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## **Hemispheric Asymmetries in the Attentional Blink**

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The *attentional blink* (AB) refers to a decrement in detecting the occurrence of a probe item if it closely follows a previous target item in a stream of stimuli in rapid serial visual presentation (RSVP). In a series of experiments the question of hemispheric asymmetries in the AB was investigated. Therefore, two RSVP streams were presented in parallel, one in each visual field. When targets and probes were both presented in the right visual field (RVF), the typical AB pattern was obtained, sparing probes in the first post-target location ("lag 1 sparing"). However, the AB was greatly attenuated when both target and probe were in the left visual field (LVF). When target and probe were in different spatial locations, there was a strong decrement in detecting the probe in the first post-target position – again more marked in the RVF. Cross-stream decrements may reflect the transient effects of shifting attention, while the AB itself appeared to be largely restricted to within-stream sequences, and to processing by the left cerebral hemisphere.

The results of a further behavioural study show, that the functional cerebral asymmetry of the AB is modulated by gonadal steroid hormones during the menstrual cycle in women. Women were tested with a double RSVP task during the low steroid menses and the high steroid midluteal phase. An AB was obtained bilaterally in the midluteal phase, while during the menses the probe detection deficit was evident only in the RVF. High levels of estradiol and progesterone in the midluteal phase appeared to reduce functional asymmetries due to a selective enhancement of the AB in the right hemisphere.

Furthermore, event-related potentials (ERPs) were recorded to examine the temporal course of the AB. Probe-related ERPs were compared between control and experimental condition when the probe was presented in the blink period (post-target position 2-4) and in the no-blink period (post-target position 6-8). The finding of Vogel, Luck, & Shapiro (1998) was replicated which is that the AB and the P3 elicited by the target component are related.