Alejandro S. Amaro[1], Mar Peretó[2], Josep Call[1, 3]

[1] Department of Psychology, Max Planck Institute for Evolutionary Anthropology, Leipzig, GER

[2] Department of Psychology, Valencia University, Valencia, SPA

[3] School of Psychology and Neuroscience, Saint Andrews University, Saint Andrews, UK

Correspondence: alex_sanchez@eva.mpg.de

Natural Choices of Food in Great Apes.

Apes constantly face different food-value items. We investigated how apes allocated their choices between two food options that varied in terms of their quantity and quality. Experiment 1 tested whether subjects followed a “rational election” strategy by preferring the AB option over the A option, where item A is highly preferred to item B (e.g. banana pellet vs. carrot). Additionally, we tested whether the length of the inter-trial interval affected subjects’ choices. Four gorillas, five orangutans, seven bonobos and ten chimpanzees received three types of trials: preference (A vs. B), quantity (AA vs. A) and rational-option (AB vs. A where A is the preferred food). We used three food items that substantially differed in terms of preference. Subjects showed no overall preference for the rational option compared to the non-rational option, although they showed clear preferences during both the preference and quantity trials suggesting that the relative value of the less preferred items compared to the most preferred was almost negligible. Experiment 2 further explored these hypotheses by using three types of highly preferred food items (e.g. banana pellet vs. grape) in both preference and rational-option trials. We tested six orangutans, four gorillas, eight bonobos, and eighteen chimpanzees. Unlike the results of Experiment 1, apes generally chose the rational-option (AB vs. A), despite showing specific preferences for items during the preference trials. The results indicate that apes assigned a relative value to every item involved in the election, been these values what drives their decisions in a natural choice task.