



EFFECTS OF WORKING MEMORY ON PERCEPTION OF SPACE AND TIME

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ABSTRACT

Space and time are intimately connected in the mind. This connection certainly permeates our language: “yesterday is behind us”; “a minute is longer than a second.” But the relationship also exists in how we perceive the world around us. Research shows that the mind’s perception of magnitude in one dimension can influence the other, but the mechanisms behind these interactions are not well understood. In this study, we investigated this relationship between space and time perception by replicating a unique visuospatial experiment to decouple the encoding stage of a line length and duration reproduction task from the memory representation stage. Additionally, we added a task to measure working memory capacity to further illuminate the nuances of this interference and its causes. Preliminary data show a successful replication of space-time interference, and some moderating effects of working memory capacity on space and time perception. These results help support a sparsely tested theory of cross-dimensional interference being influenced by memory.