Supplementary Material

Inhibition of Eye Movements Disrupts Spatial Sequence Learning

Bayesian analyses

We conducted the corresponding Bayesian analysis for each individual best-fit GLMM model using the **brms** package (Bürkner, 2018). We used the default non-informative priors (for more information, see Bürkner, 2017, 2018). Each model was fitted using 4 chains, with 2,000 iterations per chain, where the first 1,000 iterations were always used to calibrate the sampler. The convergence of algorithms was confirmed by using the Rhat value (the chains have converged if Rhat is not considerably greater than 1; cf., Bürkner, 2017). In our analyses, all Rhat values were <= 1.01. Additionally, convergence of the chain was tested by examining the variance component plots, using the plot function. We report estimates with 95% credible intervals. Given the data, the Bayesian credible interval includes the true mean with .95 probability.

Anticipations

There was a main effect of block, *estimate* = .11, 95%CI [.001, .21], such that the number of anticipations increased in the learning block compared to interference. There was no effect of task, *estimate* = -.18, 95%CI [-.59, .24].

Correct anticipations

There was a significant interaction between block and task, *estimate* = -.38, 95% CI [-.71, -.07]. In the simple effects analysis, in the O-SRT group accuracy increased in the learning block compared to the interference block, *estimate* = .22, 95%CI [.003, .444]. There was no difference in the F-SRT group, *estimate* = -.16, 95%CI [-.394, .095].

References

Bürkner, P. C. (2017). brms: An R package for Bayesian multilevel models using Stan. *Journal of Statistical Software, 80*, 1-28.

Bürkner P. C. (2018). Advanced Bayesian multilevel modeling with the R package brms. *The R Journal*, *10*, 395-411.