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Proceedings of the Annual Meeting of the Cognitive Science Society

Title

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Journal

Proceedings of the Annual Meeting of the Cognitive Science Society, 48(0)

Authors

Kisa, Yagmur Deniz

Stengelin, Roman

Maurits, Luke

et al.

Publication Date

2026

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Peer reviewed

Cognitive Change Without Linguistic Change: The Rise of Egocentric Frames of Reference in the Hai||om

Yağmur Deniz Kısa

Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany

Roman Stengelin

Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany

Luke Maurits

Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany

Daniel Haun

Max Planck Institute for Evolutionary Anthropology, Leipzig, Saxony, Germany

Abstract

Human cultures differ in how they think about space: some primarily use egocentric frames of reference (FoR), thinking about space in relation to the body, while others privilege geocentric FoR, thinking about space in relation to the environment. The origins of this cognitive diversity remain largely unknown. Here, we provide evidence suggesting an ongoing shift in spatial thinking—but not language—within a culture, offering insight into these origins. Hai||om people, a rural forager community in Namibia, have traditionally preferred geocentric FoR in cognition and language. Comparing new to historical data from the same community, we found that contemporary Hai||om show a greater preference for egocentric FoR, suggesting an egocentric shift in their cognition. Strikingly, we document no such shift in their language, suggesting language alone cannot account for cognitive diversity in spatial frames. We propose material culture, rather than language, as a key driver of diversity in spatial thought.