

Predictive processing in perception and action



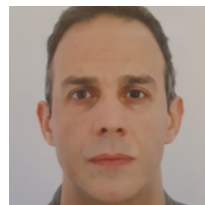
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The Markov model as a narrative for the predictive memory representations of event sequences: Events not conforming to a regularity inherent to a sequence of events may elicit prediction error signals of the brain and impair behavioural task performance. Events conforming to a regularity may result in attenuated brain activity and behavioural benefits. A mathematical model that is widely used to describe, analyze and generate event sequences are Markov chains: They contain a set of possible events and a set of probabilities for transitions between these events (transition matrix), which enable to predict the next event on the basis of the current event and the transition probabilities.

Perceiving voices through predictions and errors: from neural mechanisms to clinical implications: How do we ensure adaptive and veridical perception in a continuously changing and often ambiguous sensory environment? The capacity to predict what should happen next and to minimize any mismatch between expected and actual sensory input is a central aspect of perception, including the perception of voices. Alterations in predictive processes, such as aberrant encoding of prediction errors, have been proposed to account for auditory verbal hallucinations, which exist on a continuum with normal experience. I will present behavioral and EEG studies that illustrate how alterations in the dynamic neurocognitive operations that take place when we predict, detect, and react to unexpected changes in voice stimuli may underlie phantom voice perception

An investigation of the influence of action and prediction on perceptual experience



Hosted by: **Iria San Miguel**

January 18th
Thursday at 16:30h



Faculty of Psychology
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