Title

Movements and Visuospatial Working Memory: Examining the Role of Movementand Attention to Movement

Journal

Proceedings of the Annual Meeting of the Cognitive Science Society, 41(0)

Authors

Bhatia, Divya
Spataro, Pietro
Rossi-Arnaud, Clelia

Publication Date

2019

Peer reviewed

Movements and Visuospatial Working Memory: Examining the Role of Movement and Attention to Movement

divya bhatia
Sapienza University of Rome, Rome, Italy

Pietro Spataro
Universitas Mercatorum, Rome, Italy

Clelia Rossi-Arnaud
Sapienza University of Rome, Rome, Italy

Abstract

Previous studies have shown that, under specific conditions, pointed-to arrays can be recognized better than arrays that are only visually observed. In the present study we investigated whether this memory advantage is due to movement per se or to attention to the movement. In two experiments we modulated the amount of attention devoted to the execution of pointing movements by comparing the effects of passive and active pointing in a visuo-spatial working memory (VSWM) task. In Experiment 1, participants were instructed that their hands would be moved by the experimenter (passive pointing); in Experiment 2, participants performed active and passive pointing movements in random alternation. Results showed that passive movements benefitted VSWM only when they were alternated with active movements. This finding suggests that the key factor underlying the positive effect of pointing on VSWM is the increased attention devoted to them in the mixed pointing conditions of Experiment 2.