

Reading between the lines: eye-tracking evidence for concurrent reading and translation in a sight translation task

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Research has reported conflicting results suggesting either serial (Huang, 2011) or concurrent reading and translation (McDonald & Carpenter 1981; Ruiz et al. 2008; Ruiz & Macizo 2019) during a sight translation task. Research on reading patterns of professional and trainee interpreters has pointed towards the serial account but only indirectly (Lijewska, Chmiel & Inhoff, 2022). Therefore, the question still remains open whether reading during sight translation is similar to regular reading or else whether it already incorporates lexical access to translation equivalents, in line with the language non-selective access hypothesis known from psycholinguistic studies on bilingualism. To address this question, the present study directly compared eye movements recorded during regular reading and sight translation. In order to investigate task differences and to gauge the nature of lexical access during task performance, the present study employed the word frequency effect (i.e. dissimilar reading patterns for targets varying in frequency) (Clifton et al. 2016) and the cognate facilitation effect, i.e. shorter reading durations for words sharing form and meaning across languages (cognates) relative to language-unique control words (Dijkstra et al. 2010). Prior research has shown that differences across tasks can surface as modulations of the frequency effect in eye movement data (Kaakinen and Hyönä 2010; Schotter et al. 2014). In turn, the cognate facilitation effect has been typically taken as evidence for language non-selectivity in lexical access during task performance (Libben and Titone 2009; Dijkstra et al. 2015).

This study is based on Macizo & Bajo (2006), but it replaced a self-paced reading paradigm with eye-tracking. We recruited 23 conference interpreting students in the first or second year of their MA with Italian as an A language and English as a B or C language. Our participants were presented with two separate tasks: (1) reading comprehension of English sentences and (2) sight translation of English sentences into Italian. Materials included 160 nouns (80 English-Italian cognates and 80 non-cognates in pairs matched for word characteristics) embedded in 80 low-context sentences. Each sentence contained two sets of critical targets: either English-Italian cognates or English-only controls. We also used frequency as a continuous measure potentially modulating reading patterns. Preliminary data analysis shows a consistent task effect across both early and late reading measures, suggesting that reading and sight translation differ. This provides evidence for concurrent reading and translation during a sight translation task, which likely underlies the observed task effect. The difference between reading and sight translation is further corroborated with a cognate effect recorded in sight translation but not in reading. Contrary to our predictions, frequency effects remained similar in both tasks, possibly indicating that the frequency effect should not be used to distinguish reading patterns across the two tested tasks.

Word count: 447

Keywords: sight translation, silent reading, eye-tracking, cognate effect, frequency effect

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