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A window on the brain

**Wednesday 13 March 2013
6.00 - 8.30pm**

Medical Research Council
Cognition and Brain Sciences Unit
15 Chaucer Road
Cambridge CB2 7EF
Tel: 01223 355294

A free event organised as part of the Cambridge Science Festival

PROGRAMME

6-7pm Arrival

For the first hour, there will be practical demonstrations of experiments for you to try out, and lots of other hands-on activities with many of our scientists on hand to explain their work.

Light refreshments (tea/sandwiches) will be served.

7pm Demonstrations close and our three talks begin in the Lecture Theatre

Introduction by James Rowe

7-7.30pm Rehabilitation of spatial neglect: Have we been blinded by the obvious?

Spatial neglect is a common and debilitating effect of stroke which is associated with high levels of disability. Sufferers appear to have a complete lack of awareness of one side of space and can bump into things, fail to dress their neglected side and even fail to eat food from the neglected side of their plate. Despite the obvious spatial nature of patients' disabilities, current rehabilitation strategies which focus on improving spatial awareness have had limited success. In this talk we will discuss whether these patients' problems are really all they seem. Could it be that other less easily observed problems may be impacting their awareness of space, and that failing to address these has

limited the impact of current rehabilitation efforts? We will consider whether using cognitive models developed to understand visual spatial processing in healthy individuals might help us to better understand these patients' problems and help us to develop novel interventions.

Speaker: Polly Peers, Post-doc scientist

7.30-8pm **Seeing the bigger picture: can training in perspective broadening help alleviate depression?**

Here at the CBU, we conduct research to help improve understanding of emotion and anxiety disorders and to develop ways of treating them. This presentation will focus on major depressive disorder. We are well aware of how depression can be all-consuming in nature, and how each individual's experience of it is often unique. For these reasons, we have been working on breaking down and addressing how people deal with depression, and designing new ways to tackle it. Tonight we will discuss the difficulties in getting, and keeping, things in perspective. We currently believe that people suffering from depression show two related problems in perspective taking; a tendency to lose sight of the bigger picture, and to think in a black and white manner ('all or nothing'). We will look at techniques being developed to overcome these problems and report on our findings so far.

Speaker: Emma Hill, PhD Student

8-8.30pm **The challenge of dementia – how brain imaging will help**

Dementia presents a major challenge, not just for the 800,000 individuals who are affected directly, but also the whole nation with costs of over £23 billion per year. The MRC is leading the multidisciplinary research effort to discover to causes of dementia, understand its consequences, and develop better treatments. Brain imaging will play a major role in this effort, looking at the structure, function and networks of the brain - before dementia, at diagnosis and after treatments. In this talk, I will discuss current dementia research, including work undertaken by the CBU and our collaborators using the Magnetic Resonance Imaging (MRI) and Magnetoencephalography (MEG) scanners. We will see how versatile and powerful these can be for research by scientists and clinicians, in the national and international fight against dementia.

Speaker: James Rowe, Senior scientist

We hope you enjoy the evening. If you would like to help us with our research by becoming a member of our Volunteer Panel, please contact our Panel Manager, either at the address above, by email to panel.office@mrc-cbu.cam.ac.uk, or you can speak to us on the night.