

## OPEN ACCESS

Vision Sciences Society Annual Meeting Abstract | September 2016

# Where You Look Matters for Body Perception: Preferred Gaze Location Causally Contributes to the Body Inversion Effect

Danielle McKean; Joseph Arizpe; Annie Chan

[+ Author Affiliations](#)Journal of Vision September 2016, Vol.16, 1043. doi:<https://doi.org/10.1167/16.12.1043>

## Abstract

Similar to that of faces, visual processing of human bodies involves perceptual mechanisms distinct from those for processing other object categories. For example, the Body Inversion Effect (BIE; reduced visual discrimination performance for whole inverted bodies compared to whole upright bodies) is larger than inversion effects for other object categories, except for faces. This suggests that bodies are processed configurally; however, a robust BIE also exists for bodies without either arms or legs. Further, the importance of specific feature information, namely the head posture information, in the BIE has been indicated in reports of reduction or elimination of the BIE for whole bodies with fixed head position and for headless bodies. Through measurement of gaze patterns and investigation of the causal relation of fixation location to visual body discrimination performance, the present study reveals the joint contributions of body feature and configuration processing to visual body discrimination. Our results reveal that during body discrimination, participants predominantly directed gaze at the upper body for upright bodies and the lower body for inverted bodies. Subsequent manipulation of fixation location indicates that these differential gaze locations contributed to the BIE for whole bodies largely due to the informativeness of gazing at or near the head. Also, a BIE was detected for both whole and headless bodies even when fixation location on the body was held constant, indicating a role of configural processing in body discrimination, though inclusion of the head posture information was still highly discriminative in the context of such processing. Therefore, in addition to the differential gaze patterns, seeing a body in a

typical versus an atypical configuration as such (i.e. upright versus inverted orientation per se) also drives the BIE. Interestingly, the impact of configuration (upright and inverted) to the BIE appears greater than that of differential preferred gaze locations.

Meeting abstract presented at VSS 2016

This work is licensed under a [Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License](https://creativecommons.org/licenses/by-nc-nd/4.0/).

