Title

Context-based Prediction Error Updating of Memory Representations is Modulated by Event Boundaries

Permalink

https://escholarship.org/uc/item/8qd564q7

Journal

Proceedings of the Annual Meeting of the Cognitive Science Society, 44(44)

Authors

Pradhan, Rujuta
Kumar, Devpriya

Publication Date

2022

Peer reviewed

Context-based Prediction Error Updating of Memory Representations is Modulated by Event Boundaries

Rujuta Pradhan
Indian Institute of Technology, Kanpur, Kanpur, Uttar Pradesh, India

Devpriya Kumar
Indian Institute of Technology Kanpur, Kanpur, Uttar Pradesh, India

Abstract

Event boundary advantage (EBA) refers to greater memorability of information at boundaries than for any other part of an event. Recent studies have identified post-encoding processes as a likely source of EBA. The current study investigated whether boundaries are distinctly remembered because they act as gateways for retrieval of associated event-elements by using a trace modification paradigm where memory for the last item of an encoded triplet (A-B-C) is suppressed by replacing it with a novel item on re-exposure (A-B-D). Two hierarchical Bayesian models tested whether the immediate associate, boundary item or only the category difference between old and new item of the triplet predicts suppression. Results indicate suppression is predicted by an interaction between memory of A and category, but successful updating is predicted by an interaction between memory of B and category. We discuss the implications of the result for understanding role of event boundaries in trace updating.