The Lateral Prefrontal Cortex and Selection/Inhibition in ADHD.

Ronel Z.


Abstract

A previous paper from our lab (Shalom, 2009) presented evidence that the medial part of the prefrontal cortex is involved in the integration of raw, unintegrated information into coherent, wholistic mental representations such as perceptual objects, episodic memories, emotional states, and motor actions. It has used this analysis to classify some challenges encountered by people with Autism Spectrum Disorders, linking different types of difficulties in integration with different subareas of the medial prefrontal cortex. The current paper performs a similar analysis for the corresponding subareas of the lateral prefrontal cortex. It presents evidence that the lateral part of the prefrontal cortex is involved in the selection/inhibition of perceptual, memory, emotion, and motor aspects of processing. It then uses this analysis to classify challenges encountered by people with ADHD, linking different types of difficulties in selection/inhibition to different subareas of the lateral prefrontal cortex.