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Visual perception of vertical movements in word learning

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Abstract

People understand abstract ideas (e.g., positive/negative valence) through concrete concepts (e.g., up/down; Lakoff & Johnson, 2013). Empirical research has shown that upward/downward motor actions stimulate positive/negative feelings and memories (Casasanto & Dijkstra, 2010), and congruent motor actions facilitate word learning (Casasanto & de Bruin, 2019). Although prior studies reveal a close link between language and perceptual experiences, no study has tested whether the visual perception of upward/downward movements enhances the learning of words whose meaning involves either higher/lower spatial position (e.g., cloud, road), positive/negative emotional valence (e.g., joy, grief), or higher/lower social status (e.g., doctor, unemployed). The effects of directional congruency in word learning are discussed based on the results of an experiment in which Japanese speakers learned 54 English-based pseudowords presented with automatic visual movements that were congruent (e.g., upward-positive) or incongruent (e.g., downward-positive) with the pseudowords' assigned meaning, or controls (e.g., rightward/leftward-positive).