3:44 PM Sylvain Fiset (Université de Moncton at Edmundston)
Spatial rotation of hidden objects in domestic dogs

70

The present study was aimed at investigating whether domestic dogs understand invisible displacement of objects in a spatial rotation task. The dogs faced a rotating platform. Two containers were placed at both ends of the platform and an attractive object was visibly put in one of the containers. Experiment 1 revealed that dogs did not understand spatial rotation of hidden objects when the two containers were opaque. In Experiment 2, dogs succeeded when the target container was transparent but failed when the target container was opaque. Additional testing sessions revealed that dogs gradually learned to find the target object hidden in the opaque container, suggesting that they might be able to understand some rudiments of spatial rotation of hidden objects.

4:03 PM Category and Concept Learning III (Chair - Gordon Bauer)

4:03 PM Heidi E. Harley (New College of Florida & The Seas, Epcot®), Wendi Fellner, & Kim Odell (The Seas, Epcot®)
Object-Photo/Photo-Object Matching by the Bottlenose Dolphin

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Dolphins can accurately interpret two-dimensional video images and discriminate two-dimensional figures, but their ability to recognize an identity relation between three-dimensional objects and their static two-dimensional representations has not been documented. In this study, two dolphins (Ranier & Toby) performed a 3-alternative matching-to-sample task with objects and photographs. Ranier matched visually in three conditions: object to object (OO), photo to object (PO), and object to photo (OP). Immediate transfer occurred to photographs. Performance accuracy was comparable in all conditions within object sets of varying difficulty on five 3-alternative 18-trial sessions in each condition: Set 1, 97% OO, 94% PO, 97% OP; Set 2, 82% OO, 90%, PO, 89% OP; Set 3: 68% OO, 67% PO, 72% OP. Toby matched photographs to echoic alternatives. Performance accuracy with three different familiar object sets averaged 100%, 87%, 54%. Apparently, dolphins can instantly recognize an identity relation between objects and their photographic representations.

4:17 PM Kristy Lindemann, Colleen Reichmuth, & Ronald J. Schusterman (University of California, Santa Cruz)
The Role of The Reinforcer in Equivalence Class Formation: Evidence From Work With a California Sea Lion

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Differential outcomes effect, or DOE, has been studied in various species and across a range of learning contexts. The findings of these studies have illustrated that discrimination learning occurs more rapidly when responses to different stimuli produce different reinforcers. There are a number of theories that have been proposed to explain DOE but no single theory or mechanism has been established. We propose that Sidman's (2000) theory of equivalence offers a possible explanation of DOE by including the reinforcer as a stimulus class member. Our past and current work on equivalence classes with a California sea lion provides evidence that the differential reinforcement of two stimulus classes facilitates class formation but is not necessary for equivalence performances to emerge. We hypothesize that the reinforcer is an equivalence class member and we discuss our current work which further investigates the relationship between the reinforcer and the auditory and visual class members.

4:24 PM Timothy M. Flemming (Georgia State University) and David A. Washburn (Georgia State University)
Focus!: Enhancement of Relational Matching in Rhesus Monkeys (Macaca mulatta) with Increased Attentional Demands

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Compared to results from static presentations of a relational match-to-sample paradigm, presentations of moving stimuli in the same paradigm yielded higher rates of accuracy. In the static condition, one pair of identical or nonidentical stimuli was contacted with a cursor, subsequently presenting choice stimuli randomly in one of two corners of the computer screen. In the moving condition, stimuli were presented in pairs that moved together at a slow rate in random directions, with random starting locations around the computer screen. After contacting the first moving relational pair, two moving choice pairs appeared at random locations on the screen. Correct choices were made by contacting the moving pair that exemplified the same relation (identical/nonidentical) as the sample pair. Increased attentional demands on the composition of the moving pairs is likely responsible for the enhancement of relational matching.