

MTEI SEMINARS

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Attention control capabilities and decision making performance: An fMRI study of ambidexterity in experienced decision-makers

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This paper studies the cognitive processes that enable expert decision-makers to switch between exploitation and exploration. We use functional magnetic resonance imaging (fMRI) in a sample of expert decision-makers to provide two main contributions. First, we identify and contrast the specific brain regions and cognitive processes associated with exploitation and exploration decisions. Exploitation activates regions associated with reward seeking, which track and evaluate the value of current choices, while exploration relies on regions associated with attentional control, tracking the value of alternative choices. Second, we propose and test the idea that stronger activation of the brain systems related to attentional control allows some individuals to make timely transitions from exploitation to exploration, and achieve better performance as a result.

When:
01 October 2012, 12h-13h30

Where:
EPFL, Odyssea 4.03, VIP room