Title: Do white-faced capuchin monkeys have social norms?: New data from the Lomas Barbudal Monkey Project in Costa Rica

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Abstract Text: Cultural evolution researchers still debate whether humans are unique among species in having social norms, i.e. moralized, group-specific, socially learned, shared understandings of the rules by which social life should be conducted, maintained via moral emotions that inspire impartial third parties to punish violators of these rules. I sought to establish what behaviors spark outrage in capuchins by recording the details of social context whenever a capuchin aggressed against or screamed at another monkey. Food theft, certain types of sexual interaction, and branch-breaking displays were situations that elicited outrage often enough to warrant documentation of which other monkeys witnessed these events, and how they responded. Three decades of long-term data on ten groups were used to measure degree of maternal kinship and relationship quality (using focal follow data and ad libitum data) between the bystander monkeys and the monkeys involved in the putative norm violation. This population fails to meet three of my operational criteria for social norms: (1) There is very little betweengroup variation in the patterning of social behaviors relevant to the putative social rules identified. (2) The rate at which third party bystanders aggress against putative norm violators is low (0.6-7.0%). (3) Using a logistic regression modeling framework, the most salient predictor of whether third party bystanders punish putative rule violators is the quality of bystanders' relationships with those violators, suggesting that bystander behavior is driven more by grudge-holding against particular individuals with whom they have poor-quality relationships than by altruistic enforcement of a group-wide behavioral standard.

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