

Space and time in the child's mind: Further evidence for a cross-dimensional asymmetry

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Abstract: Space and time appear to be related asymmetrically in the child's mind: temporal representations depend on spatial representations more than vice versa, as predicted by space-time metaphors in language. In a study supporting this conclusion, spatial information interfered with children's temporal judgments more than vice versa (Casasanto, Fotakopoulou, & Boroditsky, 2010, *Cognitive Science*). In this earlier study, however, spatial information was available to participants for more time than temporal information was (as is often the case when people observe natural events), suggesting a skeptical explanation for the observed effect.

Here we conducted a stronger test of the hypothesized space-time asymmetry, controlling spatial and temporal aspects of the stimuli even more stringently than they are generally 'controlled' in the natural world. Results replicated Casasanto and colleagues', validating their finding of a robust representational asymmetry between space and time, and extending it to children (4-10 y.o.) who speak Dutch and Brazilian Portuguese.