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Inhibiting *oat* and *car* to read *cat*: An ERP study of lexical competition in deaf and hearing readers

Wednesday, June 7th
2:00 – 3:00 pm
6363 Alvarado Ct.
Suite 250, Conference Room

Theoretically, reading a word (e.g., *cat*) involves activating the correct lexical representation and inhibiting its neighbors (i.e., words that differ by one letter; e.g., *car*, *oat*). In masked priming studies designed to investigate this competition, targets preceded by neighbor primes (e.g., *car-CAT*) elicit slower responses than those preceded by an unrelated prime (e.g., *bed-CAT*). Here, we used ERPs to more closely examine the processes underlying this effect in hearing and deaf readers who were matched for spelling ability. In the hearing group, we found larger N400s for targets preceded by neighbors than for targets in unrelated pairs. This suggests that lexical competition made it more difficult for hearing readers to process targets in neighbor pairs, reminiscent of the behavioral interference effect. In contrast, in the deaf group, target words in neighbor pairs elicited *smaller* amplitude N400s. Together, these results point to critical differences in the way orthographic information is represented and employed during visual word recognition in deaf versus hearing readers.

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