



Cambridge Society for the Application of Research

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“Just one more try should do it!”

Gambling and the Brain

Dr Luke Clark
Department of Experimental Psychology
University of Cambridge

7.30 p.m., Monday 1st June, 2009
The Wolfson Lecture Theatre, Churchill College, Storey's Way, Cambridge

Dr Clark writes:

Gambling is a classic risky behaviour where a wager is placed on the uncertain prospect of larger monetary gain. Despite widespread acceptance that 'the house always wins', gambling remains a popular and expanding form of entertainment in the UK, with approximately 70% of the population gambling at least annually.

Gambling can also become dysfunctional in a small but significant minority of 'problem gamblers'. This talk will highlight some recent research from our lab looking at the brain mechanisms that underlie gambling decisions.

I will describe some data showing similarities in psychological performance between problem gamblers, and a group of patients with brain injury to an area called the ventromedial prefrontal cortex.

I will also describe some brain imaging data from healthy, non-gambling volunteers, looking at how the brain responds to 'near-miss' events, which are an important factor in encouraging gamblers to continue to play.

These findings illustrate both the general fallibility of human decision-making, and the possible routes by which gambling can become an addictive behaviour.

"At the Wolfson Brain Imaging Centre at Addenbrooke's, Dr Clark is using fMRI to measure patterns of brain activity whilst volunteers perform a gambling game"

Previous research has shown a reliable pattern of brain activity when humans receive monetary wins.

In particular, a region called the striatum, near the centre of the brain is a crucial component in a reward circuit that also responds to natural reinforcers like food and sexual stimuli, as well as drugs of abuse like cocaine"

From 'Research Horizons', Issue 3, Summer 2007

About the speaker:

Dr Luke Clark graduated in Experimental Psychology from the University of Oxford in 1997, where he completed his PhD at the Department of Psychiatry. He moved to Cambridge in 2000, and in 2007 was appointed to a University Lectureship in the Department of Experimental Psychology. He is a Fellow Commoner at Trinity Hall, and he holds an honorary assistant professorship at the University of Pittsburgh Medical Centre.

His research is directed at the brain mechanisms of decision-making, with a particular interest in how decision-making is disrupted in forms of psychopathology including the addictions.

The Organising Secretary adds.....

I don't gamble, and never have; and I find it impossible to understand people who do. But gambling in its many forms is endemic, and there is clearly something about it which 'licks the switch' for many people. Come along on Monday and find out more!

Best Regards

Richard Freeman, CSAR Organising Secretary

Coffee available, as usual, in the foyer outside the lecture theatre from ~7.00 p.m.

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