Resource depletion contributes to, but does not cause, the attentional blink

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Abstract: Contemporary debates concerning the attentional blink (AB) question whether resource depletion causes this robust attentional deficit. To investigate this uncertainty, we employed rapid serial visual presentation paradigms that presented stimuli at 30-120msec/item. In addition to the two targets of interest, a third target was positioned immediately before the second target on 'three-target' trials. 'Two-target' trials, which were less resource intensive that the three-target trials, were also included. Interestingly, target accuracy was significantly improved on the three-target trials compared with the two-target trials. Consequently, resource depletion cannot explain the AB because the deficit was alleviated when target detection resources were strained. However, we employed novel conditional accuracy analyses to show that, on three-target trials, the second target was better detected when the additional third target was not detected. Therefore, although resource depletion cannot explain the AB deficit on a global level, resources play an important role on the local level.