

## **Orienting of Attention and Spatial Cognition**

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Humans orient to their sensory world through foveation of target location or through covert shifts of attention. Orienting provides primacy to the selected location and in humans improves the precision of discrimination and increases the opportunity for segmentation and binding. All of these functions are mediated by common brain networks that include frontal, parietal and subcortical areas. Covert orienting can serve to prioritize processing the target even increasing its subjective intensity and its acuity. Cells exist that can conjoin features without attention, but reporting the conjunction appears to require orienting to it. An understanding of the pathways that connect attention networks to memory networks may allow us to enhance orienting and thus improve spatial cognition.