Departmental Seminar

The Neural Basis of Emotional Awareness

Date: November 17, 2015 (Tuesday)

Time: 11:30 a.m. – 12:30 p.m.

Venue: Room 813, 8/F, The Jockey Club Tower, Centennial Campus, HKU

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Emotional awareness is the ability to recognize and describe emotion (Lane & Schwartz, 1987). It has been postulated that emotional awareness depends on the cognitive skills developed for processing emotional information.   Nevertheless, emotional awareness might also depend on elicitation of emotional experience that occurs at a much earlier stage before cognitive processing of emotional information. In this seminar, I will introduce three studies to examine the mechanisms associated with emotional attention and interoceptive awareness (sensing of bodily state) that may also underlie emotional awareness.   These studies examined people with relatively extreme characteristics of emotional awareness. Study One explored alexithymia, a condition that reflect reduced level of emotional awareness in oneself, and its relationship with depression. This was done by examining the white-matter connectivity and seed-based resting-state functional connectivity in 22 female depressive patients and 21 matched nonclinical controls. Study Two provided further support on the association between detection of stimulus emotional

significance and alexithymia, by studying a non-depressed patient with lesion at a brain location associated with emotional attention.   Finally, Study Three explored the relationship between neurophysiological reactivity upon perception of emotional stimuli and mindfulness, a trait that is characterized by elevated ability in attentional control and emotional clarity, by studying 22 male meditation practitioners.   Mindfulness was found to predict reduced variation in the valence ratings of emotional stimuli and amplitudes of P2 (an ERP component) that contrast between positive and negative stimuli. Based on the findings, a proposed mechanism for explaining how increased emotional awareness in mindfulness might contribute to reduced negativity bias was discussed.   Together, these three studies offered significant insight to the neural basis of emotional awareness, that is, a dynamic interplay between different neural networks across both early and late stages of affective processing. These findings also have implications on identifying individuals' vulnerability to depression based on their characteristics of alexithymia, as well as treatment of affective disorders that are associated with attentional bias, as suggested by the role of mindfulness training on reducing negativity bias.