



École Pratique
des Hautes Études

PSL



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Research themes

- ❶ Autobiographical memory, future thinking
- ❷ Older adults, dementia
- ❸ Neuroimaging, fMRI

Key words

Memory, Aging, Dementia, Neuroimaging

Research

❶ Autobiographical memory

My research is focused on identifying the role of the medial temporal lobe, specifically the hippocampus, in the recollection of episodic autobiographical memories, especially those encoded in the far past, in order to test the memory consolidation theories (Viard et al., 2007, 2010, 2013, 2021).

❷ Future thinking

Another facet of episodic memory is the ability to project ourselves into the future, in order to plan and pre-experience future projects. I am interested in understanding similarities and differences between past and future mental time travel (Viard et al., 2011, 2012, 2014).

❸ Methods and participants

My work is based on neuroimaging studies (structural MRI, resting state functional MRI, task-based functional MRI) and neuropsychological data from neurodegenerative patients (semantic dementia: Viard et al., 2014, 2013; Alzheimer's disease: Platel et al., 2021, Duclos et al., 2017, Béjanin et al., 2012), amnesic syndromes (developmental amnesia, autoimmune encephalitis) and psychiatric populations (PTSD: Viard et al., 2019, Postel et al., 2019, Dégeilh et al., 2017; OCD: Viard et al., 2005).

Experience

- **2008-Present:** Associate professor at the Ecole Pratique des Hautes Etudes (EPHE), affiliated to UMR_S U1077 INSERM-EPHE-UNICAEN (Caen, FR).
- **2006-2008:** Postdoctoral research fellow at the Institute of Cognitive Neuroscience, University College London (UCL) with Pr N. Burgess (London, UK).
- **2005-2006:** Assistant professor at the University of Franche-Comté (Besançon, FR).
- **2002-2005:** PhD student in Neuroscience, INSERM E0218 with Pr F. Eustache (Caen, FR).

Diplomas

- **2005:** Doctor in Neuroscience (University Pierre and Marie Curie, Paris, FR).
- **2001:** M.Sc Neuroscience (University Pierre and Marie Curie, Paris, FR).
- **1999:** B.Sc Cell Biology and Physiology (University Denis Diderot, Paris, FR).

Grants and awards

- **2022-2023:** PHC Ulysses Franco-Irish funding (PIs: R. Roche, A. Viard)
- **2021-2024:** French regional research council, Functional neuroanatomy of Borderline personality and PTSD (PI: B. Guillery).
- **2019-2020:** PHC Ulysses Franco-Irish funding (PIs: R. Roche, A. Viard)
- **2011-2013:** French biomedical research council, Stress and emotional memory (PI: B. Guillery).
- **2011-2012:** French regional research council, Functional neuroanatomy of PTSD (PI: B. Guillery).
- **2006-2008:** European postdoctoral grant, Wayfinding project (PI: N. Burgess).
- **2004-2005:** French Alzheimer's Association award (A. Viard).
- **2002-2003:** French Alzheimer's Association award (A. Viard).

Teaching

- Neuroimaging of autobiographical memory (M.Sc Neuroscience, EPHE)
- Memory systems and aging (M.Sc Neuroscience, EPHE)
- Nosology of neurodegenerative and neurological diseases (M.Sc Neuroscience, EPHE)
- Amnesia and memory: neuropsychology and neuroimaging (M.Sc Neuroscience, University Pierre and Marie Curie; Cogmaster, Ecole Normale Supérieure)
- Neuropsychology of language (B.Sc Psychology, UNICAEN)
- Scientific English (M.Sc Neuroscience, EPHE)

Supervision

- Masters students (EPHE, UNICAEN) since 2008
- PhD students since 2010

Collaborations

- Pr. Richard Roche (Maynooth University)
- Dr. Bérengère Guillery-Girard (EPHE)
- Dr. Peggy Quinette (Caen University)
- Dr. Joy Perrier (INSERM)
- Dr. Andrew Allen (Trinity College Dublin)
- Dr. Cassandra Dinius (Maynooth University)

Main publications

- **Viard A**, Eustache F, Segobin S. (2021) History of Magnetic Resonance Imaging: a trip down memory lane. *Neuroscience*:S0306-4522(21)00337-7. [doi:10.1016/j.neuroscience.2021.06.038](https://doi.org/10.1016/j.neuroscience.2021.06.038).
- **Viard A**, Mutlu J, Chanraud S, Guenolé F, Egler PJ, Gérardin P, Baleyte JM, Dayan J, Eustache F, Guillery-Girard B (2019) Altered default mode network connectivity in adolescents with post-traumatic stress disorder. *Neuroimage: Clin* 22:101731. [doi: 10.1016/j.nicl.2019.101731](https://doi.org/10.1016/j.nicl.2019.101731)
- Eustache F, **Viard A**, Desgranges B (2016) The MNESIS model: memory systems and processes, identity and future thinking. *Neuropsychologia* 87:96-109. [doi: 10.1016/j.neuropsychologia.2016.05.006](https://doi.org/10.1016/j.neuropsychologia.2016.05.006)
- **Viard A**, Piolino P, Belliard S, de La Sayette V, Desgranges B, Eustache F (2014) Episodic future thinking in semantic dementia: a cognitive and fMRI study. *PLoS One* 9: e111046. [doi: 10.1371/journal.pone.0111046](https://doi.org/10.1371/journal.pone.0111046)
- **Viard A**, Desgranges B, Matuszewski V, Lebreton K, Belliard S, de La Sayette V, Eustache F, Piolino P (2013) Autobiographical memory in semantic dementia: new insights from two patients using fMRI. *Neuropsychologia* 51: 2620-2632. [doi: 10.1016/j.neuropsychologia.2013.08.007](https://doi.org/10.1016/j.neuropsychologia.2013.08.007)
- **Viard A**, Desgranges B, Eustache F, Piolino P (2012) Factors affecting medial temporal lobe engagement for past and future episodic events: an ALE meta-analysis of neuroimaging studies. *Brain Cogn* 80: 111-125. [doi: 10.1016/j.bandc.2012.05.004](https://doi.org/10.1016/j.bandc.2012.05.004)
- **Viard A**, Doeller CF, Hartley T, Bird CM, Burgess N (2011) Anterior hippocampus and goal-directed spatial decision making. *J Neurosci* 31: 4613-4621. [doi: 10.1523/JNEUROSCI.4640-10.2011](https://doi.org/10.1523/JNEUROSCI.4640-10.2011)
- **Viard A**, Chételat G, Lebreton K, Desgranges B, Landeau B, de La Sayette V, Eustache F, Piolino P (2011) Mental time travel into the past and the future in healthy aged adults: an fMRI study. *Brain Cogn* 75: 1-9. [doi: 10.1016/j.bandc.2010.10.009](https://doi.org/10.1016/j.bandc.2010.10.009)
- **Viard A**, Lebreton K, Chételat G, Desgranges B, Landeau B, Young A, de La Sayette V, Eustache F, Piolino P (2010) Patterns of hippocampal-neocortical interactions in the retrieval of episodic autobiographical memories across the entire life-span of aged adults. *Hippocampus* 20: 153-165. [doi: 10.1002/hipo.20601](https://doi.org/10.1002/hipo.20601)
- **Viard A**, Piolino P, Desgranges B, Chételat G, Lebreton K, Landeau B, Young A, De La Sayette V, Eustache F (2007) Hippocampal activation for autobiographical memories over the entire lifetime in healthy aged subjects: an fMRI study. *Cereb Cortex* 17:2453-2467.
- **Viard A**, Flament MF, Artiges E, Dehaene S, Naccache L, Cohen D, Mazet P, Mouren MC, Martinot JL (2005) Cognitive control in childhood-onset obsessive-compulsive disorder: a functional MRI study. *Psychol Med* 35:1007-1017.

Full list of publications here : <https://pubmed.ncbi.nlm.nih.gov/?term=viard+a&sort=date&size=100>

Google Scholar citations : <https://scholar.google.com/citations?user=CZSXjU8AAAJ&hl=fr>