

Free condition selection: the choice is ruled by attention

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A new visual search paradigm was imagined to isolate endogenous components of visuo-spatial shifts of attention. Each stimulus consisted in the simultaneous presentation of four comparable arrays in the four corners of a screen, each compounded of two types of elements. Participants (N=21) were instructed to select one of the four arrays while maintaining a central fixation point, and press a response key once they had determined the most predominant element in it (RT_{stim}). Two additional phases followed each display, controlling both visuo-spatial (RT_{space}) and feature ($RT_{feat.}$) abilities. Despite the task difficulty (mean $RT_{stim} = 2192ms \pm 192$), performances reached 85%. Type and number of elements did not affect RT_{stim} , but their location did. Indeed, a significant left visual field preference (57% of choice) was noticed, with correspondences in RT ($p = .005$; $RT_{stim-LVH} = 2139ms$, $RT_{stim-RVH} = 2245ms$). Interestingly, this advantage significantly transferred in both successive control RTs, particularly in $RT_{feat.}$. Taken together, our results suggest that free decision is under the control of attention.