

Context effects on different processing levels in the perception of speech

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Phonological variants ('*posbank*' for *Postbank*; '*gartembank*' for *Gartenbank*) pose a major challenge for word recognition: How can a word be recognized if the input mismatches the stored lexical entry, which is classically assumed to be similar to the 'dictionary' form?

Proposed solutions range from lexical storage of variants—either by underspecification or episodic storage—to phonological and even auditory normalization. Normalization is possible if variants carry residual cues for the canonical form and are context-dependent. In such cases, pre-lexical normalization with context-sensitivity would make the lexical storage of variants would be superfluous.

I will focus on two cases, the assimilation of word-final consonants and the deletion of word-final /t/. The application of both phonological processes depends on the phonological context, and I will show that the phonological context also influences perception on different levels of processing. The normalizing influence of following context on the perception of assimilated segments is mainly based on language-independent auditory processes, which are moderated by language-specific knowledge. The reduction of word-final /t/ is facilitated by a preceding /s/ and a following bilabial consonant, so that the /t/ in *Postbank* occurs in the environment in which /t/-reduction is most likely. Listeners take both preceding and following context into account when compensating for the reduction of word-final /t/, but the preceding context influences perception on an auditory level already, while the following context influences perception only on a phonological level of processing. Taken together these results indicate an amazing amount of "cleverness" in pre-lexical processing, which may make the excessive lexical storage of phonological variants superfluous.