

TITLE: Examining responses to inequity in brown capuchins

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Introduction: Previous research has demonstrated that humans and our closest living relatives, non-human primates (NHP), respond negatively to inequity. In order to study the origin and evolutionary function of behaviors concerning fairness, comparative studies have been conducted with NHP. The purpose of the following study was to compare rejection rates of varied food rewards between capuchin monkeys (*Cebus apella*) when subjects were separated versus sharing the same enclosure. We hypothesized that in both conditions, capuchin monkeys would refuse food rewards in situations of inequity as compared to equitable situations, but that refusals would increase in the no-barrier condition.

Method: Capuchins from the same social group were paired in adjoining enclosures that were either contiguous or separated by a transparent barrier. The monkeys had to exchange a token to receive a food reward that was either: High Value (HVR), Medium Value (MVR) or Low Value (LVR). Monkeys completed two 20-trial sessions of each of three conditions: HVR vs MVR, HVR vs LVR, and MVR vs LVR.

Results: Capuchin monkeys responded to reward comparisons differently depending upon the value of those rewards and the presence or absence of a barrier. When no barrier was in place they responded negatively to receiving low-value rewards when the partner received a higher value one, H vs L (Friedman's test, $n = 6$, $\chi^2 = 6.522$, d.f. = 2, $p = 0.038$) but not in any of the other comparisons (Friedman's tests: H vs M: ns; M vs L: ns), yet showed no such significant variation when the barrier was present among the three conditions for any of the comparisons (Friedman's tests: all p 's ns).

Conclusion: These results provide insight into the conditions that selected for negative responses to inequity.