





Max Wertheimer Minerva Center for Cognitive Processes and Human Performance Head of Center: Prof. Ruth Kimchi ראש המרכז : פרופי רות קמחי

אנו שמחים לארח את

Dr. Orna Rosenthal

School of Psychology, University of Birmingham, UK

The role of global-local competition for attention in Motioninduced blindness

Motion-induced blindness (MIB) is a phenomenon of moments of illusory disappearance of local visual targets in presence of moving global background mask. Stronger MIB effect has been reported for salient targets and when attention is allocated to the MIB scenario, rulingout mere local adaptation as the underlying cause. Psychophysical and brain imaging findings indicate that MIB can be modulated by multiple factors. However, the critical causal mechanisms of MIB are still under debate. One suggestion is that MIB is a consequence of a top-down attentional effect. Namely, moments of spontaneous shifts of endogenous attention from the target to the global mask, which induces suppression of the local target processing. This idea received supporting evidence from a recent fMRI study showing an increase of mask-related activation in attention-associated cortical areas and suppression of target-related activation in the visual cortex in coincidence with the initiation of MIB evens. However, currently, there is no direct evidence linking MIB to competition between the local target and the global mask for attention. We assessed this possibility by examining the frequency of MIB events in brain lesioned patients who are impaired in local vs. global attention tasks. The results indicate high correlation (ρ >0.8) between MIB frequency and the degree of distractibility by the irrelevant level in the global-local task, supporting the account of competition for attention between global mask and local target for MIB.

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04-8249431 (פקס: 04-8249430 שד' אבא חושי 199 הר הכרמל חיפה, 3498838 שלפון: 04-8249430 פקס: 199 Aba-Khoushy Avenue Mount Carmel, Haifa, ISRAEL 3498838 Tel: 972-4-8249430 Fax: 972-4-1998249431