

Electrophysiological correlates of the incorporation of recent memory sources into REM and non-REM dreams and of levels of insight following REM and non-REM dream interpretation

ABSTRACT:

Background

There have been claims throughout history that the consideration of dreams can result in personal realizations and insight.

Aim

To assess insight resulting from discussing Rapid Eye Movement (REM) and non-REM stage 2 (N2) dreams collected in the sleep laboratory, with discussion of daydreams as a control, and electrophysiological correlates of insight.

Method

31 participants slept in the sleep laboratory and were awakened for REM and N2 dream reports, and cued for a daydream report. Participants discussed their dream and daydream reports with experimenters who had not been involved in collecting the dreams and daydreams, and scored the discussions for insight obtained.

Results

There were no insight differences between discussing REM and N2 dreams. Discussing dreams led to higher scores on the exploration-insight measure than did discussing daydreams. The differences were related to the learning of what the report means in terms of waking life issues.

Conclusions

Despite electrophysiological and functional differences between REM and N2 sleep, dreams from these stages did not differ in exploration-insight scores, but did exceed exploration-insight for the discussion of daydreams. Daydreams did not show the memory-consolidation related delayed incorporation of waking life events that has been found for REM dreams (van Rijn et al., 2016, 2018). A second main paper is under review, with preliminary results in Blagrove et al. (2016) of significant electrophysiological correlates of EEG theta and insight scores for N2 dreams, in addition to the between condition insight results. Dream insight might result from functional sleep processes, or from non-functional decreased control of cognition during dreams.

Keywords

Sleep, Insight, Dreams, REM sleep, EEG theta

Published Work:

Blagrove, M., van Rijn, E., Reid, A., Edwards, C., Malinowski, J., Bennett, P., McGee, S., Evans, K., Eichenlaub, J.-B., & Ruby, P. (2016). Insight gains from the dream group discussion of REM dream, N2 dream and pre-sleep daydream reports. *Journal of Sleep Research*, 25 (Suppl. 1), 245. doi: 10.1111/jsr.12446

van Rijn, E., Reid, A., Edwards, C., Malinowski, J., Ruby, P., Eichenlaub, J.-B., & Blagrove, M. (2016). The dream-lag effect: partial replication for REM sleep dreams that does not extend to daydreams. *Journal of Sleep Research*, 25(Suppl. 1), 151. doi: 10.1111/jsr.12446

van Rijn, E., Reid, A., Edwards, C., Malinowski, J., Ruby, P., Eichenlaub, J.-B., & Blagrove, M. (2017). Daydreams incorporate recent waking life concerns but do not show delayed ('dream-lag') incorporations. *Consciousness and Cognition*. doi: 10.1016/j.concog.2017.10.011

Researcher's Contacts:

Professor Mark Blagrove
Swansea University Sleep Laboratory
Department of Psychology
Swansea University
SA2 0LY
UK

Tel.: +44-1792-295586

Fax: +44-1792-295679

Email: m.t.blagrove@swansea.ac.uk