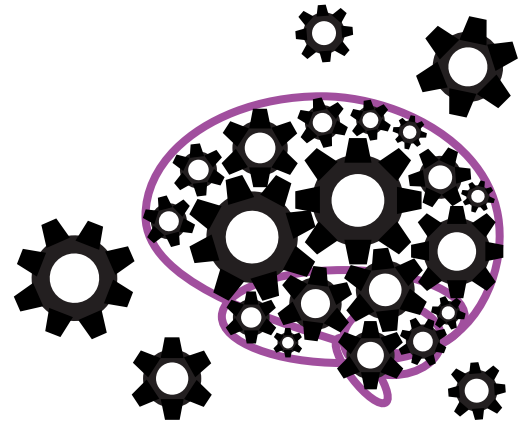




UNIVERSITY OF ALBERTA
DEPARTMENT OF PSYCHOLOGY

**42ND ANNUAL
DISTINGUISHED
SCHOLAR LECTURE
SERIES**



**November 18 (@11am & 3pm), 19 (@11am) 2019
ECHA**

DR. GAIA SCERIF
OXFORD UNIVERSITY

**ATTENTIVE LEARNING:
TRAJECTORIES, MECHANISMS
AND RISK FACTORS**

Three 1-hour lectures



For more information, please visit: uab.ca/dsls

**Lecture 1: How does attentional control matter to learning?
Longitudinal and experimental approaches at the transition between
the preschool and primary school years**
Nov 18 @ 11:00am - ECHA 1-498

In my first seminar, I will focus on describing and understanding the tight relationships between attentional control and emerging cognition in pre-schoolers and primary school children. Early individual differences in executive skills including inhibitory control, maintenance in working memory and selection of task relevant dimensions relate concurrently to emerging learning outcomes (with mathematical skills used as an example here). In addition, longitudinal findings suggests that these same skills predict later maths outcomes. Using experiments that require new learning, I will explore mechanisms underpinning these longitudinal correlations. In combination, longitudinal and experimental data point to a need for a greater mechanistic understanding of attentional control in new learning, and of the role of growing expertise in guiding attention.

**Lecture 2 : Using developmental cognitive neuroscience tools to
investigate mechanisms of attentive learning**
Nov 18 @ 3:00pm - ECHA 2-420

In this second seminar, I will highlight how, from very early in development we are equipped with exquisite attentional skills, whose improvement is coupled with increased effectiveness of control networks. In childhood, our work suggests that both behavioural and neural indices suggest similarities, as well as differences, in how children and young adults deploy attentional control to optimize maintenance of information in memory. At the same time, attentional effects on memory are not unidirectional: previously learnt information and resistance to distraction during learning guide later attentional deployment, both in adulthood and in childhood. In conclusion, assessing attentional development and its dynamics point to the bidirectional influences between attention, memory and learning.

**Lecture 3 : Attentional control development under conditions of high risk:
Insights from genetic syndromes and poverty**
Nov 19 @ 11:00am - ECHA 1-182

Can we understand the malleability of attentional control skills, by studying how they develop under conditions of high risk? With the increased availability of genetic testing, multiple genetic alterations have been associated with high risk of inattention and hyperactivity. The first line of research focuses on children with Williams syndrome and Down's syndrome, to suggest that differences in attention between and within these supposedly homogeneous syndrome groups predict variable learning outcomes in emerging literacy or numeracy. Secondly, I will discuss longitudinal data from young children with fragile X syndrome, associated with the silencing of a single gene and high risk of attention deficits in childhood. Longitudinal findings suggests that early group-level and individual differences in attentional processes predict differences in later behavioural difficulties. Finally, I will review recent evidence about executive function development under conditions of high poverty. As a whole, these lines of work point to multiple influences modulating attentional control skills.

Past lecture series:

- 1975** Frank Geldard (Princeton) - "Sensory Saltation: Metastability in the Perceptual World."
- 1976** Benton Underwood (Northwestern) - "Temporal Codes for Memories: Issues and Problems."
- 1977** David Elkind (Rochester) - "The Child's Reality: Three Developmental Themes."
- 1978** Harold Kelley (UCLA) - "Personal Relationships: Their Structures and Processes."
- 1979** Robert Rescorla (Yale) - "Pavlovian Second-Order Conditioning: Studies in Associate Learning."
- 1980** Mortimer Mishkin (NIMH - Bethesda) - "Cognitive Circuits."
- 1981** James Greeno (Pittsburgh) - "Current Cognitive Theory in Problem Solving."
- 1982** William Uttal (Michigan) - "Visual Form Detection in 3-Dimensional Space."
- 1983** Jean Mandler (UC La Jolla) - "Stories, Scripts, and Scenes: Aspects of Schema Theory."
- 1984** George Collier (Rutgers) - "Learning and Motivation: Function and Mechanism."
- 1985** Alice Eagly (Purdue) - "Sex Differences in Social Behavior: A Social Role Interpretation."
- 1986** Karl Pribram (Stanford) - "Holonomic Brain Theory: Cooperative Processing in the Configural Aspects of Perception and Action."
- 1987** Abram Amsel (UT Austin) - "Behaviourism, Neobehaviourism and Cognitivism in Learning Theory."
- 1988** Robert Siegler (Carnegie-Mellon) - "How Children Discover New Strategies."
- 1989** Robert Efron (UC Martinez) - "The Decline and Fall of Hemispheric Specialization."
- 1990** Phil Johnson-Laird (Princeton) - "Human and Machine Thinking."
- 1991** Timothy Salthouse (Georgia Institute of Technology) - "Mechanisms of Age-Cognition Relations in Adulthood."
- 1992** Scott Paris (Michigan) - "Authentic Assessment of Children's Literacy and Learning."
- 1993** Bryan Kolb (Lethbridge) - "Brain Development, Plasticity, and Behaviour."
- 1994** Max Coltheart (Macquarie) - "Our Mental Lexicon: Empirical Evidence of the Modularity of Mind."
- 1995** Norbert Schwarz (Michigan) - "Cognition and Communication: Judgmental Biases, Research Methods, and the Logic of Conversation."
- 1996** Gilbert Gottlieb (UNC Chapel Hill) - "Prenatal Roots of Instinctive Behavior: A Theoretical and Experimental Exposition of Probabilistic Epigenesis."
- 1997** C. Randy Gallistel (UCLA) "Basic Conditioning from an IntervalTiming Perspective."
- 1998** Harold W. Stevenson (Michigan) - "Learning from other Cultures: Achievement and Society."
- 1999** Melvyn A. Goodale (Western Ontario) - "The Origins of Vision."
- 2000** K. Anders Ericsson (Florida State) - "The Complexity and Power of Deliberate Thought: From Protocol Analysis of Exceptional Memory to the In-vivo Dissection of Expert Performance."
- 2001/02** Mark Snyder (Minnesota) - "Personality, Motivation, and Social Behavior: Understanding Individuals and Their Social Worlds."
- 2003** Michael Tomasello (Max Planck Institute for Evolutionary Anthropology) - "Lectures on Children and Chimpanzees."
- 2004** Michael J. Ryan (UT Austin) - "Sexual Selection and Sensory Exploitation."
- 2005** Gary S. Dell (Illinois) - "Slips of the tongue: The Linguistic and Freudian Traditions; Aphasic speech Errors: Testing Freud's Continuity Thesis; and Implicit learning, Phonotactic Constraints, and Speech Errors."
- 2006** Michael A. Arbib (Southern California) - "Crusoe's Brain: Social Cognition and the Mirror System."
- 2007** Richard M. Lerner (Tufts) - "Applying Developmental Science to Promote Positive Youth Development and to Enhance Community Life."
- 2008** Denise C. Park (UT Dallas) - "Images of the Aging Mind; Developing a Cultural Neuroscience of Aging; and Following Doctors' Instructions: Medical Adherence."
- 2009** David C. Rubin (Duke) - "Autobiographical Memory."
- 2011** Tomáš Paus (The Rotman Research Institute) - "How Environment and Genes Shape the Adolescent Brain"

- 2012** Chi-Yue Chiu (Nanyang Business School) – “Socially Motivated Superstitions: Mutual Constitution of Society and the Mind.”
- 2013** Arie Kruglanski (Maryland) – “Three Lectures on Motivation.”
- 2014** Robert Cook (Tufts) “Comparative Visual Cognition: The bird’s eye view”
- 2017 (Jan.)** William H. Warren (Brown) - “The Dynamics of Perception and Action“
- 2017 (Oct.)** Michael Hasselmo (Boston) - “How We Remember: Brain Mechanisms of Episodic Memory
- 2018** Morten H. Christiansen (Cornell) - ”How Does Language Work? Insights from Evolution, Acquisition and Processing”