

## Homophones are not homophonous: The case of word-final /s/ in German

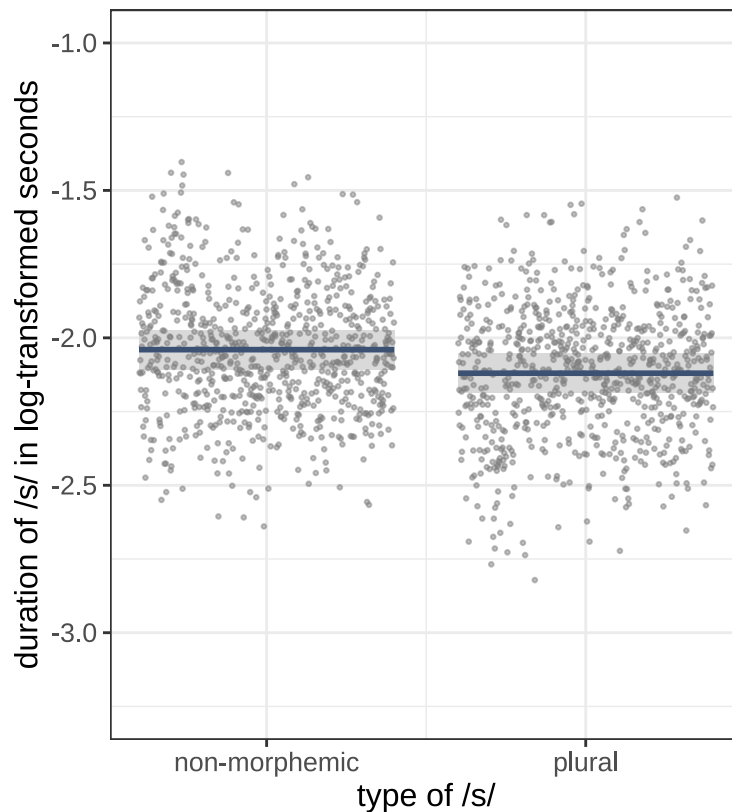
Dinah Baer-Henney & Dominic Schmitz  
*Heinrich-Heine-Universität Düsseldorf*

Recently, substantial progress has been made in understanding the architecture of language production models. Notably, studies have found that higher level processes are still reflected in articulation. This has been shown for words, stems, affixes, and even for individual segments [1;2;3]. Particularly, word-final /s/ in English has been investigated extensively. Durational differences are reported to reflect the morphological status of the sound [e.g., 4], /s/ is longest when non-morphemic, shorter as suffix, and shortest as clitic. The present study aims to find cross-linguistic evidence for such relations between sounds and structure in a language other than English and thus represents a logical and necessary progression in the ongoing debate.

Following the general method of the production study in English [4], we designed an experiment with pseudoword stimuli following the phonotactic constraints of German [5], embedded in contexts; 42 target items with word-final /s/ and 21 filler items were produced by 40 speakers. Target items were divided into two sets by their morphological status and distributed between speakers so that each item occurred both as plural form and as a singular form with a non-morphemic /s/.

Linear mixed-effects regression was used to analyse the influence of type of /s/, while controlling for potential confounds, e.g. preceding and following segment, phonological neighbourhood density, following pause, and speaking rate. The analysis revealed that the type of word-final /s/ showed a significant effect on /s/ duration. That is, non-morphemic word-final /s/ is significantly longer than plural /s/ ( $p < 0.001$ ; *Cohen's d* = 0.33; Fig. 1).

The results of the present investigation suggest that similar fine-phonetic durational differences caused by morphological categories emerge in other languages than English. Consequently, our results add to the growing body of evidence that calls for a revision of our understanding of morphological influences on speech production.



**Fig. 1.** Effect of type of /s/ (non-morphemic vs. plural) in the linear mixed-effects regression model, fitted to the log-transformed values of duration of /s/.

## References

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