

The Familiarity Heuristic in the Horse (*Equus caballus*)

David Pick, Purdue University Calumet
Beth Kendra, Happy Acres Farm
Christian Steciuch, Purdue University Calumet

This study replicated an unreported finding observed in a color perception experiment (Pick, Lovell, Brown, & Dail, 1994) where, after using the method of successive approximations to train a blue-gray discrimination, red-gray trials were initiated without further training. Although a gray choice had never been reinforced, the subject chose gray on the first 20 trials ($p < .000001$). In the study reported here, a horse was trained to approach a red feed bucket and not a green feed bucket. After the subject mastered the discrimination, a blue bucket was substituted for the previously reinforced red bucket. With double-blind controls in place, the subject chose the unreinforced green bucket on 15 out of the first 20 blue-green trials yielding a binomial $p = 0.0148$ that this outcome could be due to chance alone. These results are contrary to all behavioristic psychological learning theories, but consistent with prospect theory (Kahneman & Tversky, 1979). Prospect theory predicts that given a choice between two previously unreinforced stimuli, one familiar and the other novel, humans will choose the familiar. It is argued that the bias toward the familiar is the basis to a heuristic that has a genetic origin and should exist in other animals on the phylogenetic scale. The results of this study indicate that the heuristic is available at least as far down the scale as the horse. Conceptual replications using shape stimuli and sound stimuli are in progress.

Key words: color perception, learning theory, prospect theory

Corresponding author: David Pick
Email: pick@purdue.edu,
Tel: 1-219-989-2622