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The asymmetry between descriptions of vertical and horizontal spatial relations

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Abstract

Language guides how we conceptualize the level of detail in categorical spatial relations (Bowerman, 1996; Choi, 2006). This study examined whether details in different dimensions (i.e., distance and direction) given in spatial descriptions vary as a function of spatial categories. We asked Turkish speaking participants (N=40) to describe the spatial relation between two geometric objects aligned either on the horizontal or the vertical axis. There were three relations (on/above, under/below, next to/near) of which the direction (left, right) and the distance (adjacent, 5 mm, 10 mm, 15 mm) varied equally. More detailed descriptions in terms of direction and distance were provided for 'next to/near' compared to 'on/above' and 'under/below' relations. These results suggest an asymmetry between vertical and horizontal axes. Sensitivity for detailed descriptions along the horizontal axis may relate to language-specific spatial categorization.