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Universals and variation in spatial language and cognition: Evidence from Chichewa

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Abstract: The relation of spatial language and spatial cognition is central to the debate over language and thought. Recent findings move this debate beyond the standard opposition between universalist and relativist (Whorfian) stances. Two such studies suggest that spatial language (Khetarpal et al., 2009) and the spatial cognition underlying it (Khetarpal et al., 2010) both reflect universal tendencies of spatial cognition modulated by linguistic convention. These studies gauged non-linguistic spatial cognition through English- and Dutch-speakers' pile-sorting of spatial scenes by similarity. Since English and Dutch are closely related, we tested the generality of these findings with pile-sorting from speakers of Chichewa, a Bantu language of East Africa. We found that (1) the spatial systems of 9 unrelated languages near-optimally partition a similarity space derived from Chichewa sorting, and (2) this sorting reflects the semantic system of Chichewa itself, suggesting that Chichewa speakers' sorting combines universal and language-specific aspects of spatial cognition.