

Understanding the syllable

Ben Hermans and Francesc Josep Torres

Meertens Institute and CNRS-Paris

ben.hermans@meertens.knaw.nl francescjosep.torres@gmail.com

Phonologists agree that metrical structure and prominence are located in the same ‘dimension’. The representation of a trochaic foot, for instance, is as in (1a), not (1b). The type of notation given in (1a) was originally proposed by Hammond (1984) (although he represents hierarchical structure with trees), and became the norm since Halle and Vergnaud (1987) and Hayes (1995). The type of representation given in (1b) was the norm in the early days of (generative) metrical theory (Lieberman and Prince 1977 and Hayes 1980). In the recent literature it is still defended by Brett Hyde (Hyde 2002).

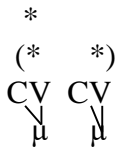
According to the theories of the type given in (1a) some node in the syllable dimension (mora or syllable) ‘projects’ a position in the prominence dimension. These positions are grouped into foot structure. In this sense the metrical and the prominence level are conflated into one dimension. In the theories of the type given in (1b) moras, syllables and foot structure are in a single dimension, separate from the prominence dimension.

In our talk we reflect on the status of the syllable. Analogously to what Hammond (1984) has done with foot structure we propose that the syllables and their ‘projections’ are conflated into a ‘constituentized’ prominence level, immediately dominating the mora line. Instead of (1a) we therefore represent a trochee as in (2), replacing the brackets with trees, as in Hammond (1984). This representation is economic in the sense that it replaces a syllable node AND its projection with one constituent immediately above the mora.

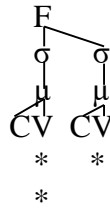
The most interesting aspect of this approach, however, is that the relation between what one might call ‘the phonetic syllable’ and the phonological syllable is not necessarily 1-to-1. We can have two phonological syllables where only one ‘phonetic’ syllable is heard; and we can have one phonological syllable, where two ‘phonetic’ syllables are heard. These mismatches are shown in (3).

The representation in (3a) derives the ‘moraic trochee’, the foot that maximally contains two moras. Formally, we say that in a language with moraic trochees, a mora cannot occupy a dependent position in a (phonological) syllable. Every mora will therefore occupy a head position in a (phonological) syllable. Since all phonological constituents are maximally binary, one ‘phonetic’ syllable projecting two phonological syllables will absorb the entire foot; consequently, if another monomoraic ‘phonetic’ syllable follows, this cannot be located in the same foot, as shown in (4a). What about the case where two ‘phonetic’ syllables project into one phonological syllable? This derives ternary feet. Formally we say that the head of the foot must branch (Dresher and van der Hulst 1998), and that the constraint disallowing a mora in a dependent position in a phonological syllable is insignificant. Therefore, if yet another mora follows the structure in (3b) it will be incorporated in the trochee, as shown in (4b). Giving the lowest prominence marks the status of phonological syllables, then, we can derive moraic trochees and ternary feet.

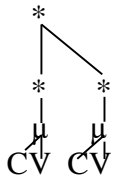
(1) a



b



(2)

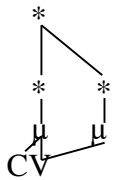


trochee

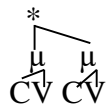
phonological syllables

(3) mismatches

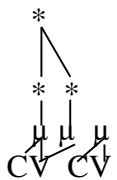
one 'phonetic' syll.,
two phonological syll.



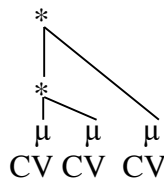
two 'phonetic' syll.,
one phonological syll.



(4) a) moraic trochee



b) ternary trochee



References:

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