

How we remember each other

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Researchers at McGill University's Douglas Mental Health University Institute, in collaboration with a French team at the University of Paris, have used magnetic resonance imaging (MRI) to identify the part of the brain that stores our memories of meetings, parties, arguments, fun and the myriad other social interactions that colour our daily lives.

"For a few years we've known that the medial prefrontal cortex is involved in the processing of social information," said Prof. Lepage. "What we didn't know is that this same brain region is also involved in the actual memory storage for social information."

The McGill team, PhD student Philippe Olivier Harvey and Martin Lepage, Assistant Professor, Dept. of Psychiatry, McGill University and Director of the Brain Imaging Group of the Douglas Mental Health University Institute and their French colleagues, identified a precise region in the frontal cortex that seems to specialize in the processing and memory storage of social information.

Using a functional MRI technique, the scientists measured brain activity in 17 volunteers while they performed memory tasks involving pictures of social scenes (interacting individuals) and non-social scenes (landscapes with no people). They identified the internal part of the prefrontal cortex, called the medial prefrontal cortex, as the key structure in remembering social information from an image.

How efficiently our brains process, store and retrieve social events and relationships is essential to our social adaptation. Various regions of the

brain, notably the hippocampus, are directly involved in learning and memory.

Previous findings by the same research teams linked this prefrontal region with how we think about ourselves and others. This new work could lead to a greater understanding of certain mental disorders, such as schizophrenia and autism, that affect social and relational skills. These findings are published in the *Journal of Cognitive Neuroscience*, February 2007.

Source: McGill University

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