Abstract

In two experiments we investigated the automatic adjusting of the attentional focus to simple geometric shapes. The participants performed a visual search task with four stimuli (the target and three distractors) presented always around the fixation point, inside an outlined frame not related to the search task. A cue informed the subject only about the possible size and shape of the frame, not about the target. The results of the first experiment showed faster target detection in the valid cue trials, suggesting that attention was captured automatically by the cue shape. In the second experiment, we introduced a flanker stimulus (compatible or incompatible with the target) in order to determine if attentional resources spread homogenously inside and outside the frame. The results showed that performance depended both on cue validity and frame orientation. The flanker effect was dependent on compatibility and flanker position (vertical or horizontal meridian). The results of both experiments suggest that the form of an irrelevant object can capture attention despite participants intention and the results of the second experiment suggest that the attentional resources are more concentrated along the horizontal meridian.