

Gender bending: auditory cues affect visual judgements of gender in biological motion displays

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The movement of an organism typically provides an observer with information in more than one sensory modality. The integration of information modalities reduces the likelihood that the observer will be confronted with a scene that is perceptually ambiguous. With that in mind, observers were presented with a series of point-light walkers each of which varied in the strength of the gender information they carried. Presenting those stimuli with auditory walking sequences containing ambiguous gender information had no effect on observers' ratings of visually perceived gender. When the visual stimuli were paired with auditory cues that were unambiguously female, observers' judgments of walker gender shifted such that ambiguous walkers were judged to look more female. To show that this is a perceptual rather than a cognitive effect, we induced visual gender after-effects with and without accompanying female auditory cues. The pairing of gender-neutral visual stimuli with unambiguous female auditory cues during adaptation elicited male after-effects. These data suggest that biological motion processing mechanisms can integrate auditory and visual cues to facilitate the extraction of higher-order features like gender. Possible neural substrates are discussed.