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# Laterally presented targets in rapid visual series: Why left is better than right

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## Abstract

When two letter streams containing two targets (T1 and T2) are presented left and right, T2 is better identified in the left visual field. This remains true under strict fixation control and also holds true in right-to-left and top-to-bottom readers. By varying the type of targets and distractors, by comparing left & right to top & bottom streams, by degrading stimuli, by cueing T2 side, and by measuring ERPs, we studied whether this advantage is due to better processing in the right hemisphere or to overload of the left one. Visual evoked potentials (VEPs) evoked by the ongoing stream of distractor stimuli peaked earlier at the right than at the left hemisphere at the onset of the stimulus series already, T2-evoked N2pc peaked earlier and T2-evoked P3 was larger with left than with right T2. Out of our many experimental variations of stimulus material, the most consistent interaction with the left-visual-field advantage was obtained by cueing T2 side in advance. Thus, the advantage probably arises due to better sensitivity of the right hemisphere to attentional cueing induced by the targets. The ERP results suggest that this might be due to both speed and capacity advantages of the right hemisphere.

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