

Investigating Mental Simulation and Mental Imagery Using Sentence-Picture Verification

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Abstract

This study hypothesized an underlying similarity between mental simulation, the automatic activation of multimodal features during language processing, and mental imagery, the voluntary effortful process of deliberate imagination. The mechanisms involved in both processes are underspecified and may be shared. To test this, participants performed a sentence-picture verification task with two blocks. In both blocks, participants read a sentence that implied the visual features of an item, then saw a (mis)matched picture of the item and were asked to verify if the item in the sentence appeared in the image. In one block, participants performed the same task but were instructed to form a mental image corresponding to the sentence. Predicted common patterns of results between these conditions will indicate similar processing with differences in time courses suggesting similar mechanisms. Distinct patterns will suggest these processes are entirely different. Results and implications for language processing will be discussed.