universität wien

Faculty of Psychology

Colloquium lecture by Dr. Elisabeth V.C. Friedrich, PD

Electrophysical Signatures of Social Cognition

I would like to present two projects in the field of social cognition.

First, I will present findings from an experiment that recorded EEG from individuals with varying levels of autistic traits, alongside an experiment using transcranial magnetic stimulation (TMS). The results suggest that the dorso-medial prefrontal cortex is a hub for communication within a network crucial for both mentalizing and working memory. Individuals with low autistic traits use slow, rhythmic brain activity to tune communication in this network, while those with high autistic traits struggle to fine-tune this mechanism. This inefficiency in regulating brain activity may explain the broad cognitive and social deficits in Autism Spectrum Disorder.

Second, we explored the neural basis of a social illusion using EEG. Participants observed a light-point agent making communicative or individual gestures, followed by either a masked agent or random noise. When the initial communicative gesture activated the sensorimotor cortex, participants often "saw" a second agent, even when absent. This effect vanished when TMS was applied to inhibit the left premotor cortex. We are now extending this design to participants with schizophrenia. These findings suggest that our brains actively anticipate others' behavior, offering insights into social interaction difficulties and perceptual illusions in mental illnesses.

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This lecture takes place at Liebiggasse 5, 1010 Vienna, Lecture Hall G 2nd floor and will be streamed.
Thursday, November 21, 2024; 3pm