

The University of Hong Kong
Department of Psychology

Departmental Seminar

***Intermingling of Sensory Representations over
the Course of Development***

Date: September 26, 2013 (Thursday)

Time: 11:30 a.m. – 12:30 p.m.

Venue: CPD-2.42, 2/F, Central Podium Level, Centennial Campus, HKU

Speaker: Professor Karen Dobkins

Professor

Department of Psychology

University of California, San Diego

Early infancy is characterized by a period of exuberant neural connectivity followed by a retraction and reweighting of connections over the course of development. It has been proposed that this connectivity may produce a perceptual intermingling of the senses in infants that is unlike that experienced by typical adults. And, a lack of pruning of these exuberant connections during development is thought to explain the rare condition of “synesthesia” in about 2% of adults, wherein one sense involuntarily evokes an additional arbitrary sensation. We have been studying the perceptual consequences of neuronal intermingling in young infants and adults with “grapheme-color” synesthesia, wherein specific letters or numbers evoke idiosyncratic, largely individualized sensations of specific colors. Our results in typically developing infants (2 to 4 months) are consistent with them making strong associations between color and shapes (a precursor to graphemes), as well as between color and motion, which are significantly greater than the associations experienced by typical adults. Such findings – which suggest that all young infants experience synesthesia, provide a perceptual consequence of the exuberant neural connections seen in the infant brain.