0. Intro

The paper aims to contribute to the study of phonological strength.

Claims:
(i) the phonological strength of consonants and vowels should be evaluated separately; consequently:
(ii) stress is a property of vowels (rather than syllables);
(iii) foot-based analyses are inadequate; instead
(iv) a system of V-to-V and V-to-C interactions makes better predictions.

1. Phonological strength

- weak = frequent site for lenition (weakening, incl. all types of reduction and deletion)
- strong = more resistant to lenition (stability, fortition, or less weakening than in weak position)
- certain positions (e.g., stressed vowels, word-initial or post-coda consonants) are stronger than others (e.g., unstressed vowels, word-final or coda consonants) both synchronically and diachronically
- universal tendencies + parameters (e.g., word-initial C, stress-sensitivity, quality of C₁ for post-coda C₂, etc., see Ségréal and Scheer 2008)

2. Analysis

Traditional:
- syllable-initial/onset, foot-initial/foothead -> strong(er)
- syllable-final/coda, foot-internal intervocalic (ambisyllabic) -> weak(er)
- i.e., reference to hierarchical/arboreal structure


(1)

<table>
<thead>
<tr>
<th></th>
<th>&quot;closed syllable&quot;</th>
<th>geminate</th>
<th>long vowel</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>pit</td>
<td>Hu. itas ‘drunk’</td>
<td>pea</td>
</tr>
<tr>
<td>C</td>
<td>V</td>
<td>C</td>
<td>V</td>
</tr>
<tr>
<td>p</td>
<td>t</td>
<td>\</td>
<td>/</td>
</tr>
</tbody>
</table>

(2) The phonological ECP (simplified)

An empty nuclear position is licensed to remain unpronounced if one of the following holds: (a) it is properly governed; or (b) it is parametrically licensed domain-finally.

(3)

<table>
<thead>
<tr>
<th>PG</th>
<th>PG</th>
<th>parameter: ON</th>
</tr>
</thead>
<tbody>
<tr>
<td>e</td>
<td>v</td>
<td>C</td>
</tr>
<tr>
<td>C</td>
<td>v</td>
<td>C</td>
</tr>
<tr>
<td>C</td>
<td>v</td>
<td>C</td>
</tr>
<tr>
<td>k</td>
<td>a</td>
<td>t</td>
</tr>
<tr>
<td>l</td>
<td>o</td>
<td>t</td>
</tr>
</tbody>
</table>

(4)

a. Government spoils the inherent properties of its target. (Szigetvári 1999: 66)
b. Licensing comforts segmental expression of its target. (Ségréal and Scheer 1999: 20)

(5)

A. atom
B. Tom

<table>
<thead>
<tr>
<th>C</th>
<th>V</th>
<th>C=⇒</th>
<th>V</th>
<th>C</th>
<th>V</th>
<th>C</th>
<th>V</th>
</tr>
</thead>
<tbody>
<tr>
<td>æ</td>
<td>t</td>
<td>a</td>
<td>m</td>
<td>t</td>
<td>o</td>
<td>m</td>
<td></td>
</tr>
</tbody>
</table>

universal tendencies:
- "post-coda" is preceded by empty V => strong
- "coda" is followed by empty V => weak
- "(foot-internal) intervocalic" is sandwiched between 2 nonempty V's => weak

parameters:
- boundary-marker CV is present/needs licensing: word-initial C is strong

1 lowercase letters = empty positions; boldfaced ev = boundary-marker; single arrow = government; double arrow = licensing
2 For the Two directions for lenition, see Szigetvári (1999, 2008).
• stress-sensitivity: stressed vowels can only govern the boundary marker CV (stress "materializes" as an empty CV unit – Ségéral and Scheer 2008; Antipenetration Constraint ["Government cannot penetrate a stress domain"] – Szigetvári 1999:79)

(6) Predictions of CVCV for stress-sensitive systems
a. #C is strong whatever V follows it: eCVV
b. V:CV: C is weak, stressed V's cannot be PG-ed
c. V:CV: (see e. and f. below)
d. VC:V, C:VC: 2 possibilities, e.g., alternative pronunciations: *  

\[ \text{V} \quad \text{C} \quad \text{V} \quad \text{C} \quad \text{V} \quad \text{C} \quad \text{V} \quad \text{C} \quad \text{V} \quad \text{C} \quad \text{V} \]

both C's are weak_2

\[ \text{V} \quad \text{C} \quad \text{V} \quad \text{C} \quad \text{V} \quad \text{C} \quad \text{V} \quad \text{C} \quad \text{V} \quad \text{C} \quad \text{V} \]

C_1 is weak, C_2 is strong(er)

C, will never be stronger than C); V, will never be stronger than V

e. pretonic unstressed syllables: the word-initial case: #C:V,C:V:V: C=C=2 (strong); V_1 is weak (being unstressed) and may be PG-ed by V_2, in faster/connected speech, where the licensing condition on the boundary marker is relaxed
f. pretonic unstressed syllables: the word-medial case: C, V, C:V, C:V:V, as in d. V_2 is not expected to be PG-ed by V_3

(7) Comparison of pretonic unstressed syllables

<table>
<thead>
<tr>
<th>consonant</th>
<th>initial (e.)</th>
<th>medial (f.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>vowel</td>
<td>stronger than in f.</td>
<td>weaker than in e. (but stronger than b.)</td>
</tr>
<tr>
<td></td>
<td>stronger than in f.</td>
<td>stronger than e.</td>
</tr>
</tbody>
</table>

3. Data from English: bear out the predictions

English*: typical symptoms:
• strong: stressed/full vowel, aspiration, /h/
• weak: V: reduced (typically: schwa), syncope

4, V, V: V, C:V, C:V, 2 possibilities, e.g., alternative pronunciations: *  

\[ \text{V} \quad \text{C} \quad \text{V} \quad \text{C} \quad \text{V} \quad \text{C} \quad \text{V} \quad \text{C} \quad \text{V} \quad \text{C} \quad \text{V} \]

both C's are weak_2

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f. pretonic unstressed syllables: the word-medial case: C, V, C:V, C:V:V, as in d. V_2 is not expected to be PG-ed by V_3

(8) Predictions of CVCV confronted with English data (cf. (6))

a. #C: tén/Tóm = tomórow
b. VCV; letté, átom
d. VCVCV: t immediately following the stressed vowel (e.g. Italy) must be a flap, later t (e.g. sanity) may be a flap (Kahn 1976: 165 fn.17, Hooper 1978, Selkirk 1982, Kreidler 1989: 110-111, Kenstowicz 1994: 69, Vaux 2002 and references therein); two successive potential lenition sites, e.g., compétive (Harris and Kaye 1990: 261): the second can only reduce if the first reduces, too; alternative pronunciations of Italy
f. pretonic unstressed syllables: CVCVCV:

\[ \text{C}_1 \text{ is stronger:} \text{ Méditerránean, militaristic, Návratilova, abracadabra, Winnesaukee, etc. (the "Withgott-effect": the systematic absence of lenition in the third position of nonfinal dactyls – Withgott 1983)} \]

\[ \text{capitalistic/militaristic ("Withgott-effect" + Paradigm Uniformity – Steriade 2000: 322-326)} \]

\[ \text{(no Withgott-effect in cases like (statisticistic – statistician)} \]

\[ \text{V}_1 \text{ is stronger: affected by reduction to a lesser extent: Tatamgoughi (Burzio 1994: 113, footnote 14 – also cited in van Oostendorp 2000)} \]

\[ \text{pre-stress syncope: word-initially only (?): milit'ristic/nation'lize? (lexicized examples?)} \]

(9) Comparison of pretonic unstressed syllables in English (cf. (7))

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<td>weaker, militaristic (cf. better)</td>
<td>stronger, militaristic (cf. better)</td>
</tr>
</tbody>
</table>

3. Data from English: bear out the predictions

English*: typical symptoms:
• strong: stressed/full vowel, aspiration, /h/
• weak: C: (pre)glottalization, unreleased plosive, no /h/
4. Foot-based adjunction analyses: problems with "unfooted" syllables


(10) a. abracadabra
   b. potáto
   \[ \begin{array}{c|c|c|c|c|c}
   F_t & / & F_t & / & \Sigma & F_t \\
   \sigma & \sigma & \sigma & \sigma & \sigma & \sigma \\
\end{array} \]

but: aspiration is stronger word-initially + no lenition in, e.g.,

gotato/tomorrow vs.

Anderson and Ewen (1987: 83): ambisyllabicity vs. absolute onsethood: heretic

(11) \[ [\text{he[re]tic}], \text{[tic]}]; \]

cf. (12a)

if ambisyllabicity is not accepted as a theoretical device: why is the third syllable stronger than the second? \(\Rightarrow\) (12b)

(12) a. \(\Sigma\)
   b. Word
   \(\Sigma\)
   \(\Sigma\)
   \(\Sigma\)

(b): if \(ca\) is a foothead, which it is in (12b), how is it able to reduce its vowel to a schwa?

5. Conclusions

- the evaluation of the strength of the pretonic unstressed syllable as a whole is ambivalent
- the phonological strength of consonants and vowels should be evaluated separately

- foot-adjunction analyses predict too much strength for either the vowel or the consonant
- prominence relations can be reduced to lateral interactions
- avoid the debatable notion of the syllable
- no reference to foot structure

References


(Produced by New York and London: Garland Publishing Inc. in 1980.)


