Testing the "activation reflects encoding transparency" principle in writing systems using repetition blindness

Catherine Caldwell-Harris
Boston University

Hui-wen Cheng
Boston University

Tingyan Li
Boston University

Alison Morris
Iowa State University

Abstract: Chinese script encodes phonology less transparently than alphabetic writing systems, but provides more clues to meaning. We propose that amount of activation depends on encoding transparency, a plausible theoretical statement which has received mixed support using standard priming tasks. The repetition blindness (RB) paradigm was employed to infer activation during reading of Chinese vs. English by native speakers. RB is the failure of conscious perception for repeated or similar items. Chinese and English stimuli were matched for frequency and target words' similarity. Sequences such as played moon braid team were rapidly displayed at 115 ms per word. For English readers, phonological RB was robust, but semantic RB was absent. For Chinese readers, semantic RB was reliable, but phonological RB was weak. Amount of phonological RB increased in Chinese (but not English) for naming stimuli (compared to handwriting), indicating that phonological RB increases when readers need to activate phonology.