

**The Hands of Time:
What Gestures Reveal about Space-Time Mappings**

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People talk about time using spatial metaphors. Do they think about time the same way they talk about it? The answer appears to be: sometimes. Spontaneous hand gestures reveal spatial conceptualizations of time that cannot be inferred from language. English speakers typically gesture *leftward* when talking about earlier events – not backward. Arabic speakers typically gesture *forward* when talking about the past, despite using English-like spoken metaphors that locate the future in front. These space-time mappings are not found in the gesturers' verbal metaphors, nor are they evident in their everyday experiences with space and time in the natural world. Rather than arising from universal patterns of body-world interaction, these mental metaphors for time appear to be grounded in people's interactions with culture-specific material artifacts (in some cases), and in culture-specific attitudes about the past and future (in other cases). These findings illuminate the experiential origins of our temporal thinking, and highlight the importance of a multidisciplinary approach to the study of space and time in language and mind.