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Spatial language and visual attention: A new approach to test linguistic relativity.

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Abstract

It is debated how far-reaching effects of language on cognition are - if they exist at all. Using a visual search paradigm, we tested whether native Korean and German speakers are differentially sensitive to visual 3D-object composites that only the Korean, but not the German (nor the English), language semantically distinguishes as tight- versus loose-fit. We instructed our participants to search for a colour-defined target composite among distractors. However, targets were also implicitly signalled by their tight- or loose-fit composites. Only Korean speakers picked up on this implicit target-defining characteristic, reflected in attention capture by target-similar composites. As these concepts are not grammaticalised in the German language, our results demonstrate that language can determine which visual features capture attention. Our research introduces a novel approach because processing of the linguistically discriminated visual characteristics was neither instructed nor necessary for the task, demonstrating a case of linguistic relativity of cognition.