

BETWEEN THE SEGMENT AND THE SYLLABLE (Part 2)**4. SYLLABLE-TEMPLATES AND THE SONORITY HIERARCHY**

Syllable-template for English: [21]

Only the N position is obligatory.

Study [22]

There is a clear ranking of accessibility to the head position: The standard distinctive features do not express this *relative ranking*

↓
expressed by recognizing a SONORITY HIERARCHY [23]

The SONORITY HIERARCHY (although will be refined) allows us not only to determine the head of the nucleus, but it also makes *predictions* as to the constituents of the syllable.

ONSETS are typically on the ascending slope of sonority, and codas are on the descending slope.

e.g. the sonority curve of *flint* : 3-6-8-5-1

Sonority Profile: The sonority of syllables increases from the beginning of the syllable onwards, and decreases from the beginning of the peak onwards. Violations of the sonority profile are uncommon!

Clements (1990:) In the onset, large sonority differences are preferred over small ones; syllables start with a “bang” and end with a “whimper”.

Sonority Scale (=hierarchy):

Obstruents – Nasals – Liquids – Glides – Vowels

Study Section 10.3.1 – textbook pp.138-139

But: The sonority hierarchy should be supplemented by *conditions*, because the template erroneously predicts as correct forms such as

* *bnit*, **psint* etc.

CONDITIONS: [24]

e.g. [24b] restricts the O₁ position to values 6, 7 and 8

train, clip, queen etc.

PROBLEM: The syllable template does not allow words such as *backs, act* etc. because condition [24d] requires a descending sonority slope within the coda. Also: *acts, texts, sixths* contain more than two segments (only two positions are in the coda in the template).

Two possibilities:

1. modifying the syllable template to accommodate final [ks] [kt] [kts] [ksts] and [ksθs] sequences;

(examples: p. 211)

2. considering EXTRAMETRICALITY



this is accepted by most phonologists

EXTRAMETRICALITY:

Assumption: some underlying segments may not be integrated to syllable structure -- they are extrametrical.

Argument: Simpler rules of stress assignment could be formulated if certain sequences were ignored.

e.g. In English, simpler stress rules can be formulated if we assume that the last consonant does not count. [25]

If the last consonant is irrelevant (=extrametrical), stress assignment is formulated in a simple manner:

Stress the last syllable if it is heavy, otherwise stress the penultimate syllable.

“Stray Segment Adjustment Rule” for accounting extrametrical segments as shown below:

i.

-*th*, -*s* : grammatical markers (e.g. *widths*); derivatively attached to the syllable → extrametrical!

ii.

[t] of *act*; [s] of *axe* : same or higher sonority index than the consonant preceding → the last segment is extrametrical!

In English EXTRAMETRICAL segments are [CORONAL]!

5. ARGUMENTS FOR THE CV-tier.

a. Representation of affricates:

The formalization reflects the intuition that affricates are considered as a single entity made up of two articulatory events.

[31] *chin*

The representation makes the feature [delayed release] unnecessary.

b. Representation of long segments:

A long segment always corresponds to two slots on the CV-tier; a short segment is anchored to a single C or V position.

[32] *bit, beat, bite*

Consider the syllable-template above: only two members were permitted in the onset and the coda;

What about words such as *strip* [str-] and *next* [-kst]?

Suggestion:

/st/ should be treated as a single unit.

Arguments:

- (i) Already in classical phonemics /st/ /sp/ and /sk/ were treated as “phonemic long components”



There are no *voiced* stops after /s/: the domain of the feature [voice] is *longer than one segment*.

The value of [voice] is determined by the fact that the stop constitutes a cluster with the /s/ → [-voice]!

- (ii) In verses sk- alliterates with sk-

st-	st-
sp-	sp-

sk- does not alliterate with st- or sp-

ONE SINGLE UNIT!

p- may alliterate with	pr-, pl
h-	hl-, hn

but:

s- may *not* alliterate with sk-, st-, sp.

The single unit can be made sense of by applying the formalism of CV-phonology:

[34] *strip*, *next*

There is thus another advantage of the CV-tier: the feature [long] can be eliminated -- this results in a more homogeneous feature set.

The templatic use of the CV Tier: Study the Arabic example (Section 10.4, text book pp. 139-141).

6. AMBISYLLABILITY

There is evidence that syllables may overlap:

e.g. *petrol*

The /-t-/ has simultaneously syllable-initial and syllable-final characteristics.

The /r/ is voiceless:

indicates that /t/ is syllable initial;

But there is a *glottal reinforcement* of the /t/: [tʔ] (in some varieties of English)

↓
typical for syllable-final positions

Thus the /t/ is AMBISYLLABIC.

Study [35a]

The /t/ is simultaneously associated with the CODA of the first syllable and the ONSET of the second syllable.

Does this imply that the /t/ is long?

No! Consider the CV-phonological representation! [35b]

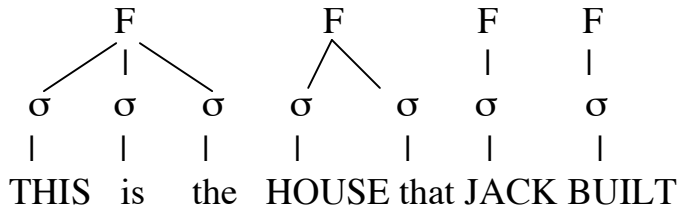
7. PROSODIC HIERARCHY

Syllables are grouped into rhythmic units: FEET.

This is the house that Jack built.

- there are four feet in this sentence;
- feet in English tend to be of equal duration: ISOCHRONY (much debated issue)

(F = foot)



Head-initial or head-final feet (p. 220)

STRESS AND PROMINENCE

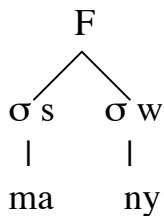
- Is stress a feature?
- Stress is a syntagmatic notion!

Numerological approach to stress -- WRONG!
Explain (p.224)!

METRICAL TREES:

Stress is considered to be a binary relation between two constituents: a strong element marked as *s* and a weak one *w*.

e.g. *many*



U = Utterance
f = Phonological Phrase
I = Intonational Phrase
F = Foot
 σ = Syllable

Example: *Many linguists go to Essex.*

Study [47] and [48]

