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Stable Representations, Shifting Constraints: Reweighting Frequency and Concreteness in Lexical Access with Age

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Abstract

Across cognitive domains, a central question concerns whether behavioural change reflects reorganization of representational structure or altered dynamics controlling access to a stable system. We address this in highly proficient Basque–Spanish bilinguals—young and older adults—using a naming-by-definition task probing two lexical constraints: Frequency and Concreteness. Across ages and languages, both dimensions constrained retrieval, supporting a shared architecture across languages. Aging produced a global decline in accuracy without amplifying frequency effects, constraining accounts predicting selective vulnerability of weak representations. However, the concreteness advantage was larger in older adults, suggesting increased reliance on intrinsic representational support. Although age-related costs appeared for low-frequency abstract words, this reflected additive effects rather than higher-order interaction. Critically, the absence of a three-way interaction does not support structural reorganization and is more consistent with changes in access dynamics. Accordingly, within this population and task, aging is associated with a reweighting of constraints on access.