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Rhythmic behaviors in chimpanzees: range, functional contexts, sex differences and emotional correlates

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Abstract

There have been recently multiple calls to investigate the rhythmic behaviors (RBs) of nonhuman animals, as a way to gain insight into the evolution of human rhythm cognition and musicality. Currently, the empirical data from non-human species is scarce. Most strikingly, we lack data from chimpanzees (*Pan troglodytes*), our closest genetic relatives. Here, we present an observational study conducted at three sites (N=41), in which we systematically documented RBs in chimpanzees, with a particular focus on functional contexts, sex differences and emotional correlates. We found that RBs were frequent in chimpanzees, occurred primarily in social contexts, and often had social consequences. RBs were not exclusively associated with high arousal or playfulness. RBs were more frequent in males than females, but sex did not affect their social efficacy. Our findings are consistent with social theories on the evolution of musicality, but also highlight a role for RBs in chimpanzee inter-sexual communication.