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Auditory White Noise Increases Visual Accuracy

Dear Editorial Team of Scientific Reports,

We hereby submit out recent work on the role of auditory white noise stimulation on the perception of visual stimuli for publication in Scientific Reports.

In the current manuscript, we summarize the results from two experiments on the crossmodal influence of auditory white noise stimulation on visual perception. In the first experiment, we combine a visual flanker task with auditory white noise, and we replicate previous findings on the beneficial influence on visual accuracy. In the second experiment, we extend this experimental logic to an established audiovisual illusion paradigm, and we find that auditory white noise again improves visual perception. These results are in line with recent proposals, which suggest that auditory white noise can increase arousal, which will improve perceptual accuracy.

We believe that the current results are of great interest to the vision research community, to scientists working on crossmodal influences, and to researchers studying the neural mechanisms underlying arousal and perception. All data and code to reproduce the analyses is available on GitHub (<https://github.com/juliankeil/SIFINoise>), and the manuscript is not under consideration elsewhere.

The following researchers might be suitable reviewers for the current manuscript:

Rebecca Hirst: hirstr@tcd.ie

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On behalf of the co-authors,



Julian Keil