SERIES C:
The Brain: An Amazing Time Travelling Machine

Fridays, 1:00 – 3:00 pm, September 23 to November 25, 2016

Innis College, Town Hall

Lecturer: Professor Guy Proulx. Guy is Associate Professor in the Department of Psychology at Glendon College, York University. He is a clinical neuropsychologist specializing in cognitive aging. Recently, he has been focusing on the wide variability within the normal aging population.

This series surveys the fascinating brain and cognitive changes that take place over a lifetime. We see, for example, how the different functions of memory – that amazing time travelling machine – allow us to recapture the past and imagine possible futures. You will gain an inside view into the exciting world of brain, cognition and behaviour.

Lecture 1 (Sept.23): The brain, an incredible meaning-making machine
This first session is an overview of basic, useful guidelines and concepts for the series of lectures. You are introduced to the top 10 brain structures (props included) and learn the importance of why only living organisms that “move in space” have a brain.

Lecture 2 (Sept.30): Standing on the shoulders of giants
Extraordinary people have contributed to our current understanding of brain and mind over the centuries. Aristotle, Broca, Sherrington, Penfield and others have provided remarkable insights.

Lecture 3 (Oct.7): The spark of life: how neurons talk to each other
Sensory inputs to the brain use very different forms of energies, such as sound, light, smell or touch, but all this information is quickly translated into a common language – “bioelectrical” brain activity. You will understand (in plain English) how this is important for the generation, transmission and integration of information in the brain.
Lecture 4 (Oct.14): Round and round the clock it goes
This lecture will introduce you to the mysteries of our sleeping brain. Too few people appreciate how daytime functions and...how problems spill over into the night. You might be surprised to learn how busy the brain is at night.

Lecture 5 (Oct.21): The short and long story of aging: it all starts with sleeping babies
How the brain develops, adjusts, learns...as it changes over time will be highlighted. With Simone de Beauvoir, we will see how she had it right when she said that “life is aging, nothing more” and, with Seneca, almost two thousand years ago, when he said that “life is long if you know how to use it.”

Lecture 6 (Oct.28): Memory, the amazing time travelling machine
You will learn about the 6 different memory systems and their functions. Fascinating brief videos of two people who feel that they are trapped in the “eternal now” will be presented.

Lecture 7 (Nov.4): Brain and emotion
The story of a patient who recaptured his ability to smile again will be shared.

Lecture 8 (Nov.11): The trinity of attention
Three major processes have been identified so far. We will see why some view the processes of attention as the “glue” to many other cognitive functions.

Lecture 9 (Nov.18): The miracle of language
The important concept of how language “co-evolved” with the brain will be stressed. We will also discuss the different modalities of speech, writing and reading.

Lecture 10 (Nov.25): Cortex in context: putting all the pieces together
Some final thoughts on: 1) how brain and context create the mind, and 2) the privilege of aging....