

Inversion effect in biological motion perception: Evidence for a "life detector"?

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If biological-motion point-light displays are presented upside down, adequate perception is strongly impaired. Reminiscent of the inversion effect in face recognition, it has been suggested that the inversion effect in biological motion is due to impaired configural processing in a highly trained expert system. Here, we present data that are incompatible with this view. We show that observers can readily retrieve information about direction from scrambled point-light displays of humans and animals. Even though all configural information is entirely disrupted, perception of these displays is still subject to a significant inversion effect. Inverting only parts of the display reveals that the information about direction, as well as the associated inversion effect, is entirely carried by the local motion of the feet. We interpret our findings in terms of a visual filter that is tuned to the characteristic motion of the limbs of an animal in locomotion and hypothesize that this mechanism serves as a general detection system for the presence of articulated terrestrial animals.