

Auditory spatial discrimination with visual vs. auditory attentional cueing

R. Šebeňa, B. Hrebeňárová, N. Kopčo

Abstract

A previous study found an enhancement of auditory spatial discrimination ability when the listener's gaze was directed towards the auditory stimulus (Maddox et al., 2014).

Here, we examined whether directing spatial auditory attention also affects this cross-modal enhancement when using realistic spatial simulation.

Listeners made a judgment about the relative positions of two click-trains following a visual or auditory cue, while fixating on a neutral location.

Results show that 1) subjects performed better when visual cue was used, and 2) auditory cue presented from incongruent location resulted in deteriorating performance.

These results suggest a complex interaction between attentional and eye-gaze control mechanisms in auditory spatial representation.

[Work supported by APVV-0452-12 and EU H2020-MSCA-RISE-2015 Grant No. 69122.]