

PHARYNGEALS AND “LAX” VOWEL QUALITY

When Halle and Stevens (1969), based on X-ray evidence, proposed that “tense” vs. “lax” in the vowels of English be identified with the distinctive feature $[\pm\text{ATR}]$ recognised in the description of so-called cross-height vowel harmonies, that proposal was subsequently widely decried as lacking a factual base (cf. e.g. Lindau 1979, and the refs. there and in Ladefoged and Maddieson 1996).

Since then, it has been discovered that realisation of uncontroversial $[\pm\text{ATR}]$ in different languages can be as different from one another as they supposedly are from Germanic “tense/lax” (in both cases, the only consistent correlate eventually is a subdistinction in vowel height; cf. e.g. Jakobson, 1980: 195ff.); and in a number of languages, phenomena typical of $[\pm\text{ATR}]$ (vowel harmony) and phenomena typical of “tense/lax” (correlation with closed syllables) appear to involve the same feature, potentially rehabilitating Halle and Stevens’s proposal. **The present contribution, now, clarifies that situation; for in the surface phonological grammar of Swabian, a dialect of German, is found a phenomenon that requires a certain property in vowels to simultaneously be referred to as “lax” (vs. “tense”) and at the same time as involving a tongue root articulation as its defining characteristic** — consequently is to be encoded by the distinctive feature $[\pm\text{ATR}]$ (or an equivalent). The data have been published in the literature but their significance hadn’t fully been realised or at least hasn’t before now been explicated.

First of all, Swabian German has an alternation of a uvular approximant $[\text{ɣ}]$ in onset and an epiglottal approximant $[\text{ʕ}]$ in nucleus or coda position (diachronically, this distribution has arisen from a rhotic $/r/$; such a development is also known e.g. from Kedah Malay, cf. Trigo 1991). This allophonic relation supports McCarthy’s (1989; 1994) proposal that both uvulars and epiglottals are characterized by the feature [radical] (a.k.a. [pharyngeal]) and also shows that [radical] is the defining property of this phoneme of Swabian.

Of major interest here is its interaction with vowels; the description thereof by Hiller (1995; 1998) can be reinterpreted as follows (this output-oriented analysis being argued to be superior to his rule-based one):

- Swabian contrasts long and short vowel quantity (1).

(1) $[\text{ɣ}o\text{ʃ}t]$ “rust” — $[\text{ɣ}o:\text{ʃ}t]$ “grille”

- Similarly as in Standard German, tense $[i\ e\ \text{ə}\ o\ u]$ and lax $[\text{ɪ}\ \text{ɛ}\ \text{ɜ}\ a\ \text{ɔ}\ \text{ʊ}]$ vowel qualities can be distinguished. Unlike there, however, $/e(:)\ \text{ɛ}(:)/$ contrast at both quantities. $/a(:)\ \text{ɔ}(:)/$ don’t have a tense counterpart, and **the remaining lax vowels $[\text{ɪ}\ \text{ɜ}\ \text{ɔ}\ \text{ʊ}]$ occur if and only if three conditions intersect:**

1. The syllable must be closed.
2. The vowel must be of short quantity.
3. That lax quality must be licensed by a rightward adjacent $[\text{ɕ}]$ or $[\text{ɣ}]$ (cond. 1 entails: coda $[\text{ɕ}]$ or ambisyllabic $[\text{ɣ}]$).

Besides the said allophones, that triple condition also leads to neutralization of $/e\ \text{ɛ}/$ into $[\text{ɛ}]$.

- The first two conditions don’t leave a doubt that the feature interacting here is the same as $[-\text{tense}]$ in Standard German and other Germanic languages. The third one shows that the interaction involves a tongue root articulation, most presumably the vowel feature $[-\text{ATR}]$. **Therefore, $[\pm\text{tense}]$ and $[\pm\text{ATR}]$ must be the same feature.**

A further notable aspect of this interaction between [radical] in a consonant and [–ATR] in a vowel is that there is evidence that *those two are not* the same feature, but rather they are ambiguously identifiable analogous to the situation with [labial] and [+round], as has been argued in more length by Hiller (1995; 1998 following Clements 1989; 1993). This also means that the sign should be reversed: [≠RTR].

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