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Authors

Carey, Ian

Kirvin-Quamme, Andrew

Newcombe, Nora

et al.

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Spatial categories in language and thought: Evidence for categorical perception at the cardinal axes

Ian Carey

Colorado College, Colorado Springs, Colorado, United States

Andrew Kirvin-Quamme

Colorado College, Colorado Springs, Colorado, United States

Nora Newcombe

Temple U, Philadelphia, Pennsylvania, United States

Kevin Holmes

Colorado College, Colorado Springs, Colorado, United States

Abstract

The relationship between linguistic and nonlinguistic spatial categories has been characterized in terms of two contrasting positions. One position suggests, naturally enough, a close correspondence between the two sets of categories. A second position suggests a dissociation, in which the boundaries between nonlinguistic categories function as the prototypes for linguistic categories. The latter account predicts categorical perception (CP)enhanced discrimination at category boundaries at the horizontal and vertical axes, yet this prediction has not been tested directly. We tested it in three experiments. In perceptual and memory tasks, cross-axis locations were discriminated better than within-axis locations at both axes, indicating CP. These results suggest that the axes indeed serve as nonlinguistic category boundaries, consistent with the dissociation account. However, findings from a supplemental naming task revealed that these boundaries are also marked linguistically, implying some correspondence between linguistic and nonlinguistic spatial categories and a potential reconciliation of the competing accounts.