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Linguistic distributional information about object labels affects ultrarapid object categorization

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Abstract

When given unrestricted time to process an image, people are faster and more accurate at making categorical decisions about a depicted object (e.g., Labrador) if it is close in sensorimotor and linguistic distributional experience to its target category concept (e.g., dog). In this preregistered study, we examined whether sensorimotor and linguistic distributional information affect object categorisation differently as a function of time available for perceptual processing. Using an ultrarapid categorisation paradigm with backwards masking, we systematically varied onset timing (SOA) of a post-stimulus mask (17-133ms) following a briefly displayed (17ms) object. Preliminary results suggest that linguistic distributional distance between concept and category (e.g., Labrador → dog), but not sensorimotor distance, affects categorisation accuracy and RT even in rapid categorisation, and that these effects do not vary systematically by SOA. These findings support the role of a linguistic shortcut (i.e., using linguistic distributional instead of sensorimotor information) in rapid object categorisation.