

**An investigation of task constraints on
attentional orienting in adults with dyslexia.**

Judy Buchholz and Ann Aimola Davies

ABSTRACT

Attentional processes have been shown to be necessary for the development of the reading system, and also for competent reading. A *specific* attentional deficit has not been consistently demonstrated across studies of adults and children with dyslexia, possibly due to differences in methodology. Task variables, such as cue size, stimulus onset asynchrony (SOA), eccentricity and visual field of presentation, may differentially affect attentional processes. Three spatial cueing tasks were used to examine the effects of such variables on the attentional orienting performance of five adults with dyslexia. The findings were compared with those of a control group, on both a group and individual case basis. Adults with dyslexia demonstrated attentional orienting difficulties related specifically to adjusting and maintaining attentional focus. While target detection benefited from cueing, attentional orienting was comparable to controls only for larger cue sizes. However, increasing SOA and eccentricity reduced orienting capacity. Performance asymmetries were observed when shifting attention within and between visual fields, with the poorest performance at peripheral locations and specifically in the right visual field. Overall results indicate there is a compromised attentional system in dyslexia, and highlight the need to consider task variables when designing attentional studies.