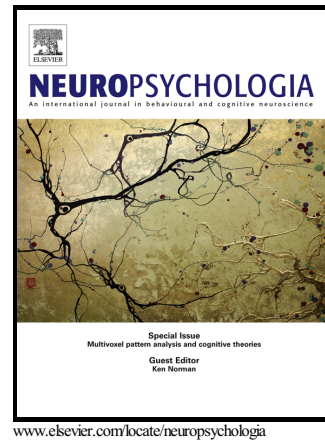


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Hemispheric lateralization of semantic feature distinctiveness

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Abstract

Recent models of semantic memory propose that the semantic representation of concepts is based, in part, on a network of features. In this view, a feature that is distinctive for an object (a zebra has stripes) is processed differently from a feature that is shared across many objects (a zebra has four legs). The goal of this paper is to determine whether there are hemispheric differences in such processing. In a feature verification task, participants responded yes or no following concepts which were presented to a single visual field (left or right) paired with a shared or distinctive feature. Both hemispheres showed faster reaction times to shared features than to distinctive features, although right hemisphere responses were significantly slower overall and particularly in the processing of distinctive features. These findings support models of semantic processing in which the dominant left hemisphere more efficiently performs highly discriminating fine encoding, in contrast to the right hemisphere which performs less discriminating coarse encoding.

Keywords: semantic memory, lateralization, categorization, visual half-field

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