

16.30-17.15

Plasticity After Acute Brain Injury (with Special Reference to Aphasia)

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In my talk I will present the results of a series of imaging studies of recovery. In particular, I will address the issue of recovery from focal neuropsychological disorders, such as aphasia and neglect, drawing from our research experience in this field. Two basic mechanisms, i.e. regression of diaschisis and functional re-organisation, have been considered to play an important role in neuropsychological recovery. The results of recent investigations using positron emission tomography and functional magnetic resonance are providing a closer look to the contribution of these mechanisms in different stages of recovery. Methodological advances, such as event-related functional magnetic resonance, allow a more direct investigation of the effects of training on the neural mechanism responsible for complex cognitive processes, such as lexical retrieval. An integration will be attempted between empirical findings and neurological theories of functional recovery, taking into account the extent and the limits of plasticity in the adult brain.

*with Daniela Perani, Paolo Vitali, Ana Inés Ansaldo and Yves Joannette §Université de Montréal