

The role of the parietal priority map in guiding visual attention

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Abstract:

Visual attention is the mechanism the nervous system uses to highlight specific locations, objects or features within the visual field. This can be accomplished by making an eye movement to bring the object onto the fovea (overt attention) or by increased processing of visual information in more peripheral regions of the visual field (covert attention). We have hypothesized that neurons within the lateral intraparietal area (LIP) of posterior parietal cortex create a priority map, which is used to guide these processes. I will use evidence from a visual foraging task to illustrate the role that LIP plays in targeting eye movements and how it may differ from other oculomotor areas. I will then present evidence from a change detection task to question the traditional role of LIP in guiding covert attention.