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WORD DISCRIMINATION : A STUDY OF
THE ROLE OF PRIOR EXPERIENCE IN
THE PROCESSING OF BRIEFLY AVAILABLE
VISUAL INFORMATION

A Thesis submitted for the
Degree of Doctor of Philosophy
in the Australian National University

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ABSTRACT

Briefly displayed words are far more accurately recognized if the words displayed are familiar. Although well established, this phenomenon has not yet been adequately explained. Word recognition performance combines two components: the stimulus component, comprising information received from the stimulus and transmitted into the response; and the supplementary component, comprising additional information supplied by the subject. Techniques currently available do not enable these two components to be separated. It has therefore not been possible to determine how the effects of familiarity are distributed across the two components. This thesis describes techniques which do provide such a separation.

Employing these techniques it is clearly shown that the effects of familiarity include changes in the stimulus component. Investigations of the mechanism of these changes in the stimulus component then show that the input is identified as a single particular word within the reception systems. The improvement in recognition performance results from the ensuing reduction in read-out and storage load. These findings constitute a confirmation of Woodworth's whole-word theory.