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Journal
Proceedings of the Annual Meeting of the Cognitive Science Society, 40(0)

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Publication Date
2018

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Determinants of Inhibitory Interference in Processing Reflexive-antecedent Dependencies

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Abstract

This study investigates the mechanism of memory retrieval in sentence processing, e.g. searching for an antecedent for the reflexive, e.g. himself or herself in English. Cue-based retrieval models (e.g. ACT-R, Lewis and Vasishth, 2005) predict that such process is delayed when there is a distractor matching the retrieval cues, such as gender and number. However, this inhibitory interference effect was not found in a recent Bayesian random-effects meta-analysis of 49 experiments (Jger et al., 2017).

In two self-paced reading experiments, we provide additional evidence of the inhibitory interference effect in processing antecedent-reflexive dependencies. Reflexives and the following spillover regions were read slower when the distractors gender matched the retrieval cue. The delay was more significant when the interference was retroactive, i.e. distractors were located between the reflexive and its antecedent. The distractors prominence, which is related to its syntactic position, was not found to be a determinant in this process.