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What to expect when you are not expecting it:
How implicit regularities drive attentional selection

12:30 p.m. – 1:30 p.m. │May 30, 2023 (Tuesday)
Rm 813, 8/F, The Jockey Club Tower │ Centennial Campus │ The University of Hong Kong

Professor Jan Theeuwes
Institute Brain and Behavior Amsterdam (iBBA)
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Abstract

Lingering biases of attentional selection affect the deployment of attention above and beyond top-down and bottom-up control. In this talk I will present an overview of recent studies investigating how statistical learning determines attentional selection. In all experiments we used variants of the classic additional singleton task in which participants searched for a salient shape singleton while ignoring a color distractor singleton. We show that a wide range of regularities modulate attentional prioritization. These include distributional regularities regarding the most probable location of the target or the distractor, regular trial-to-trial transitions (where the location of a target or distractor on trial n-1 predicts its subsequent location on trial n), within-object regularities, and regularities that associate a particular moment in time with a particular location. Even though participants are seldom aware of the statistical regularities present in the display, we show that these regularities have a large effect on attentional selection. Moreover, we show that this learning is highly flexible and adaptive. By using a new 'pinging' technique using EEG, we can reveal the invisible, latent topographical landscape of spatial 'priority' maps, that represent how attention is biased towards specific location within the visual field.

Zoom Meeting (For participants who couldn't attend the Seminar in person)
https://hku.zoom.us/j/3951550048?pwd=SncvL3RYakEycUtpL29vdDJEdlEwdz09
Meeting ID: 395 155 0048 │Password: psyc

~All are Welcome~

Enquiry: Dr Janet Hsiao <jhsiao@hku.hk> │ Professor William Hayward < willhayward@ln.edu.hk>