Title
Long-term effects of valence, concreteness, and arousal on lexical reproduction

Permalink
https://escholarship.org/uc/item/0901t2ht

Journal
Proceedings of the Annual Meeting of the Cognitive Science Society, 43(43)

ISSN
1069-7977

Author
Baumann, Andreas

Publication Date
2021

Peer reviewed
Long-term effects of valence, concreteness, and arousal on lexical reproduction

Andreas Baumann
University of Vienna, Vienna, Austria

Abstract

Emotional factors like valence, concreteness, and arousal have been shown to influence lexical processing, in that they exhibit non-neutrality, positivity, and negativity biases, respectively (e.g. Kuperman et al. 2014, J. Exp. Psych.; Pauligk et al. 2019, Scientific Reports). Since even weak cognitive biases can yield strong tendencies on a larger time scale, we investigate diachronic long-term effects of these factors on the reproductive success of English words. We operationalize reproductive success by means of diachronic growth, age-of-acquisition and prevalence of words. By combining emotional norms (Warriner et al. 2013, Beh. Res. Meth.; Kuperman et al. 2012, Beh. Res. Meth.) with historical language data (COHA; controlling for semantic shift), we show that long-term effects of valence and concreteness largely mimic cognitive short-term biases. However, arousal, quite surprisingly, exhibits a clearly positive effect on lexical reproduction. We attribute this reversed effect to (i) interactions among emotional factors and (ii) social effects.