Paradigm and Task Modulations on the Morpho-Orthographic Effect: An Eye-Tracking Study.
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The morpho-orthographic level
• Longtin et al. (2003) and Rastle et al. (2004) studied the effect of semantic transparency on early stages of visual word recognition:
  – significant priming effect for transparent words (dealer-DEAL)
  – significant priming effect for opaque words (corner-CORN)
  – no priming effect for orthographic control words (brothel-BROTH)
• Critically, opaque pairs yield more facilitation than orthographic pairs in lexical decision, masked priming paradigms

Task effects
• The morpho-orthographic pattern is not found when a same-different task is used in place of lexical decision (Dunabeitia et al. 2011):
  – significant priming effect for transparent words (dealer-DEAL)
  – significant priming effect for opaque words (corner-CORN)
  – significant priming effect for orthographic control words (brothel-BROTH)
• However, in a cross-case same/different task, a reference word is presented before the prime-target pair appears on screen, possibly affecting the way the target is processed

Reactions times in a cross-case same/different task are not indicative of the direct processing of the target
• Does a different pattern emerge because of the question asked to the subjects (“is the target identical to the reference?” vs. “is the target a word?”) or because of the different sequence in which the stimuli appear (“reference-prime-target” vs. “prime-target” only)?

Results

First fixation duration

Gaze duration

Discussion
• A priming effect was found and it did not differ in the Form, Opaque and Transparent conditions, thus showing a purely orthographic effect.
• Measuring directly the processing of the target word, we found an orthographic effect in response to an orthographic task.
• It is possible to compare these results to the results of Marelli et al., 2013 (a semantic task with a paradigm very similar to the one used here and with the same stimuli), and to hypothesize that the task can radically change the way a stimulus is processed. The interaction between task and paradigm should however be tested directly.
• Moreover, the effect was evident only on first fixation durations (a measure of early processing), suggesting that the task may preactivate the system for relevant cues at specific processing levels, rather than changing the overall processing of a word.

Conclusions

References