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Authors
Widmer, Colin
Kim, Dahee
Szostak, Christine
et al.

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The use of lexical and duration information in segmenting speech with unclear word boundaries

Colin Widmer
Department of Psychology Ohio State University

Dahee Kim
Department of Linguistics Ohio State University

Christine Szostak
Department of Psychology Ohio State University

Mark Pitt
Department of Psychology Ohio State University

Abstract: To comprehend spoken language, listeners must segment continuous speech into individual words. In cases where /s/ occurs on both sides of a word boundary (e.g., gas station) segmentation might be difficult because the two s-sounds blend together into one long s-sound. We report a series of experiments that examined how listeners segment such sequences, focusing on the contribution of lexical knowledge and /s/ duration. The stimuli were two-word phrases made up of all possible combinations of the lexical status of both words (e.g., gas-station, nas-station, gas-stagon, nas-stagon). The duration of the stimuli and the middle /s/ were also manipulated. The results show that lexicality trades off with relative duration in determining how many s-sounds listeners hear and to which of the two words, or both, the s-sound is perceived as belonging.