

Measuring the Role of Hypoarticulation in a Sound Change in Progress in Southern German

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We present results from perception experiments designed to investigate the role of speech-rate-induced hypoarticulation in diachronic sound change. Hypoarticulation has been identified as one potential source for such change [1, 2]. However, this account is challenged by the fact that listeners generally compensate for the effects of fast speech: In minimal pairs differing in vowel length (e. g. German *Stadt*, ‘city’, vs. *Staat*, ‘state’), they tend to classify identical word tokens as containing long vowels when they occur in a fast carrier phrase (i. e. shorter duration) and vice versa [3]. The aim of the present experiments is to test whether compensation is diminished in listeners partaking in a sound change in progress.

The experiments are part of a larger-scale study on the evolution of quantity contrasts in consonants and vowels in Southern German (including Austrian and Swiss) varieties. Standard German features a phonemic vowel length (cf. example above) and a consonantal fortis-lenis contrast (e. g. *Hagen*, a given name, vs. *Haken*, ‘hook’), both of which are cued by duration (the latter in particular in the absence of aspiration [4, 5, 6]). The two contrasts can be freely combined in standard German vowel-consonant sequences. Central Bavarian (CB) varieties spoken in the south of Germany and in Austria differ from standard German in that combinations of long+fortis and short+lenis are phonotactically illegal [7]. Previous studies [8, 9], however, have presented evidence for a sound change in progress by which these combinations emerge in CB, too.

Our experiments test whether listeners of CB compensate less for speech rate than listeners from other German varieties (e.g. German Standard German, Swiss German) in which no such changes are expected. We are obtaining forced-choice judgments to continua spanning resynthesized versions of minimal pair words (e.g. *bitter-Bieter*, *baden-baten*) embedded in fast and slower carrier phrases spoken in the respective variety. The only cue to differentiate the words within any of these continua is the duration of the vowel or consonant, respectively. We will test a total of 136 listeners from three countries.

So far, we have tested a small number of listeners of German (N=7) and Austrian (N=5) CB varieties. Commensurate with Fig. 1, German CB listeners classify stimuli in fast carrier phrases more often as long vowels than in slower carrier phrases, indicating that they compensate for speech rate. Austrian CB listeners, on the other hand, show no such difference, implying that compensation is diminished in this group. These preliminary results suggest that the expected sound change is more active in Austria, where the standard is influenced by CB. The complete set of results will be discussed in light of usage-based theories [10] by which dialect leveling is the result of increased experience with the standard language.

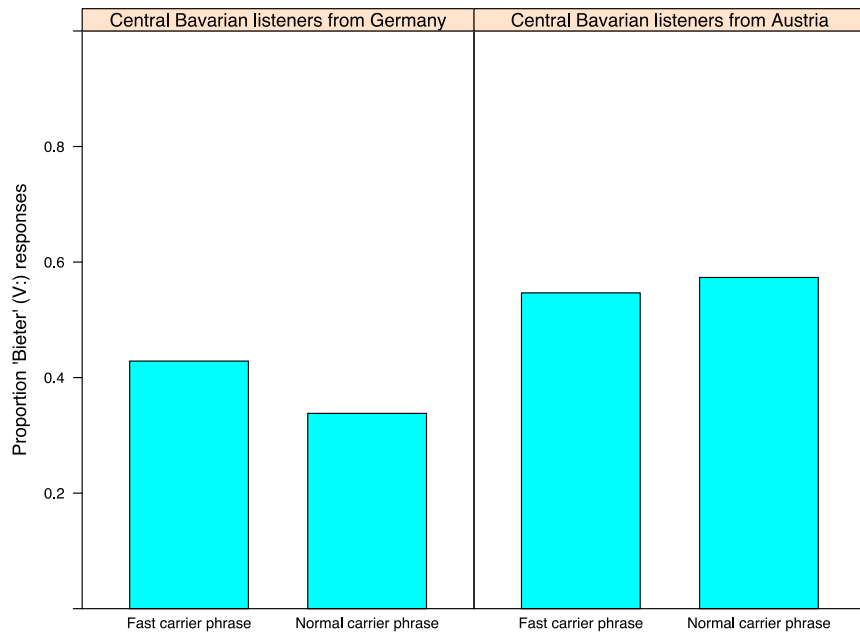


Figure 1: Responses in categorization tasks (30 trials per listener). Central Bavarian listeners from Germany ($N=7$) and Austria ($N=5$) had to categorize tokens as Bieter (long vowel) or bitter (short vowel). Tokens were embedded in either a fast or a slower carrier phrase. Germans compensated for speech rate, as indicated by the increased proportion of V: responses in the fast condition. Austrians showed no difference between conditions, suggesting that compensation for speech rate was diminished.

References

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