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English speakers gesture laterally for time regardless of the input modality

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Abstract

Spontaneous gestures suggest that English speakers tend to conceptualize time on the lateral (left-right) axis, even though they use sagittal (front-back) space-time metaphors in language. Here we tested a skeptical explanation for this counterintuitive finding: Perhaps participants in previous gesture studies were biased to spatialize time laterally because the stimuli were presented in left-to-right text? We randomly assigned English speakers to read stories about the past and future, or to listen to the same stories, and then to retell the stories to their partners. Regardless of the presentation modality, participants made systematic use of the lateral axis but not the sagittal axis, contrary to predictions based on linguistic metaphors. English speakers preferential use of the lateral axis for time cannot be explained by exposure to written text in the experimental setting, but may result from long-term exposure to English orthography, among other cultural artifacts and practices that spatialize time laterally.