

Vowel quantity and syllable weight in German: A reanalysis

Joshua Booth, University of Oxford

The metrical system of Modern Standard German is highly complex and remains fiercely debated. Whilst it is accepted that German constructs trochaic feet from the right edge, fundamental questions of quantity sensitivity, extrametricality and the role of segmental quantity in determining syllable weight are still debated (for a comprehensive overview, see Jessen 1998, Féry 1998 and references therein). Of central interest are the underlying quantity of vowels, the weight of open syllables and the status of medial consonants in Romance loan words. Despite this complexity, a number of powerful generalisations can be identified (cf. Vennemann 1992), in particular the following: schwa syllables are incapable of bearing stress; main stress in simplex words is required to fall within the last three syllables; stress cannot fall to the left of a closed penult; and final schwa syllables predict penultimate stress, unless onsetless, in which case stress is antepenultimate. However, explanations for such generalisations have proved elusive. This paper seeks to provide a fresh account of stress in simplex German nouns by reassessing the relationship between underlying vowel quantity and syllable weight, proposing an additional contrast between underlyingly short and long tense vowels. This analysis allows us to capture the regularities and variation in a predictable way, without excessive reliance on lexically specified feet and extrametricality (or the suspect extrametricality of -VC syllables exclusively). It also explains why superheavy finals consistently attract stress and final -VC and -VV syllables sometimes receive main stress, but more often do not.

As Wiese (1996) notes, tense vowels can surface as either long or short as a product of stress (e.g. *Musik*~*musikalisch*), neutralising length distinctions in unstressed syllables; however, lax vowels are underlyingly short and restricted to closed syllables, otherwise obligatorily closed by an ambisyllabic consonant (“sharp cut” in Vennemann’s terminology). However, this predicts that many underlyingly long vowels only ever surface as short and fails to explain the inconsistent stressing of final open syllables, as in the simplex nouns /bi.'ki:.ni/ (suggesting a final (σσ) foot), /ga.ʁan.'ti:/ (suggesting a final (σ) foot) or, worse still, /'a:.li.bi/ (c.f. Domahs et al. 2008 for experimental evidence for these structures). I argue instead for a three-way contrast between long tense vowels, short tense vowels and short lax vowels, e.g. /'ki:.mə/, /'kɪmə/ and /'ɛs.ki.mo/. However, this contrast is made opaque by the neutralisation of length in unstressed syllables and the fact that stressed syllables must be bimoraic. Thus, only tense vowels can appear in open syllables and the only truly light syllables in German are schwa syllables and open syllables with an underlyingly short tense vowel. The benefit of such an analysis is twofold. Firstly, it becomes possible to treat both -VC and -VV as heavy, explaining why tense vowels in open syllables sometimes behave like heavy syllables and sometimes do not (being underlyingly long or short respectively). Secondly, it accounts for the ambiguous status of medial consonants in Romance loans, as the short tense vowels are for historical reasons restricted to such loans (and thus most frequently the high vowels /i,u/).

We can thus account for the regularities observed in the language data by constructing moraic trochees from right to left with final consonant extrametricality, in combination with a constraint that requires stress to fall on a bimoraic syllable. In this way, words ending in a schwa would be predicted to be stressed regularly on the preceding syllable unless it was light, which only occurs in words ending in /iə,uə/ (where stress would fall on the preceding heavy syllable). Nor would stress ever fall leftwards of a closed penult or an open penult with a long vowel. Crucially, however, it *would* be expected to fall on the antepenult if the penult is a schwa syllable or an open syllable with a short tense vowel, accounting for the difference in stress between /'a:.li.bi/ and /bi.'ki:.ni/ (and also remaining consistent with all surface realisations of such words). It furthermore becomes possible to account for the regular stress found on superheavy final syllables (which would be able to form a monosyllabic heavy foot, even with consonant extrametricality). In contrast, final tense vowels will only attract stress if they are truly underlyingly long, accounting for what would appear to be inconsistent behaviour if all final tense vowels were underlying -VV syllables. The mixed behaviour of final closed syllables is the product of a small class of stress-attracting syllables (e.g. -/ɛt/, -/ɛl/) which are most likely lexically specified, contrasting with the regular lack of stress, given their patterning with final stressed syllables featuring marked, nonnative segments, e.g. /bal.'kõ:./.