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The space of words: on the sensorimotor processing of variable affordances in noun-adjective combinations

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Abstract

Evidence suggests that the processing of graspable object nouns elicits specific motor programs related to potential hand-object interactions. Notably, adjectives specifying manipulative features of these objects are integrated into this sensorimotor representation. The present experiment investigated the effect of adjectives denoting the position of the object in space on the sensorimotor representation of graspable object nouns. We used a reach-to-grasp compatibility task, in which participants had to categorize object nouns as artifact or natural, by performing either a power or precision grip matching or not the typical grip associated with the object. On each trial, the object noun was presented with a near or far adjective. While reliable grasp-compatibility effects emerged for object nouns on RTs, this was not modulated by the spatial position denoted by the adjective. Spatial adjectives appear not to be integrated into the noun sensorimotor representation, supporting the distinction between stable and variable affordances.