

"Evidence for specific prelexical phonological processing in compensation for assimilation"

Previous research evidenced robust context effects in compensation for assimilation (Gaskell & Marslen-Wilson 1996, 1998, Otake et al. 1996), suggesting that a specific phonological knowledge is involved in processing of assimilated words.

The question remains as to where during processing this phonological knowledge comes to use. Three processing levels could handle such a context sensitive compensation : the prelexical level (i.e. independently of the activation of a lexical representation), the lexical level (in line with exemplar models keeping information about variation within a given lexical representation), and the postlexical level through articulatory verification loops (Gaskell, Hare & Marslen Wilson 1995).

Compensation done at a prelexical level should apply for nonwords as well as for words, whereas both other levels should not show this effect. Postlexical compensation would be hindered by suppressing access to articulatory verification loops.

I tried to separate the respective predictions in three word detection experiments using nonwords and nonwords-sentences (Jabberwocky) as well as the technique of "articulatory suppression", where listeners are asked to speak loud while performing the word detection task.

Results argue in favor of the prelexical view of compensation: compensation for phonological variation applies for words as well as for nonwords and nonword-sentences. Articulatory suppression does not impede compensation. Taken together, results suggest that changes due to assimilation are processed and undone prelexically. Consequences for the form of lexical representations are discussed.