Science of Learning

Strategic Research Theme

*Meeting of Minds Series*

# Cross-linguistic Constraints on Speech Perception and Production

**Speakers: Dr. Puisan Wong and Dr. Shelley Tong**,
Division of Speech and Hearing Sciences, FoE, HKU

**Date:** 25 February 2016 (Thursday)

**Time:** 12:30-2:00 pm

**Venue:** Room 101 Runme Shaw Building
*[Sandwiches will be served with coffee and tea]*

**Chair: Professor Brendan Weekes**

**Respondent: Professor William Marslen-Wilson,**
Department of Psychology, University of Cambridge

## Talk 1: What do child-directed lexical tones tell us about the nature of child-directed speech?

*By Dr. Puisan Wong*

Child-directed speech has been found to facilitate children's speech and language development. However, how the acoustic modifications in child-directed speech promote speech and language learning in children is unclear. One hypothesis is that in child-directed speech, adults exaggerate the phonemic contrasts to make them more salient for children to acquire. Another hypothesis is that adults express affective emotions in child-directed speech to promote child-adult interactions and facilitate speech and language learning. In Chinese, pitch is used both for making phonemic contrasts (lexical tones) and expressing emotions (prosody). To understand factors contributing to children's speech acquisition, we examined the use of pitch in child-directed Mandarin and Cantonese lexical tones to test the two hypotheses of child-directed speech.

## Talk 2: Modulation of musical expertise and linguistic expertise on pitch perception and non-native tone word learning

*By Dr. Shelley Tong*

As previous research shows, musical experience and tone language expertise separately impacts non-native pitch perception and tone word learning. However, it is unclear how musical and tone language expertise jointly influence these linguistic abilities. We examine this issue through a series of comparisons involving English-speaking musicians and non-musicians, Cantonese-speaking musicians and non-musicians, and Mandarin-speaking musicians and non-musicians to test their aptitudes for Thai tone identification and tone word leaning. Our findings demonstrate that, although musicians outperformed non-musicians on tone identification regardless of native language background, the effect of musical expertise on tone word learning was modulated by native language complexity.

## About the respondent

**Prof. Marslen-Wilson** has played a vital role in the development of psychological theories of language and cognitive neuroscience in the UK and across the globe. He led two internationally leading research institutes the Max-Plank-Institut für Psycholinguistik Nijmegen from 1985-87 and MRC Cognition and Brain Sciences Unit Cambridge from 1997-2012 and has held academic posts at the University of Chicago, the University of Cambridge and Birkbeck College, University of London.

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