BETWEEN THE SEGMENT AND THE SYLLABLE  (Part 1)

1. THE SYLLABLE

SPE: The phonological representation consists of linear strings of segments with no hierarchical organization.

But: The syllable needs to be recognized as a phonological unit.

Example: In Polish, stress falls on the penultimate syllable.

SPE formalization: [3a], [3b], [3c]

correct formalizations, but they are arbitrary: the number of consonants is irrelevant.

If we recognize that the syllable is a unit, the Polish stress rule can be formalized as in [4].

What is the relationship between the syllable (=phonological unit) and its constituents (=segments)?


The σ node dominates immediately its constituents (daughters):

The word catkin may be represented as in [5].

- The nodes are linked to segments (=single column feature matrices) by ASSOCIATION LINES.
- Each maximal sequence of segments dominated by a single σ node constitutes a syllable.

C & K: There is a CV tier between the σ and the segments [6]. The C and the V slots form a set of timing units.

e.g. *catkin* [6]

C and V in the CV-tier define functional positions: *peak* vs. *non-peak*:

The CV-tier can be seen as subsuming the function of the feature [syllabic].

But: The CV-tier is not only a replacement of the feature [syllabic], but defines the units of timing (see above).

e.g. a single segment corresponds to a single instance of C or V on the CV-tier;

long segments correspond to two units on the CV-tier.

```
  V     V
 \ /     long vowel
  a

  V
 \| short vowel
  a
```

Textbook, Chapter 10, pp. 135-138:

The CV-tier thus has two roles:
  i. represents segmental duration
  ii. designates syllabicity (onset, nucleus or coda)

Syllables must be included in the phonological representation – *it forms the domain to which stress is assigned.*
Stress placement may depend on the structure of the Rhyme, i.e., whether it is heavy or light. Therefore, an intermediate level is recognized: *mora* 

Distinguishes between light (monomoraic) and heavy (bimoraic) syllables (pp. 145-147)

Duration: independent aspect of segment – an argument for a separate level: *CV-tier (= Skeletal Tier)*

Study the example in (1), p. 136.

2. **SUB-UNITS OF THE SYLLABLE**

On the analogy of NP - VP division of sentences in syntax, there is a major break between the ONSET of the syllable and the rest of the syllable: RHYME.

    e.g. [tr] in *train* is the ONSET

    [ejn] RHYME

**MAXIMUM ONSET PRINCIPLE** (MOP): First make the onset as long as it legitimately can be; then form a legitimate coda

Languages differ in the *syllabification domain.*

Text book, pp. 137-138)

**ARGUMENTS FOR THE ONSET-RHYME SPLIT:**

In Latin the stress rule can be stated as follows:

In words of more than two syllables, if the penultimate *rhyme* is heavy, it is stressed.
Heavy syllables:

(i) contain a long vowel or a diphthong;

(ii) short vowel followed by a consonant.

NOTE: The ONSET is irrelevant -- e.g. *ak* is just as heavy as *brak*.

In words where the penultimate *rhyme* is light, the antepenultimate is stressed.

Light syllable: An open syllable containing a short vowel.

Problem: What is common to a

\[
\text{long vowel and} \\
\text{a diphthong or} \\
\text{a short vowel + cons}. \\
\]

If we were to represent long vowels as [+long], the heaviness of a rhyme containing a long vowel would be *different* from that of the other types of rhyme.

| Heavy syllable: A syllable whose rhyme branches. |

STUDY [7]

ONSET irrelevance vs. RHYME relevance in the realization of stress has to be considered as evidence for the ONSET- RHYME split.

Spoonerism also provides evidence for the division of the syllable:

*if the fap kits* for *if the cap fits*

It shows that substitution involves ONSETS only; the RHYME is respected (= remains unchanged).
ARGUMENTS FOR THE NUCLEUS AND CODA SPLIT:

The RHYME can be divided into two parts: NUCLEUS and CODA.

NUCLEUS: The constituent that contains the head of the whole syllable.

In English, the nucleus is made up of short vowels (bit), long vowels (bead) or diphthongs (like).

The NUCLEUS imposes restrictions on the CODA, e.g. in English, the NUCLEUS /aw/ cannot be followed by non-coronals [10].

Study [11]

3. THE ELIMINATION OF THE FEATURE [syllabic]

The advantage of introducing the syllable into the phonological representation is the possibility of eliminating the feature [syllabic].

Along with the features [stress] and [long] the feature [syllabic] is DIFFERENT from other features, such as [coronal], [back] etc.

DIFFERENT: Syntagmatic!

Whether or not a segment is syllabic depends on its position within the syllable structure, not on any inherent phonological property of its own.

e.g. little - the non-syllabicity of the first /l/ and the syllabicity of the second /l/ is determined by their position.

By contrast, /l/ inherently is [CORONAL], [+lateral] etc.

If the feature [syllabic] is eliminated, the contrast between high vowels and glides is not one of feature-value assignment, but one of position within the syllable.

Any /i/ /u/ which is in the nucleus is automatically [+syllabic].

e.g. [aj] in buy is a true diphthong: /j/ belongs to the nucleus.
But: in the sequence /uj/ in French, the /j/ does not form a nucleus with the /u/, but is part of the coda.

e.g. *mouille [muj], with a suffix:

   *mouillons : resyllabifies rightward like any final consonant [mu$jô]