reward contingency task, lemurs showed an impulsive bias towards the larger quantity of food. However, when a large-or-none contingency training was applied, all the subjects learned to reliably select the smaller quantity in order to obtain the larger one. The lemurs were able to maintain a significant preference for the smaller quantity when the original reverse-reward contingency was reinstated. Furthermore, lemurs showed positive transfer of their performance when novel food-size array combinations were presented. Once acquired, this self-control ability appeared robust, as the lemurs performed similarly months later (3 months for brown lemurs, 18 months for black lemurs). They also transferred their acquired ability to foods differing qualitatively, selecting the less desired food to obtain the preferred one.

Subsequently we assessed the possibility that, similar to rhesus macaques and mangabeys, lemurs could master the task if a large number of trials was applied. Only one subject of five mastered the task after receiving 1300 trials; the other subjects quickly developed a position bias and were unable to overcome it. Finally, we tested the possibility that food quality or the presence of a competitive subject (to which the desired item was given) would help subjects to master the reverse-reward task faster.

Keywords: lemur, cognition, self-control, reverse-reward contingency