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Failures of Visual Awareness: Inattentional Blindness and Attentional Blink

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vanessa.beanland@monash.edu**Abstract**

Failures of visual awareness occur when attentional processing limitations prevent an observer from detecting clearly visible stimuli. These failures can occur in a variety of contexts; two well-known research examples are inattentional blindness (IB) and attentional blink (AB). IB involves failure to detect an irrelevant, unexpected stimulus when attention is engaged by another primary task. AB involves failure to detect a relevant, expected stimulus, which occurs when a second target is presented within 180–500ms of the first target in a rapid serial visual presentation stream. Because both involve failures of visual awareness, IB and AB are often discussed in conjunction with each other. Though past research has implicated similar cognitive processes underlying both phenomena, no evidence directly correlated the two. We tested 54 observers on both an IB task and an AB task. Consistent with our hypotheses, we found that “non-noticers” who failed to detect an unexpected stimulus in the IB task also demonstrated larger AB magnitude, with a particular dip at lag 2, compared with noticers of the unexpected stimulus. This suggests that individual differences play a role in failures of visual awareness and that some observers may be more or less susceptible to failures of visual awareness generally.

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