

**The Case of Different Scripts:  
Cross-Linguistic Effects in Japanese-English Bilingual Word Recognition**

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Studies have shown that bilinguals' recognition of a word is co-determined by its cross-linguistic similarity in orthography, phonology, and semantics, as well as its relative frequency in the two languages (Dijkstra, Grainger, & van Heuven, 1999; Dijkstra et al., 2005). However, these effects have mostly been reported for orthographically similar alphabetic languages, such as Dutch and English.

The present visual lexical decision regression study with eye-tracking investigated the contribution of lexical distributional properties of simplex English target words and Japanese translation equivalents to Japanese-English late bilinguals' reading. For these bilinguals, an early non-selective lexical access based on cross-linguistic orthographic similarity is not expected. To assess the bilingual component to reading, the same experiment was conducted using English monolingual readers.

The bilinguals' lexical decision latency and eye-fixation duration were found to be affected by cross-linguistic phonological similarity, semantic identity or non-identity, and relative L1/L2 word frequency. For both bilinguals and monolinguals, the fixation duration at a later point in time and the response latency revealed a facilitatory effect of English word frequency that was attenuated in dense orthographic neighbourhood. In addition, there was a facilitatory contribution of the contextual diversity of English words as based on file subtitles.

The results are discussed within a localist-connectionist framework (c.f., Bilingual Interactive Activation (BIA+) model, Dijkstra & van Heuven, 2002) that accounts for the early contribution of orthographic effects, followed by the simultaneous use of the target language's lexical properties, cross-linguistic phonological and semantic similarities, as well as relative word frequency in the two languages. At the same time, it takes into account response criteria that are fine-tuned throughout the experiment to best cope with the task at hand.

### References

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