

## Dr Jonathan Lee MA PhD

Senior Lecturer

[School of Psychology \(/schools/psychology/index.aspx\)](/schools/psychology/index.aspx)

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### About

I am a behavioural neuroscientist primarily interested in the mechanisms and functions of memory processes. In particular, I currently study the phenomenon of memory reconsolidation, which may have applications in the understanding of and treatment of conditions such as post-traumatic stress disorder and drug addiction.

### Qualifications

MA (Cantab)

PhD (Cantab)

### Biography

I spent all my formative years at the University of Cambridge. After completing my undergraduate degree in Natural Sciences (Neuroscience), I undertook a PhD in the Department of Experimental Psychology under the supervision of Professor Barry Everitt. I continued as a post-doc in Prof Everitt's lab, before becoming a Lecturer in the Department of Experimental Psychology prior to my move to Birmingham in 2008.

### Postgraduate supervision

#### Current PhD students:

Marc Exton-McGuinness - Reconsolidation of instrumental memories

If you are interested in working with me, please email me with your research interests.

### Research

My research is focussed on the basic mechanisms of learning and memory. These range from the neural circuits that support memory acquisition and persistence, to the cellular mechanisms that operate within those circuits. In particular, I am interested in the different phases that occur in the lifetime of a memory: initial acquisition, subsequent memory stabilisation, retrieval/expression. Each of these processes contributes to the long-term persistence of memories. Recently, particular attention has been paid to the phenomenon of memory reconsolidation, whereby a memory may be modified after its retrieval, perhaps to maintain its adaptive relevance. Impairing the retrieval-induced reconsolidation phase results in severe amnesia for that, often old, memory.

The study of memory reconsolidation is a major focus of my research. Not only might it prove to be the mechanism underlying so-called "false memories", but it has also been highlighted as a potential target in the treatment of some psychiatric disorders. Conditions such as post-traumatic stress disorder and drug addiction depend to a large extent upon the formation of extremely powerful and persistent emotional memories. It may be possible, therefore, to reduce the impact of these memories by blocking their reconsolidation. By using preclinical models of emotional learning and memory, we can begin to explore the clinical benefits of such an approach.

### Publications

Please see <http://www.researcherid.com/rid/A-9629-2008> (<http://www.researcherid.com/rid/A-9629-2008>)