Review of: "The cost of attentional reorienting on conscious visual perception: an MEG study"

Stefano Lasaponara[1]

1 Sapienza University of Rome

Potential competing interests: The author(s) declared that no potential competing interests exist.

I have found this paper very interesting, methodologically well-conducted and the results are potentially interesting for scientists interested in the relationship between attention and awareness. In my opionion, the only limitation (which has been already reported by the authors) regards the between-subject experimental design adopted in the study. Nonetheless I am reporting below some useful suggestions.

Introduction

- "*However, when relevant events are presented at unattended or unexpected locations, a more ventral frontoparietal network in the right hemisphere*" - Please note that when Invalid"unexpected" targets are compared to Neutral targets, fMRI results pointed out to the activations of both Left and Right TPJ (see Doricchi et al., 2010; Silvetti et al., 2016; Dragone et al., 2015).

Results

I would rather change the structure of the results section by reporting first both behavioural results from Pred and NoPred experiments, successively the MEG comparisons for Valid > Invalid in both Pred and NoPred and finally, the interaction of Valid/Invalid for Seen and Unseen trials in the two different condition of cue predictiveness. Relatedly, I have noticed that there are no results reported for Valid/Seen/Unseen vs Invalid/Seen/Unseen targets in the NoPred condition. The authors reported that, in this condition, there were no significant effects for Valid > Invalid comparisons, but this is not excluding the possibility of the presence some differences as a function of targets awareness in such a condition. At the end of all sections, I would report the cross-experiments comparisons.

In all MEG results figures I would add some graphical indicator reporting when the cue and targets appeared.

Discussion

"*[…] Thus, the response of IFG-MFG to invalid cues was increased for predictive as compared to nonpredictive cues, because predictive cues induce strong focusing of endogenous attention on valid locations. Our results add to this knowledge by showing increased left-lateralized activation during attentional reorienting for nonpredictive over predictive invalid trials, further stressing the role of ventral frontal regions for template matching in stimulus-driven attention.*" - I am sorry but this part it is not clear to me. Doricchi et al., 2010 reported stronger activation of the IFG in response of Invalid

targets during the Pred condition. By contrast in the present paper, the opposite pattern has been found. The authors should better clarify how these two results could be combined.

Minor points:

- "*Using the spatial orienting task (Chica et al 2014, Posner 1980*") - I would rather invert these citations from the oldest ones to the most recent.