

The University of Hong Kong  
Department of Psychology

*Departmental Seminar*

*High and Low: The Resolution of Representations in  
Visual Working Memory*

Date: July 29, 2013 (Monday)

Time: 11:30 a.m. – 12:30 p.m.

Venue: Rm 8.13, 8/F, The Jockey Club Tower, Centennial Campus, HKU

Speaker: Ms. LIU Tong Tina  
MPhil Candidate  
Department of Psychology  
The University of Hong Kong

Visual working memory (VWM) has long been considered to be limited in capacity, but the way in which it is limited remains unclear. One of the theoretical debates concerns whether the number of objects that can be stored is fixed (discrete slot models) or variable (flexible resource models). Recent research on VWM resolution has helped elucidate this debate by acknowledging an important trade-off between number and resolution: as the number of items stored increases, the resolution of representation declines. Yet, a different conception suggests that the number and the resolution may represent distinct aspects of visual working memory, evidenced by both behavioral and neurophysiological measures. In a series of five experiments, we examined three theoretical questions regarding the relationship between the number and the resolution of items in VWM using an adapted continuous report paradigm, in which participants were asked to remember a mixture of objects from two categories and respond firstly to the category of the item-to-report (low-resolution measure), followed by a second within-category response (high-resolution measure) which was contingent on the first. Taken together, we demonstrated that 1) both low-resolution ensemble representations and high-resolution individual item representations exist in VWM, and 2) high-resolution representations (i.e. object identity) and low-resolution representations (i.e. objects' categories, configural information and perhaps some coarse feature information) of an object might be stored independently.