

The University of Hong Kong
Department of Psychology

Departmental Seminar

Rivalry is getting simpler every day

Date: September 5, 2013 (Thursday)
Time: 11:30 a.m. – 12:30 p.m.
Venue: Social Sciences Chamber, 11/F, The Jockey Club Tower,
Centennial Campus, HKU
Speaker: Professor Robert P. O'Shea
Professor
School of Health and Human Sciences
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Under some circumstances, when we look at two incompatible pictures (such as of a face and of a house), we see only one at a time. We are conscious of one picture for a few moments, then the other, then the first, at random for as long as we look despite both being continuously presented to our eyes. This is known as *rivalry*. For many years, the properties and explanation of rivalry seemed very complicated. The one deceptively simple thing was that there was really only one sort of rivalry, *binocular rivalry*, which occurs when the two pictures are presented one to each eye. Within the last few decades, researchers have discovered other forms of rivalry, revealing it to be a general process of consciousness by which we deal with ambiguous input. The properties of rivalry have proved to be simpler and more general than imagined. Most of these properties are consistent with a simple theory, proposed in 1901, that visual consciousness of one picture occurs because neurons processing it are active and inhibit the activity of neurons processing the other and that the alternations in visual consciousness occur because adaptation of active neurons depresses their activity. All the properties of rivalry can be explained by adding the idea that processing occurs at different levels of the visual system linked by feed-forward and feedback connections. All this makes rivalry simpler than ever.