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Using multiple joystick systems in computerised enrichment for captive orangutans

S Mallavarapu^{*†}, MA Bloomsmith[‡], CW Kuhar[§] and TL Maple[#]

[†] Department of Psychology, Kennesaw State University, Kennesaw, Georgia, USA

[‡] Yerkes National Primate Research Center, Atlanta, Georgia, USA

[§] Cleveland Metroparks Zoo, Cleveland, Ohio, USA

[#] Department of Psychology, Florida Atlantic University, Boca Raton, Florida, USA

* Contact for correspondence and requests for reprints: smallava@kennesaw.edu

Abstract

*It has been suggested that providing multiple computers with automatic reward dispensers as enrichment to captive orangutans (*Pongo spp*) (as opposed to a single computer, with a care-staff person delivering reinforcers) might help improve behavioural outcomes. The purpose of the current study was to test this hypothesis by providing two computers with automatic reward dispensers to eight orangutans housed in four male-female pairs at Zoo Atlanta, USA. Subjects were observed for ten days during each of three phases: a baseline phase (during which, no computer was provided); immediately followed by Phase 1 (during which, one computer system was provided to each pair of subjects); immediately followed by Phase 2 (during which, two computer systems were provided to each pair). Data were collected in 1-h sessions using instantaneous scan sampling. There was no habituation to the computer system, nor were there any significant increases in aggression, rough scratching, and abnormal behaviours in either computer phase, which indicates that computer-joystick systems are effective as enrichment for captive orangutans. However, a high level of interest in the computer was shown by only a few individuals, which highlights a need to take into consideration individual differences when providing computerised enrichment to captive non-human primates. It would also be advisable to provide other forms of enrichment to increase activity levels for individuals which are not interested in interacting with a computer, as well as to help increase the diversity of behaviours being stimulated by the enrichment.*

Keywords: animal welfare, automated feeder, computers, enrichment, joystick, orangutans