

The time course of speech interpretation

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Abstract

Language is a system that combines discrete units into hierarchical structures from which meaning is derived. Yet speech, its most common physical instantiation, is a temporally-extending signal that provides continuously variable and ambiguous data. The interface between the gradient, continuous, properties of speech and the categorical and combinatorial structure of language is a topic of inquiry with far-reaching implications to our understanding of language processing and of cognition more generally. Work undertaken in my lab on the time course of speech comprehension is shedding light on this process. In particular, while very brief portion of speech can give rise to anticipating upcoming words or phrases, there is growing evidence that phonetic, semantic, and combinatorial properties of current information can modulate categorization of prior speech units. This finding suggests a temporal window over which the attribution of portions of the physical signal to elements of meaning remains flexible. Importantly, our work has also revealed limits to such flexibility.