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Authors

Hernàndez-Gutiérrez, David
Sorrel, Dr Miguel A.
Shanks, David
et al.

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Is masked syntactic priming unconscious?

David Hernández-Gutiérrez
Basque Center on Cognition, Brain and Language (BCBL), San Sebastián, Spain

Dr Miguel A. Sorrel
Universidad Autónoma de Madrid, Madrid, Spain

David Shanks
University College London, London, United Kingdom

Dr Miguel A. Vadillo
Universidad Autónoma de Madrid, Madrid, Spain

Abstract

The automaticity of syntax has been a long-debated topic in psycholinguistics. One strategy to establish it involves finding significant evidence of syntactic priming in experimental tasks that restrict conscious awareness. Two common criteria to assess the unconscious nature of priming are that visibility (d') of masked words is not significantly different from zero, and that visibility is not positively correlated with the size of the priming effect. Unfortunately, these outcomes may also arise from low statistical power in visibility data and low reliability of dependent measures. We report results of a meta-analysis and a Bayesian re-analysis, which revealed low statistical power and evidence that "subliminal" words were actually visible for participants. Additionally, reliability analyses on Berkovitch and Dehaene's (2019) dataset showed that noisy measures may account for the lack of correlation between visibility and priming. These findings question the validity of previous results supporting the automatic nature of syntactic processing.

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