

**Effects of Luminance Contrast Levels on
Traditional Chinese Word Recognition in Hong Kong Adults**

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Abstract

The aim of this study was to investigate whether low luminance contrast (LC) word could activate the magnocellular (M) pathway to trigger top-down facilitation in traditional Chinese word recognition. M pathway is sensitive to low LC stimuli and object recognition studies in the past decade have demonstrated the presence of top-down facilitation driven by M pathway. However, whether word recognition would follow similar low LC object processing pathway is yet to investigate. This study analyzed data collected from 26 local Cantonese speaking adults in a masked repetition priming lexical decision task but found no significant differences in reaction time and accuracy between low and high LC stimuli. The present evidence failed to support the presence of top-down processing triggered by low LC stimuli in word recognition. Suggestions were made for improving experimental design in future to capture the rapid early visual word processing and possible factors that could contribute to top-down facilitate in Chinese word recognition discussed.

Keywords: luminance contrast; Chinese word recognition, magnocellular pathway;
visual word recognition; top-down processing