

Language production: Shaped by phonological interference and motor interference

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Abstract

Speakers are known to insert optional words when upcoming material is difficult. In three studies, we investigated how phonological interference and motor planning difficulty affect production choices. First, analyses of the spoken COCA corpus (¿100m words) showed lower use of [optional-that] in relative clauses following a that determiner (that boy [that] we saw) than following other determiners (this boy [that] we saw). Second, a sentence recall study confirmed numerically lower rates of optional-that use and more recall/production errors in the presence of a homophonous that determiner compared with sentences with other determiners. These two studies suggest phonological interference reduces the planning benefits of optional-that. Third, in a separate sentence recall study, we demonstrated optional-that use increases with motor planning difficulty (concurrent finger tapping). Together, these results demonstrate that speakers balance multiple constraints when planning speech, and that both phonological interference and concurrent tasks affect language production choices.