/t/-realization in German – A case for hybrid models?

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Reduction and deletion of /t/ has been the centre of interest of several empirical studies in the recent past, displaying a complex interplay of phonological, morphological and other factors in sound production (cf. e.g. Zimmerer et al. 2014). The proven relevance of usage-based and postlexical factors for the realization of words calls into question some basic assumptions of “traditional” accounts of Lexical Phonology which suppose a division between lexical and postlexical processes in word production (cf. e.g. Wiese 2000). To address this problem, hybrid models have come into play, aiming to reconcile systematic usage-based effects including phonetic detail with more formal processes and abstract representations (cf. e.g. Hinskens et al. 2014). Against this backdrop, the paper presents the results of a corpus study of spontaneous speech of ca. 600 instances of /t/ in complex German words. The dependent variables included categorical /t/-deletion as well as gradient durational reduction of the cluster. Next to controlling for several possible influences for the realization of /t/, the independent factors were token frequency and semantic transparency of the complex word, as well as type frequency and semantic bleaching of the first constituent. The results underline the reductional effect of token frequency on gradient duration as well as on categorical deletion of /t/. However, gradient reductions and categorical deletions do not always react to the same factors. All in all, the results can be seen to support the call for hybrid models where on the one hand some gradient and categorical effects should be separated, while on the other hand usage-based and word-based information can exert a systematic influence on sound production in complex words.