COLLOQUIUM SERIES

TITLE: Spatial Associations of Numbers - Their Origin and Purpose

Date: November 27th, 2009
Location: Somerville House, Room 3345
Time: 3:00 - 4:00 p.m.

(Please join us after the talk for light refreshments.)

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Abstract:

Like other complex skills, number processing involves a range of cognitive subcomponents that require careful coordination. Recent work has shown that this coordination may in part rely on a spatial representation. For example, parity judgments for small digits (1, 2) are faster with the left hand, while parity judgments for larger digits (8, 9) are faster with the right hand. This reaction time effect suggests a Spatial Numerical Association of Response Codes (SNARC effect; Dehaene et al. [1993], JEP-General, 122, 371-396).

The SNARC effect generalizes to negative numbers and into arithmetic. It also influences movement times, movement endpoints, visual attention allocation and body postures. Thus, numerical cognition induces quite general spatial biases. New studies of reading and finger counting show that this association is very flexible and may have a cultural origin.

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