

Three puzzling findings in visual word recognition

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Three recent findings pose problems for models of visual word recognition: the U-shaped length effect in lexical decision, priming across an intervening item, and the complex effects of prime exposure duration and neighborhood density in orthographic priming. The competition model (Morris, Still, & Caldwell-Harris, 2009), originally designed to account for repetition blindness effects, may prove useful in explaining these findings. The model was derived from recent findings in neurophysiology concerning the effects of stimulus repetition and the neural correlates of consciousness. According to the model, an overt response to a word requires that it be identified by the recognition system and that its representation access awareness. Furthermore, the competition for access to awareness between successive items is based on the total activation of each representation. We will present simulations suggesting that competition between items presented in close temporal proximity is the common thread underlying the three problematic findings.