

Máster Universitario en Neurociencia Cognitiva y del Comportamiento

Seminario Dr. Freek van Ede "Attention for behaviour in working memory"

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"Attention for behaviour in working memory"

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Working memory regards the past but serves thefuture. Adopting this future-focused perspectiveshifts the narrative of working memory as atemporary storage with limited capacity, toworking memory as an anticipatory buffer that enables us to prepare for potential and sequential upcoming behaviour. In such aframework, selective attention plays a vital role because it serves not only to bringselected information into working memory but also to dynamically prioritise internal representations for guiding anticipated behaviour. Starting from this functional perspective of working memory and selective attention for serving behaviour, I will discuss three complementary lines of research in my lab - in turn considering visual working memory and attention for action, through action, and in action. I will discuss (i) how visual working memory and parallel action planning work hand-in-hand to support effective memory-guided behaviour, (ii) how the brain's system that controls our eyes also participates in controlling our inner attentional focus, and (iii) how working memory may rely on multiple spatial frames in moving participants. Collectively, these findings demonstrate how working memory looks forward, not backward, and incorporates actions rather than merely preceding them. Zoomingout, these studies show how studying working memory, selective attention, andaction together paves way for a rich and integrated understanding of how mindserves behaviour.