Does word confusability explain reversal of word-frequency effects in lexical decisions?

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Abstract: In a lexical decision task (LDT) using 88 words and 88 matched nonwords, 46 undergraduate participants responded significantly faster (90 ms faster on average) to lower-frequency words such as "voice" and "challenge" than to higher-frequency words with equal or greater homophony and polysemy such as "end" and "see". Response-time differences between semantic categories were significant, $F(4,217)=3.71$, $p<.01$. Word frequencies were taken from Brysbaert and New's (2009) corpus of movie subtitles.

Twenty percent of participants identified themselves as fluent in at least one language other than English. As expected, multilingual participants took longer to make lexical decisions, with an average RT for monolinguals of 764ms and 878ms for the multilingual group, $F(1,217)=21.45$, $p<.001$. Although the highest-frequency category included many short and highly confusable words, the longer response times for multilinguals were comparable across all stimulus categories. Reading speed for an initial prose passage weakly predicted LDT response time, $F(1,217)=4.35$, $p<.05$.