Attention benefits and burdens in natural bilingual reading

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Bilinguals read less fluently in their weaker, second language [1]. This processing disadvantage corresponds to bilingual models of lexical access [2] and models of reading [3] because L2 words are used less frequently, so that their processing consumes more cognitive resources. Yet, lower-frequency items also have a processing advantage if their relative novelty attracts selective attention [4]. In this talk, we investigate how these procedural burdens and benefits interact in determining how much language-specific attention bilinguals pay to persuasive messages. We tested 102 unbalanced bilinguals in a mixed-factorial design with picture attraction (low vs. high) as between and language (L1 German vs L2 English) as a within-subjects factor. To measure language-selective attention, eye movements were recorded while participants watched twelve online advertisement slogans in each language competing for attention against large pictorial eye-catchers. We inferred language-specific baseline reading fluency from a separate eye-tracking task, where participants paid undivided attention to reading two pages of a novel in each language consecutively [adapted from 1]. Results showed longer L2 word reading times (9%) for the novel, while participants dwelled 11-15% longer on L2 slogans, relative to L1, depending on the competitive attractiveness of the picture. We used linear mixed effects regression to control for random differences in participants, items and L1 reading fluency. The models indicated that the L2 slogans robustly attracted more selective attention, compared to L1, because their less automatic processing was only partially predicted by less fluent L2 reading skills. In sum, we find bilinguals may pay more attention than needed for comprehension to the same task if it is presented in the L2. We discuss theoretical implications for modelling bilingual reading as well as practical consequences for persuasive communication and bilingualism research.
References


