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Vertical directionality ratings as lexical norms for English verbs

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Abstract

While lexical norm databases are being developed with a renewed emphasis on perceptual psycholinguistic features, verbs are often neglected. Research on nouns and adjectives utilizes vertical spatial localization ratings, providing an analogue for the inclusion of verbs via vertical directionality ratings. This study demonstrates the feasibility of collecting such ratings for 32 English verbs, as well as the possibility of assessing directionality ratings in other spatial dimensions. Further, ratings were analyzed using distributional semantic models. Results indicate that language statistics are strongly associated with human ratings, providing convergent validity for vertical directionality as a useful psycholinguistic measure. Additionally, a comparison of the predictive performance of LSA and Web 1T 5-gram models on human ratings revealed that the first-order 5-gram model accounted for significant unique variance in the norms, while LSA did not. It may be concluded that spatial verb associations are encoded linguistically by proximal, syntactic dependencies.