Seminar

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Language as Co-evolved with the Brain: The Evolution of Pragmatics Beyond Dendrophilia

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SCAS, Linneanum, Thunbergsvägen 2, Uppsala
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ABOUT JULIA UDDÉN

Julia Uddén holds a BA in Mathematics from Stockholm University and a Ph.D. in Cognitive Neuroscience from Karolinska Institutet, Stockholm. She has been a researcher at the Max Planck Institute for Psycholinguistics and the Donders Centre for Cognitive Neuroimaging in Nijmegen. Uddén has published many articles in internationally renowned peer-reviewed journals such as 'A rostro-caudal gradient of structured sequence processing in the left inferior frontal gyrus', *Philosophical Transactions of the Royal Society B: Biological Sciences*. Other publications have appeared in *Cognition, Cognitive Science, NeuroImage* and *Brain & Language*. The topics include the neural processing of language structure, sequence processing in the brain, the neural basis of sentence processing as well as genetic influences on the structure of the brain. She is an expert in psycho- and neurolinguistics, with a focus on syntax and neuroimaging methods, and serves on the Neuroscience editorial board of *Scientific Reports*. Since starting her research group at Stockholm University in spring 2017, Uddén has received many grants and also the L'Oréal–Unesco For Women in Science Award 2017, selected by the Young Academy of Sweden.

At SCAS, Uddén will start work on a new empirical research approach to the neural development of pragmatics, establishing a novel approach to tackle theoretical questions on the evolution of language and communication.

ABSTRACT

Psycho- and neurolinguistics have so far largely been focused on *coded meaning*, i.e. meaning that is built from word meanings and the grammar of a language. However, information is not always directly coded in speech. Rather, the *speaker meaning*, what the speaker intends to communicate, depends on coded meaning and meaning derived from the context. The insight of the importance of the communicative context for effective language use is a core part of the linguistic study of *pragmatics*. Linguistics universals have been difficult to establish at the level of coded meaning. At the same time, there are recent findings of pragmatic universals. More specifically, it turns out that the same rules for repairing misunderstandings in dialogue are seen in cultures all over the world. This suggests that pragmatics might have had a central role in the emergence of human communication. I will contrast the recent evolutionary accounts focusing on pragmatics against the suggestion that human "dendrophilia" (the love of trees or, in other words, *hierarchical structure*) is key to understand language evolution. We have already understood a good part of the neural processes corresponding to human dendrophilia and the extent to which these neural structures are uniquely human. When the same knowledge is available for the neural processes underlying pragmatics, we will be much closer to finishing the puzzle on how human language evolved and what made us uniquely human. I will present an early theoretical account of how I think we could divide human communicative competence into four different subprocesses that are needed in dialogue. I will present a experimental plan for testing this theory, using an experimental battery we are currently evolving, also to study individual communicative ability as well as pragmatic development. I will argue that ultimately, debates on language evolution will be solved by empirical studies that are now tractable, with crucial contributions from psycholinguistics, neuroscience and genetics.