

# THE LANGUAGE CIRCLE

MPI FOR HUMAN COGNITIVE AND BRAIN SCIENCES, STEPHANSTRASSE 1A, LEIPZIG

25.09.2024, 15:00 CEST

Zoom: <https://zoom.us/j/94686183586>

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## Squeezing Language through the Bottleneck: From *Milliseconds* to *Millennia*

Language happens in the here-and-now. During normal linguistic interaction, we are faced with an immense challenge by the combined effects of rapid input, short retention of sensory information, and severely limited sequence memory. How, then, can the brain successfully handle the continual deluge of linguistic input? I argue that, to deal with this *Now-or-Never bottleneck*, the brain must incrementally chunk and integrate the linguistic input as rapidly as possible before it is gone. This perspective has profound implications for the nature of language processing, acquisition, and evolution. To illustrate, I present results from a lab-based cultural evolution experiment, computational modeling, and psycholinguistic experimentation. Together, these studies suggest that cultural evolution, as constrained by basic chunk-based learning and processing mechanisms, has promoted the emergence of linguistic structure that helps alleviate the challenge posed by the Now-or-Never bottleneck.



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