Perspectives in Neuroscience Seminar Series Presents

Dr. Stanislas Dehaene

(*Director of the INSERM-CEA Cognitive Neuroimaging Unit, Professor at the Collège de France, Chair of Experimental Cognitive Psychology*)

Stanislas Dehaene is a French psychologist and cognitive neuroscientist. He is currently heading the Cognitive NeuroImaging Unit within the NeuroSpin building of the Commissariat A l'Energie Atomique in Saclay near Paris, France's most advanced brain imaging center. He is also a professor at College de France in Paris, where he holds the newly created chair of Experimental Cognitive Psychology. In 2005, he was elected as the youngest member of the French Academy of Sciences. Stanislas Dehaene's interests concern the brain mechanisms of specifically human cognitive functions such as language, calculation, and conscious reasoning.

Education Matters: Literacy, Numeracy and the Developing Brain

The human species is the only species that actively increases its competences through education – the active, voluntary transfer of knowledge from one brain to another. My laboratory uses cognitive psychology and brain imaging to ask how schooling, and particularly the acquisition of basic reading and mathematical skills, modifies the human brain. I will present a series of experiments that compare brain organization in literate and illiterate brain, and probe the transition process by which a young child acquires reading. These findings indicate that education to reading “recycles” a set of brain circuits that did not evolve for this function, but are initially involved in visual recognition and spoken language processing and slowly get reconverted to the interpretation of letter strings. They are important for education inasmuch as they lead to a clear picture of (1) what is the child’s initial state of competence prior to reading; (2) how this initial state can be optimally modified during the learning process; (3) what sorts of difficulties are to be expected by teachers during the learning process. A similar set of studies characterize how the brain acquires arithmetic skills. I will end with a set of tentative recommendations for the cooperation between researchers and teachers in the domain of early schooling.

Date: Monday, May 7th, 2012

Time: 11:30 a.m. – 12:30 p.m.

Location: Room 2050,
The Social Science Centre

If you require information in an alternate format or if any other arrangements can make this event accessible to you, please contact Denise Soanes at dsoanes4@uwo.ca

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