

1. Record Nr.	TD17009929
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Titolo	The Role of Ventromedial Prefrontal Cortex in Mental Time Travel and Mind Wandering [Tesi di dottorato]
Lingua di pubblicazione	Non definito
Formato	Tesi di dottorato
Livello bibliografico	Monografia
Note	In relazione con http://amsdottorato.unibo.it/7623/
Sommario	<p>Recent research showed that a network of brain regions known as the Default Mode Network (DMN), including the ventromedial prefrontal cortex (vmPFC), is active when individuals remember the past, imagine the future, take the perspective of others, as well as during spontaneous cognition (mind wandering). The goal of this dissertation is to investigate whether the vmPFC plays a crucial role during DMN-related cognitive processes, such as MTT and mind wandering. Experiment 1 revealed that a damage to the vmPFC provokes the disruption of past and future MTT and a decreased ability to imagine future other-related episodes. vmPFC role extends to imagining events that are not self-relevant indicating that vmPFC is crucial for the imagination of complex experiences alternative to the current reality. In experiment 2, findings showed that a lesion to vmPFC disrupts the ability to construct complex atemporal scenarios. However, unlike the control groups, vmPFC patients had more difficulties in imagining future compared to fictitious experiences, suggesting that vmPFC is more critical for the simulation of future episodes. Experiment 3 revealed that these results are not explained by the disruption of non-episodic capabilities, such as narrative and working memory abilities. Furthermore, experiment 4 explored the effect of a lesion to vmPFC on the occurrence of mind wandering. A damage to the vmPFC provokes a decreased propensity to mind-wander, showing that vmPFC supports spontaneous cognition.</p>

Experiment 5 confirmed the involvement of the medial prefrontal cortex (mPFC) in supporting mind wandering. Using the transcranial direct current stimulation to inhibit the mPFC we could decrease the intensity of mind wandering in males. Together, these results point out the fundamental role of vmPFC in allowing human beings to escape the here and now, whether it occurs deliberately or spontaneously.

Localizzazioni e accesso

http://memoria.depositolegale.it/*/http://amsdottorato.unibo.it/7623/1/Bertossi_Elena_Tesi.pdf
