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

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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.