Morphological richness and the acquisition and processing of German morphonotactic patterns

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Phonotactics and morphotactics interact in the area of morphonotactics (Dressler & Dziubalska-Kołaczyk 2006), which creates either entirely new consonant clusters that do not exist in morphologically underived words or clusters which are homophonous with already existing clusters. Those already existing in underived words are phonotactic clusters, those newly created are morphonotactic clusters. Thus the question arises whether the interaction between phonotactics and morphotactics facilitates or renders more difficult the acquisition and processing of morphonotactic than of phonotactic clusters or whether the phonotactic vs. morphonotactic character makes no difference.

Previous research (Zydorowicz 2007, 2009, 2020; Kamandulyte 2006, Freiberger 2007, 2014; Korecky-Kröll & Dressler 2015; Zydorowicz, Kamandulyte, Korecky-Kröll & Dressler 2016) has shown that morphonotactic clusters do not pose greater acquisitional difficulties than phonotactic clusters to typically developing children, and evidence for facilitation of morphonotactic clusters has been found for Polish and Lithuanian, but not for German and evidence for processing of German has been divergent (Korecky-Kröll et al. 2014, Celata et al. 2015).

This has led to the hypothesis (Zydorowicz, Kamandulyte, Korecky-Kröll & Dressler 2016) that this may be due to the greater morphological richness of Polish and Lithuanian than of German. For morphological richness, defined as the amount of productive morphology (Dressler 1999, 2004), it has been demonstrated by Xanthos et al. (2011) that its presence in child-directed speech stimulates children to focus more on, and speed up, the acquisition of morphology. We extend this impact to facilitation of acquiring morphonotactic rather than phonotactic clusters. For processing our corresponding claim refers to Libben's (2014) principle of maximum opportunity.

German morphology is relatively poor in inflection (for which we have found no or no clear facilitation of the acquisition and processing of morphonotactic clusters), but rich in compounding and several areas of derivational morphology (prefixation, particle verbs, agent and action nouns). We have found corresponding significant results for the processing of morphonotactic vs. phonotactic clusters in compounds: words with the morphonotactic cluster /s+t/ were processed more accurately and faster than monomorphemic words with the phonotactic cluster /st/ in lexical decision and progressive demasking tasks in visual recognition).

Ongoing work indicates similar results for acquisition of compounding, also for derivational morphology, based on 3 large longitudinal corpora of children in interaction with their parents (from the onset of speech onwards) and the transversal corpora of 31 children at 4 data points (from 3;1 to 4;8). Current processing experiments with derivational morphology will show whether this is true also for processing by adults. Consequences for various models of acquisition and processing will be indicated.