

WEDNESDAY, March 25th, 2020, 2pm ET
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Beyond the Language Given: Language Processing from an Embrained Perspective

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The infrastructure of the human brain allows us to acquire a language without formal instruction in the first years of life. I will discuss the features that make our brain language-ready. Next to the neuro-architectural features I will discuss the functional aspects of language processing. A central and influential idea among researchers of language is that our language faculty is organized according to Fregean compositionality, which implies that the meaning of an utterances is a function of the meaning of its parts and of the syntactic rules by which these parts are combined. fMRI results and results from recordings of event related brain potentials will be presented that are inconsistent with this classical model of language interpretation. Our data support a model in which knowledge about the context and the world, knowledge about concomitant information from other modalities, and knowledge about the speaker are brought to bear immediately, by the same fast-acting brain system that combines the meanings of individual words into a message-level representation. The Memory, Unification and Control (MUC) model of language accounts for these data. Resting state connectivity data, and data from a large MEG study (N=204 participants) will be discussed, specifying the contributions of temporal and inferior frontal cortex. I will also discuss fMRI results that indicate the insufficiency of the Mirror Neuron Hypothesis to explain language understanding. Instead, understanding the message that the speaker wants to convey requires the contribution of the Theory of Mind network. I will sketch a picture of language processing from an embrained perspective. Overall, I will argue that a multiple network perspective is needed to account for the neurobiological underpinning of language to its full extent. Finally I will illustrate why it is hard to give a good presentation.

This lecture will be delivered online, but broadcast live to the University of South Carolina:
Room #140, Discovery I, 915 Greene Street, Columbia, SC 29208
The viewing event will be catered!

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