

Abstract for the EMPG 1999 Meeting in Mannheim

How to Produce Fast Absent-Responses in Visual Search

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In visual-search experiments, participants have to decide whether a target item is present among distractors or not. Usually, target-present responses are faster than target-absent responses. However, when the distractors were homogenous and regularly arranged, then there was often an absent-advantage, i. e. absent-responses were faster. Up to now it is open what exactly determines this effect. It has been speculated that an absent-advantage occurs when the distractors can be grouped and rejected as a whole. However, also decisional processes might play a role. To test these and other hypotheses, we conducted a series of experiments. It turned out that several factors are necessary for an absent-advantage to occur. Absent-responses were faster than present-responses only when (1) the distractors were homogeneous, (2) the distractors were arranged as a regular pattern, (3) regular patterns were mixed with irregular ones across trials, and (4) the distractors were familiar. These results suggest that the absent-advantage is not due to perceptual processes alone, but depends also on decisional processes.