

**Fine-semantic differences lead to fine-phonetic variation:  
Word-final /ɐ/ in generic and specific masculines in German**

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Previous research on English found that fine-phonetic durational differences are modulated by lexical and morphological differences, for example, in different types of word-final /s/ (Plag et al., 2017; Schmitz et al., 2021), in homophonous free and bound (pseudo-)stems (Engemann & Plag, 2021), and in homophonous words (Lohmann, 2018). The present study takes research on fine-phonetic differences one step further and asks: are there subphonemic durational differences in phonologically, morphologically, and lexically identical members of semantic minimal pairs?

To answer this question, a sentence reading task on German role nouns ending in the suffix *-er /ɐ/* was conducted. Target words were generic masculines and specific masculines, e.g. *Programmierer* ‘programmer’, and fillers were their feminine counterparts, e.g. *Programmiererin*. All targets were preceded by a simple disambiguating context and embedded in a sentence, with similar contexts and sentences for all forms of a target item. Each participant ( $n = 20$  thus far, at least 40 in total) produced 30 targets (currently  $n = 589$ , 11 data points were excluded due to stutter).

The duration of the *-er* suffix was analysed in linear mixed-effects models. The predictor of interest was the type of masculine (generic vs. specific); included covariates were number, definiteness, speech rate, preceding and following segment type, stereotypicality, phonological neighbourhood size, bigram probability, target, and speaker. The results showed that generic masculines come with longer *-er* durations than specific masculines ( $p < 0.001$ , *Cohen's d* = 0.91, see Figure 1).

The present findings add to the body on fine-phonetic durational differences unaccounted for by established theories of speech production (e.g. Kiparsky, 1982; Roelofs & Ferreira, 2019) and add a further dimension to the potential sources of variation in production. That is, it seems that in addition to morphological and lexical differences, fine-semantic differences just as well may influence the fine-phonetic realisation of segments in their duration. Overall, the present study contributes to the evidence calling for revisions in our understanding of speech production and influences thereon.

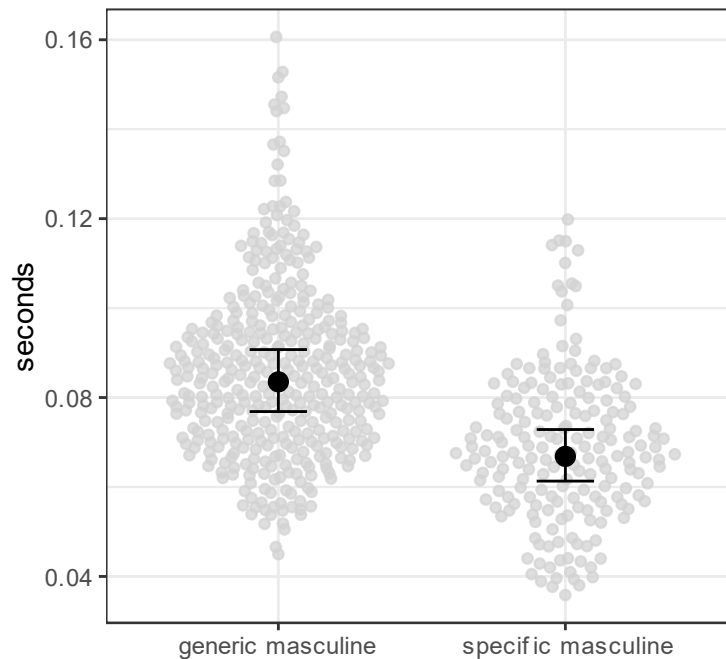


Figure 1. Partial effect of type of masculine as predicted by the linear mixed-effects model. Black dots represent the predicted mean, whiskers represent the 0.95 confidence intervals, light grey dots represent predicted data points.

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