1 Syllables

Syllables have a powerful psychological effect that can be of great use if you are writing a song, a poem, or memorizing a spoken passage. Often in linguistic theory, the lowercase Greek letter σ (sigma) stands for “syllable.”

Two notations:

1. periods divide broad transcription into component syllables (typically but not always, each contains a vowel) and a diacritic marks unexpectedly syllabic sounds e.g.: [baɪ], [wɪk]

2. tree diagram differentiates constituents: onset, nucleus, coda, rime
   - presence or absence of a coda determines open vs. closed syllable
   - all constituents except the nucleus optional

   ![Syllable Diagram](attachment:diagram.png)

2 Systematic gaps

The phonotactics of a language lead to systematic gaps in the inventory of possible onsets.

some illegal English syllable onsets: vz, vn, dv, kt, pt, kp, zm, zr

All of these clusters are legal onsets in Polish. For English speakers, perhaps knowing $*[e, gm$ rules out the syllabification $*[seg]ment$ favoring instead $[seg]ment$. Likewise, $*[e pt might rule out [helicopter].

For foreign words involving illegal clusters (like the Russian name Dmitri) something’s got to give. A typical response is schwa epenthesis, e.g.

schwa epenthesis, again $\emptyset \rightarrow [\rho] / [+consonantal] [-nasal]$ (exceptions: /sm/, /sn/)

This happens under controlled conditions, too. In a production experiment, monolingual English speakers were asked to pronounce various illegal Polish consonant clusters.
(13) Experimental procedure

<table>
<thead>
<tr>
<th>TIME</th>
<th>1200ms</th>
<th>500ms</th>
<th>2400ms</th>
<th>3200ms</th>
</tr>
</thead>
<tbody>
<tr>
<td>COURSE PAUSE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

VISUAL vzety Can you tell me if the Vzety castle is open....

AURAL/ 9 [vzrzu]

SPOKEN

SPOKEN “Can you tell me if the Vzety castle is open....”

Results from production experiment.

Lisa Davidson, Paul Smolensky and Peter Jusczyk
The Initial and Final States: Theoretical Implications and Experimental Explorations of Richness of the Base.
In R. Kager, W. Zonneveld, J. Pater editors.
Fixing Priorities: Constraints on Phonological Acquisition.
Cambridge: Cambridge University Press.
3 A syllabification algorithm

Syllabify /ɪmprəˈvaɪz/

1. Vowels are typically nuclei – the only obligatory part. Create nucleus, rime and syllable nodes for each vowel.

2. Onsets before codas: the longest sequence of consonants to the left of each nucleus that does not violate the phonotactic constraints of the language is the onset. Make O the first child of σ.

3. Any remaining consonants to the right of each nucleus form the coda. A C node dominates them, and is a child of the rime.

how about slim, decline and scrimp?

4 Stress and Tone

Not the kind next week’s exam causes! Two notations:

1. preposed main stress mark /1 vs preposed secondary stress mark /1

2. a kind of histogram made with x’s above the individual syllables called a grid

try using notation two to describe the stress pattern of Mississippi, Apalachicola or Tennessee.

We have knowledge of regular stress changes:

MAGnify magnifiCAtion
perSONify personifiCAtion
It would just be wrong to say *PERsonify!