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Do left-right and back-front mental timelines activate simultaneously?

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Abstract

We asked whether it is possible to simultaneously activate two timelines in the human mind. We hypothesized that the lateral (left-right) and sagittal (back-front) spatial dimensions can be coactivated and expected the congruent space-time mappings of each dimension (back-past front-future and left-past right-future), but not the non-coherent ones, to prime each other. Participants were asked to keep in mind the two spatial dimensions as discrete entities. Spanish speakers categorized the temporal reference of sentences by pressing a sagittal directional key with their left or right hand. Results suggest that (i) full congruence facilitates the spatial representation of time the most, (ii) full incongruence interferes the most with the spatial representation of time, and (iii) the two partial forms of congruence produce similar interference effects between the two spatial dimensions and time. The results were interpreted according to the Coherent Working Models approach.