

The University of Hong Kong  
Department of Psychology

*Departmental Seminar*

Date: October 3, 2013 (Thursday)  
Time: 11:30 a.m. – 12:30 p.m.  
Venue: Room 8.13, 8/F The Jockey Club Tower, Centennial Campus, HKU  
Speaker: Dr. Holger Wiese (DFG-funded Principal Investigator) & Ms. Jessica Komes (PhD Student)  
Department of General Psychology  
Friedrich-Schiller-University of Jena

*[Note: Dr. Wiese and Ms. Komes will each give 25 minute talks]*

Dr. Holger Wiese:

***What drives own-race, own-age, and mere categorization biases in face memory? Evidence from event-related brain potentials.***

Faces from an observer's social group, such as own-race or own-age faces, are typically remembered more accurately than respective other-group faces. These own-race (ORB) and own-age biases (OAB) are classically explained by increased perceptual expertise for own- than other-group faces. Alternatively, the mere categorization of faces into social in- versus out-groups, independent of expertise, may underlie such effects. Accordingly, memory biases for faces arbitrarily assigned to ad-hoc categories have been observed. Importantly, while recent theoretical approaches acknowledge that partly different processes may drive the different memory biases, the exact contributions of perceptual expertise and social categorization to the ORB, the OAB, and mere categorization biases are largely unknown. Here, I present evidence from event-related potentials, which demonstrate (i) that early processing stages reflected in the

N170 component, and thus differences in perceptual expertise, underlie the ORB, (ii) that the processing of own-race/own-age faces arbitrarily assigned to ad-hoc in- versus out-groups does not result in similar perceptual effects, and (iii) that the OAB is not affected by experimental manipulations typically interpreted as supporting socio-cognitive accounts (such as increasing the participants' motivation to individualize out-group faces), and manifests at stages reflecting the in-depth processing of facial identity.

Ms. Jessica Komes:

***Disentangling older adults' difficulties in person recognition - Behavioral and neurophysiological studies on face and name processing***

The talk focuses on two aspects of person recognition, namely face processing of unfamiliar faces and source memory for familiar names. Both may be compromised in older age and cause difficulties person recognition. In study 1, event-related brain potential (ERP) correlates of the own-race bias (ORB) in groups of high- and low performing older adults were assessed to investigate potential dedifferentiation in early perceptual stages of face processing. The results suggest a neural compensation for age-related decline in high-performers, and demonstrate that even a less efficient face processing system exhibits preserved specialization towards own-race faces. Study 2 systematically tested whether daily-life contact can influence the occurrence of an own-age bias (OAB). Such result would argue for preserved plasticity of the face representational system in older age. Indeed, high contact to own-age persons was related to a behavioral OAB, which shows that older adults' face representational system can adapt to environmental demands. Experiments 3 and 4 focused on source memory for familiar names. Source memory, as a form of associative memory, is often particularly impaired in older adults. By contrast, fluency-based processes, such as priming, are usually spared in older adults, and fluency-based processes have been recently shown to contribute to source memory. Across experiments, an N400 ERP priming effect differentiated between the two possible sources of a previously presented familiar name (auditory versus visual learning modality) in both younger and older adults. As this effect occurred for correct source judgments only, it strongly argues for a beneficial influence of fluency-based processes on source memory. In addition, the N400 effect was slightly reduced and polarity-reversed in older adults, suggesting age-related changes of fluency signals in this age group.