Supra-lexical Prosodic Morphology in German

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On the basis of four case studies, I will discuss the influence of the three rhythmic constraints in (1) on the morphophonology of German. It will be shown that i. all three constraints condition the prosodic shape of words (I and II below), and ii. that their influence is not confined by word boundaries; instead, the choice of allomorphs is also affected by the prosodic structure of adjacent words (III and IV below).

(1)   a. *CLASH: no adjacent stressed syllables
        b. *LAPSE: no adjacent unstressed syllables
        c. PARALLELISM: two feet that are prosodic sisters must not differ w.r.t. branching

I. Several stress patterns in German complex words are motivated by *CLASH and *LAPSE: Clash avoidance may lead to stress shift (as in *natión+ál → nàtionál*); *LAPSE can be made responsible for the (opaque) formation of demonyms in certain dialects (2),(3).

II. Rhyme and ablaut reduplication: the data in (4) (Kentner, accepted) corroborate the findings by Wiese & Speyer (2015) and Wiese (2016) who make the case for prosodic parallelism. In these forms (which are often used as nicknames), base and reduplicant obey a strict non-identity requirement, guaranteed by rhyme or ablaut. Crucially, however, the two morphs must not differ prosodically, that is w.r.t. branching (*Il.se+bils, *Frinz+fran.ze*).

III. Coinages for musical genres from the website everynoise.com were examined. Besides simplex words (e.g. *pixie*), these coinages are either phrases (e.g. *swedish metal*), or compounds/blends (e.g. *triphop*). To ascertain the effect of PARALLELISM, all dyadic coinages (n=714) listed in everynoise.com were scrutinised. While the majority of these was nonparallel in nature (e.g. *chicago house*), the subset involving only native feet (monosyllables and trochees) as members of the dyad (n=498) did show a significant influence of PARALLELISM (z=2.611, p=0.009). Importantly, PARALLELISM appears to be effective both within complex words (*pop rock*) as well as beyond the word (*swedish metal*).

IV. Optional schwa: To ascertain the relative influence of the three rhythmic constraints in (1), the frequencies of the variable adverbs *gern~gerne* ("gladly")*, selbst~selber* ("him/herself"), and *lang~lange* ("long") were examined in the context of two forms of the verbs *tun* and *machen* ("to do"), respectively, creating six quadruplets of adverb-verb combinations. This way, eight conditions were devised in which the three rhythmic constraints were either violated or respected (see Table 1). For each combination of verb form and adverb, the corpus frequency (DeReKo) was determined. For all six quadruplets (verb form vs. foot structure of adverb, 2x2), chi-square tests revealed that the two factors are not independent (all p-values<0.001). To specifically test the effects of the three rhythmic constraints, mixed effects models were constructed with the standardized residual of the chi-square as dependent variable (cf. Figure 1), and verb and adverb as random effects. The full model with all three constraints as fixed factors yields significant effects for *CLASH and *LAPSE but not for PARALLEL. A likelihood ratio test demonstrates, that model fit does not deteriorate when discarding PARALLEL as fixed factor (chi-square=1.59, Df=1, p=0.207), suggesting that *CLASH and *LAPSE suffice to explain the rhythmic aspect of the morpho-prosodic alternation.

In sum, there is good evidence that all three constraints condition the morphophonolgy of German both within as well as beyond the word. The effect of PARALLELISM appears to be particularly evident in the case of names or coinages (which are relatively immune to further morphological processes); however, PARALLELISM may be superseded by *CLASH and *LAPSE in contexts that are more strongly affected by the morphosyntactic environment (IV).

I
(2) semi-transparent, with resyllabication (e.g. Bavarian, Upper Saxon)
    München ~ Münch(*e)ner; Weiden ~ Weid(*e)ner; Bautzen ~ Bautz(*e)ner

(3) opaque, elision of stem-final consonant (Northern Low Saxon)
    Bremen ~ Brem(*en)er; Emden ~ Emd(*en)er; Apen ~ Ap(*en)er

II
(4)   a. Krimskrams, Frinzfranz, Tingeltangel, Mitzematze
        b. Ilsebilse, Mannipanni, Popelmopel, Heinzipeinzi

IV
Table 1: Bigrams scrutinized in corpus experiment and corresponding factors used for the evaluation of rhythmic effects.

	PARALLEL	*CLASH	*LAPSE
gern/lang/selbst tun	✓	✗	✓
gerne/lange/selber tun	✗	✓	✓
gern/lang/selbst getan	✗	✓	✓
gerne/lange/selber getan	✗	✓	✗
gern/lang/selbst machen	✗	✗	✓
gerne/lange/selber machen	✓	✓	✓
gern/lang/selbst gemacht	✗	✓	✓
gerne/lange/selber gemacht	✗	✓	✗

Figure 1: Standardized residuals for the two levels of each of the three factors
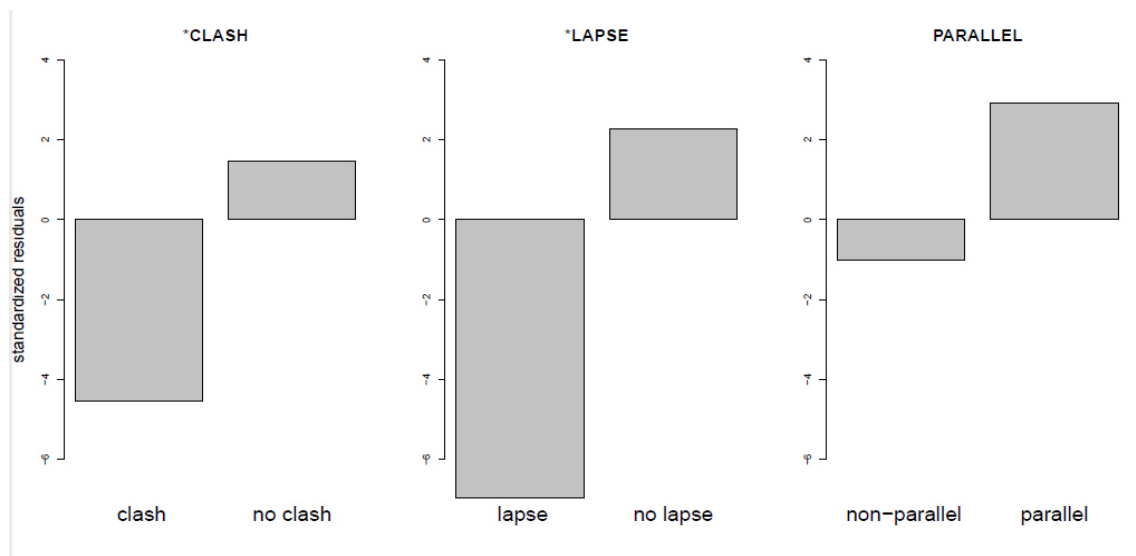
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