EEG activity in response to disocclusion of objects appearing from seemingly empty spaces

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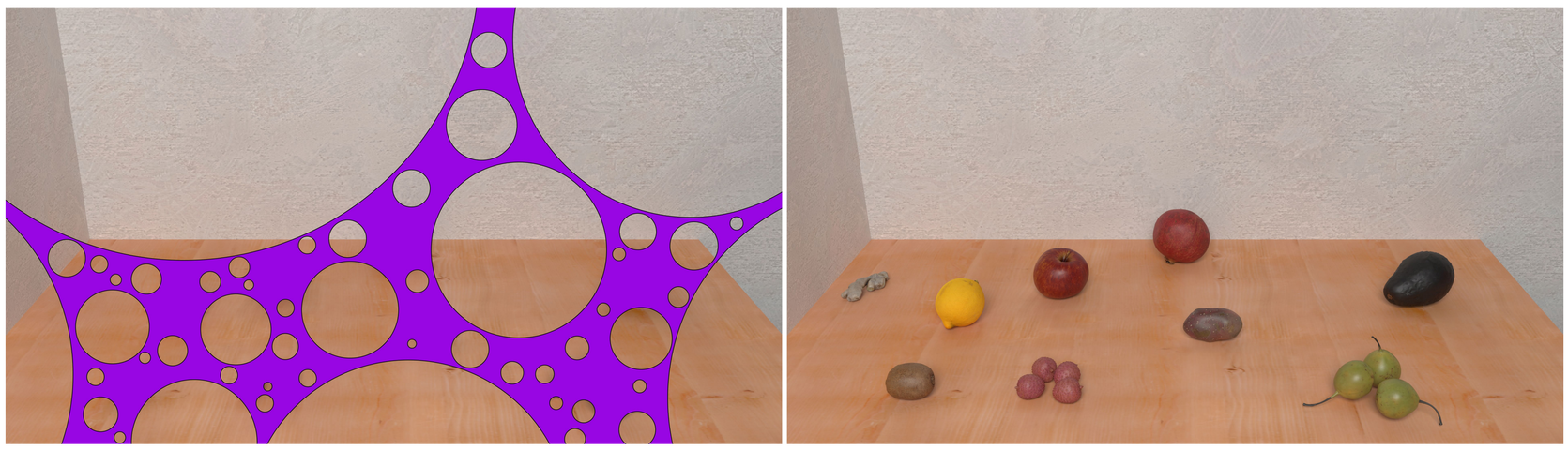
Illusion of absence

The space behind narrow occluders is perceived to be empty (illusion of absence).[1,2]

P3 ERP component associated with surprise.[3]

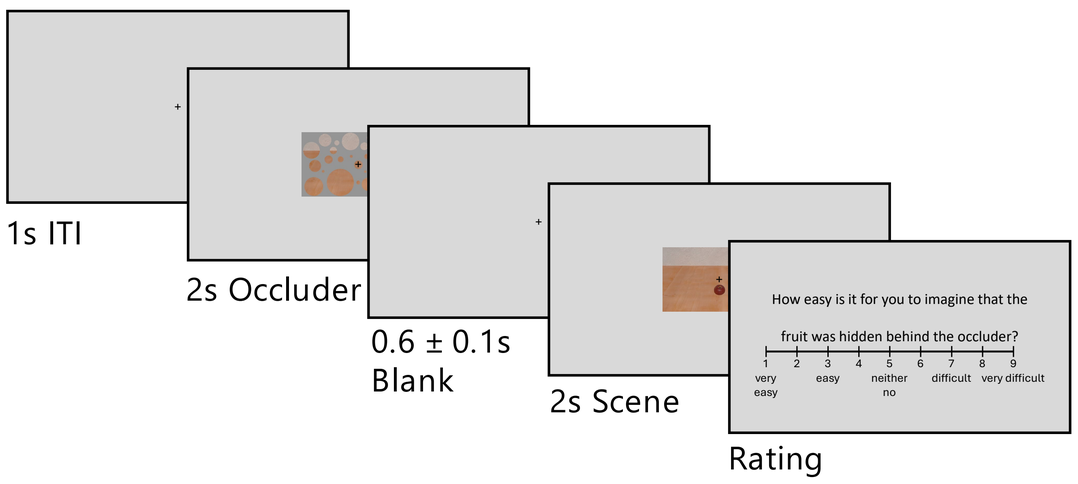
→ Revealing objects from behind narrow occluders should lead to a P3 in EEG.



Forster et al. (2025)

Methods

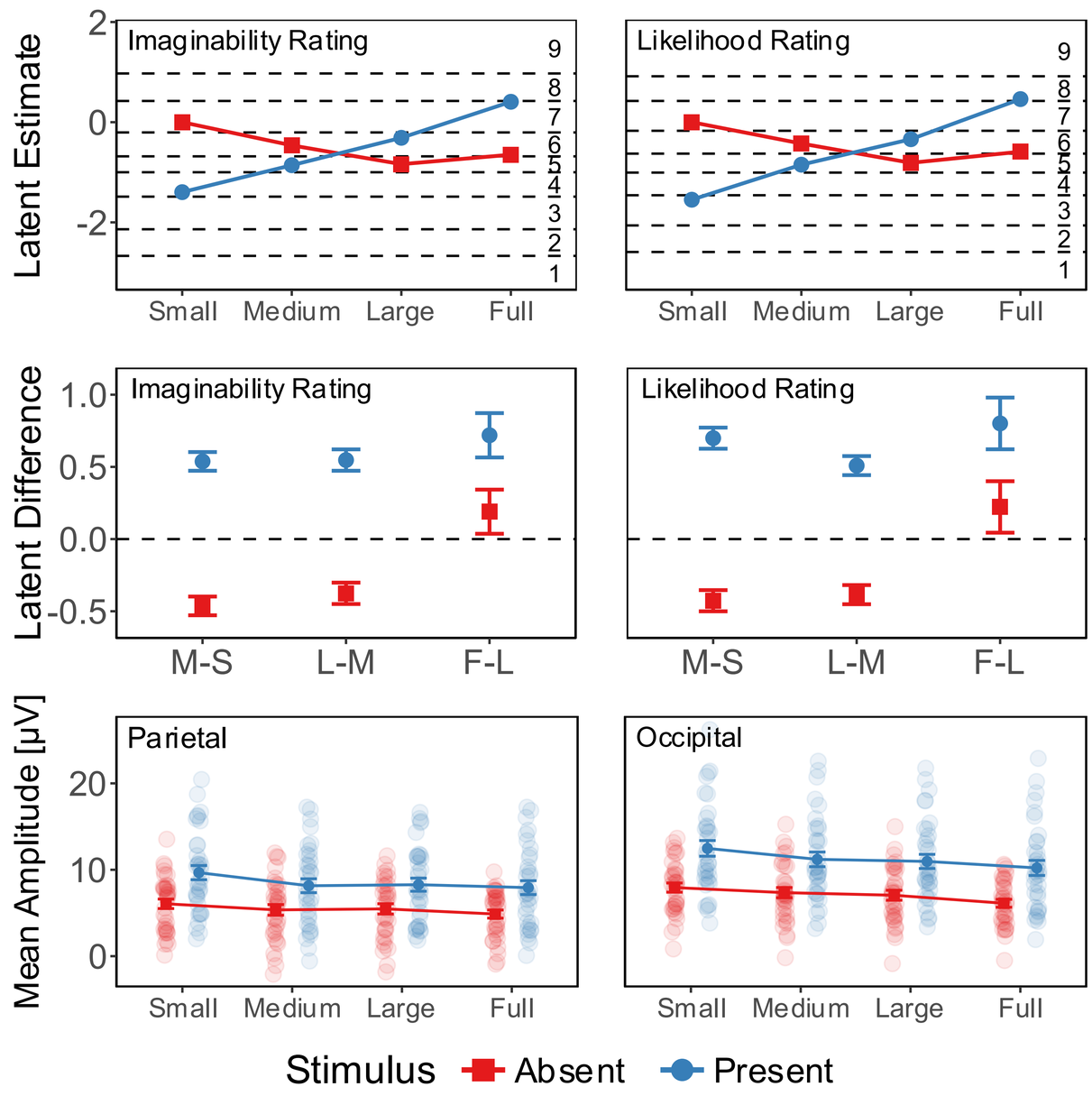
A fruit was hidden behind the occluder in 50% of the trials.



Imaginability rating: How easy is it for you to imagine that the fruit was hidden behind the occluder?

Likelihood rating: How likely do you think it is that the fruit was hidden behind the occluder?

Results



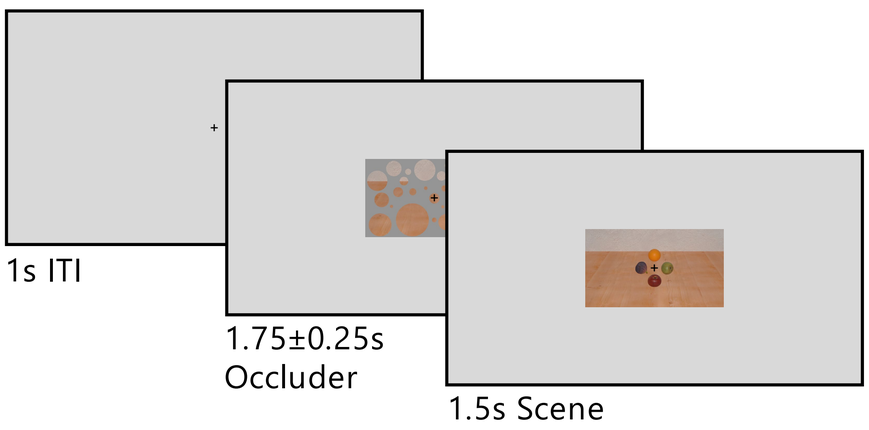
Discussion

Ratings show that the illusion of absence depends on the occluder size.[2,4]

Difference in mean amplitude between present and absent trials,[5] but no interaction with occluder size.

Duration of blank interval too long for temporal binding of occluder and scene events?[6]

→ Different task demands for rating and EEG responses?



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Acknowledgements
This work was supported by the Research Council of Norway, project number 334817.

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47th ECVP
24-28 August 2025
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