

BODY PERCEPTION IN TUFTED CAPUCHIN MONKEYS (*CEBUS APELLA*)

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The processing of bodies compared to that of inanimate objects is specialized in our visual system, as is that of faces. Humans process a visual body image depending on the configuration of the parts. However, little is known about whether such a function is evolutionarily shared with nonhuman primates who have different constraints on body postures. Here, we demonstrated that monkeys exhibit the body-inversion effects i.e., body posture discrimination is impaired by inversion, which disrupts the configural relationships of body parts. Furthermore, they exhibited this effect when the body postures were human-specific and not in the postural repertoire of monkeys. Further experiments using transfigured body forms revealed that the visual appearance of the body ("humanlikeness") was crucial for the inversion effects. These results provide the first evidence of configural processing of body forms in nonhuman primates and suggest that the visual attunement to social signals mediated by body postures are conserved through evolution of primate vision. Furthermore, our results suggest that acquired visual knowledge concerning typical human body appearance plays a critical role in configural body processing rather than an observer's own body representation. (The study was approved by the Animal Research Committee of the Graduate School of Letters, Kyoto University. Care and use of the monkeys adhered to the 2002 version of the Guide for the Care and Use of Laboratory Primates of the Primate Research Institute, Kyoto University, Japan.)

Keywords: capuchin monkeys, visual perception, object perception, configural processing