

## **Multimodal perception and action in biological motion**

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Most of the studies on biological motion perception are concerned with recognition issues and visual-only inputs. However, perceptual cues from several modalities and action related tasks are critical and common in everyday life situations. Here we present two research approaches, one on multimodal perception (visual and auditory) and the second on the role of observers' movement. In an audiovisual biological motion experiment, we found that sound strongly affects our final multimodal direction judgements. We used point-light-walkers with a strong bias in order to be perceived as walking towards the observer. We then combined these stimuli with congruent looming or receding auditory steps. In the audiovisual condition, we found that the bias was eliminated. In a time-to-passage (TTP) estimation experiment, a self-based TTP judgment between an external visual object and the observer was studied in static and walking conditions. Walking observers were more accurate and prompt to estimate time-to-passage when compared with static ones. In summary, both multimodal cues and action seems to play a relevant role in achieving accurate biological motion perception.