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# Corrigendum: Rapid Eye Movements in Sleep Furnish a Unique Probe Into Consciousness

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**Keywords:** predictive coding, dream, rapid eye movements (REMs) in sleep, autism, visual perception, retrosplenial cortex, claustrum, thalamic reticular nucleus

## A Corrigendum on

### Rapid Eye Movements in Sleep Furnish a Unique Probe Into Consciousness

by Hong, C. C.-H., Fallon, J. H., Friston, K. J., and Harris, J. C. (2018). *Front. Psychol.* 9:2087. doi: 10.3389/fpsyg.2018.02087

In the original article, there was an error. Crucially, fMRI correlates of REMs timed with EOG (Wehrle et al., 2005; Miyauchi et al., 2009) are similar to those with video-timing and have been construed as empirical support for predictive coding (Hobson et al., 2014).

A correction has been made to the first paragraph of the Sub-section Video-Timing Findings Lend Support to Predictive Coding.

Crucially, fMRI correlates of REMs timed with EOG (Wehrle et al., 2005; Miyauchi et al., 2009) are similar to those with video-timing. However, it is our new findings in the video-timed study (Hong et al., 2009) that are construed as empirical support for predictive coding (Hobson et al., 2014).

The authors apologize for this error and state that this does not change the scientific conclusions of the article in any way. The original article has been updated.

## REFERENCES

- Hobson, J. A., Hong, C. C. H., and Friston, K. (2014). Virtual reality and consciousness inference in dreaming. *Front. Psychol.* 5:1133. doi: 10.3389/fpsyg.2014.01133
- Hong, C. C. H., Harris, J. C., Pearlson, G. D., Kim, J. S., Calhoun, V. D., Fallon, J. H., et al. (2009). fMRI evidence for multisensory recruitment associated with rapid eye movements during sleep. *Hum. Brain Mapp.* 30, 1705–1722. doi: 10.1002/hbm.20635
- Miyauchi, S., Misaki, M., Kan, S., Fukunaga, T., and Koike, T. (2009). Human brain activity time-locked to rapid eye movements during REM sleep. *Exp. Brain Res.* 192, 657–667. doi: 10.1007/s00221-008-1579-2
- Wehrle, R., Czisch, M., Kaufmann, C., Wetter, T. C., Holsboer, F., Auer, D. P., et al. (2005). Rapid eye movement-related brain activation in human sleep: a functional magnetic resonance imaging study. *Neuroreport* 16, 853–857. doi: 10.1097/00001756-200505310-00015

**Conflict of Interest Statement:** The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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