

# Reference Frame of the Ventriloquism Aftereffect

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Seeing the image of a newscaster on a television set causes us to think that the sound coming from the loudspeaker is actually coming from the screen. How images capture sounds is mysterious because the brain uses different methods for determining the locations of visual versus auditory stimuli. The retina senses the locations of visual objects with respect to the eyes, whereas differences in sound characteristics across the ears indicate the locations of sound sources referenced to the head. Here, we tested which reference frame (RF) is used when vision recalibrates perceived sound locations. Visually guided biases in sound localization were induced in seven humans and two monkeys who made eye movements to auditory or audiovisual stimuli. On audiovisual (training) trials, the visual component of the targets was displaced laterally by 5–6°. Interleaved auditory-only (probe) trials served to evaluate the effect of experience with mismatched visual stimuli on auditory localization. We found that the displaced visual stimuli induced ventriloquism aftereffect in both humans (⇒<<<<<<)

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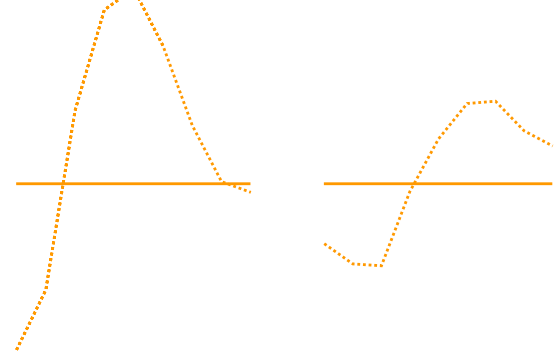
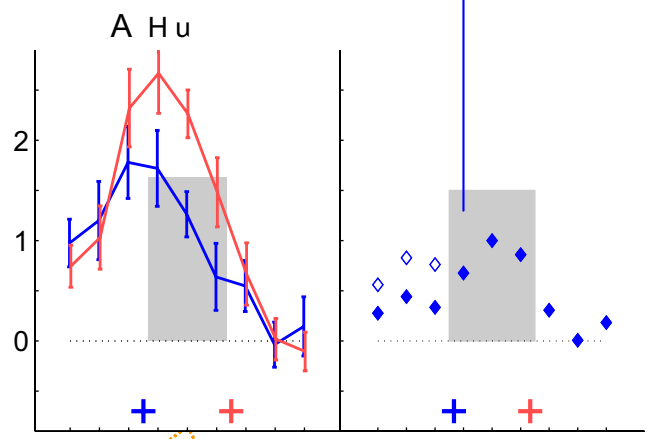
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