Phonological strength: Refinement #2
Recap:

<table>
<thead>
<tr>
<th>STRONG</th>
<th>WEAK</th>
<th>'stress parameter'</th>
</tr>
</thead>
<tbody>
<tr>
<td>'initial, onset'</td>
<td>'final, coda'</td>
<td></td>
</tr>
<tr>
<td>[#, ]</td>
<td>[_.c]</td>
<td></td>
</tr>
<tr>
<td>[c, ]</td>
<td>[_.#]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[v_v]</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>[OFF]</th>
<th>[ON]</th>
</tr>
</thead>
<tbody>
<tr>
<td>[v_v]</td>
<td>[v_v]</td>
</tr>
</tbody>
</table>
Refinement #1:

The “Withgott effect”
• tapping/flapping: the ‘classical’ pattern: roughly, in intervocalic position whenever the second vowel is unstressed
• but: Withgott (1982): tap suppression in certain positions (for certain speakers):

<table>
<thead>
<tr>
<th>flapped ɻ</th>
<th>aspirated ɻ</th>
</tr>
</thead>
<tbody>
<tr>
<td>capitalistic</td>
<td>militaristic</td>
</tr>
<tr>
<td>sanitisation</td>
<td>monotonicity</td>
</tr>
</tbody>
</table>

• cf. capital vs. military, sanitise, monotone: untapped ɻ in the derivative where there is untapped ɻ in the base due to stress on the syllable whose onset the ɻ is
• the problem of the third syllable in a dactyl
• foot-based solution: right-adjunction
the foot-based solution:

- accounts for the Withgott effect
- accounts for expletive infixation data
- no need to refer to PU effect -> accounts for underived examples (e.g., Navratilova) as well
- also accounts for initial unstressed syllables (e.g., potáto)

**BUT:** only applicable to nonfinal dactyls!

**next:**
- final dactyls are also special (cf. vánity, compétitive)
- *right* adjunction is ruled out: nowhere to adjoin ☹
- the only way is to the *left… :-P -- ??*
Interim summary:

+ tap suppression (= relative consonant strength) in the third syllable of a (nonfinal) dactyl
Refinement #2:

Weak vs. semiweak positions
• terminology introduced for Dutch by van Oostendorp (2000: 147-148)
• full vowel ~ schwa alternation in stressless position (basically free variation, style registers): 2 types of unstressed position: 'weak' (immediate post-tonic) and 'semiweak' (third in the dactyl), e.g.:

Dutch *fonologie* 'phonology'

  very formal: [ˌfonoloˈyi]
  less formal: [ˌfonəloˈyi]
  even less formal: [ˌfonəɬəˈyi]
  but: * [ˌfonəɬəˈyi]
van Oostendorp’s left-adjoined representation (ibid: 148, Figure 17)

- OT analysis: two constraints: no reduction if head of foot >> no reduction if head of branching foot (+ no unreduced vowel in non-foothead position)
- N.B. adjunction of the third syllable in the dactyl to the left (left-headed superfeet) – the opposite of Withgott & co.’s solution above, but
- is also applicable to final dactyls
Is there evidence for the weak-semiweak distinction in final dactyls?

evidence from English:
• Harris and Kaye (1990: 261): \( t \)-lenition in New York English (tapping) and London (glottalling): two successive potential lenition sites, e.g.

  competitive:
  comp[\text{e}]t[\text{e}]i[\text{e}]
  comp[e][\text{e}][\text{e}]
  comp[e][\text{e}][\text{e}]
  *comp[e][\text{e}][\text{e}]

  • the second can only reduce if the first reduces, too
• (parallel results obtained for tapping in NYC)
• [Harris and Kaye: "a 'chain' of reduction [...] along lines of government" – analysis not explicitly given; data ignored in later discussions]

\[ \begin{array}{cccccc}
N_1 & O & N_2 & O & N_3 \\
\mid & \mid & \mid & \mid & \mid & \mid \\
\times & \times & \times & \times & \times \\
\mid & \mid & \mid & \mid & \mid \\
\alpha & \beta \\
\end{array} \]
The data can be reinterpreted as weak vs. semiweak: stronger tendency to lenite in weak position (*compétitive*), semiweak (*compétitive*) is more resistant to reduction.
general difference between immediate post-tonic and later positions:

- native intuition: Ʌ immediately following the stressed vowel (e.g. *Italy*) must be a flap, later Ʌ (e.g. *sanity*) may be a flap – for these speakers, this is a difference between weak and semiweak positions: later Ʌ is in semiweak position, more resistant to reduction
- e.g., Hooper (1978): only post-tonic consonants are ambisyllabic, reflected by the fact that only such Ʌ's are flapped (as in *kitty*) as opposed to intervocalic consonants not preceded by the stressed vowel (as in *serenity*, which contains an aspirated /t/ for Hooper)
• Zue and Laferriere (1979): the “flapped” environment e.g., flatter vs. the “unstressed” environment e.g., complicity: different acoustic realizations + probability of occurrence of flap .99 vs. .33

• others: in words like capacity or éditeur aspiration is more acceptable than in átom or glíter (e.g. Kahn 1976/1980: 165 fn.17, Selkirk 1982, Kreidler 1989: 110-111, Kenstowicz 1994: 69, Vaux 2002 and references therein)

plus:
• the “Withgott effect” revisited: Steriade (2000: 322-326, endnote 4): tap suppression does not obtain in syllables that directly follow the tonic: *statistic* – *statistician*; generally, very few instances of non-tapped ʰ’s in the post-tonic position:

> [...] constraints that induce tapping are more stringent (i.e. more highly ranked) in the immediate post-stress position than elsewhere. PU effects surface only when the tapping constraint is weaker.
• That is, examples of tap suppression (whether or not they are manifestations of PU effects) are only found in the semiweak position, irrespective of morphological structure.

• semiweak = third syllable in a dactyl => adjoined to the left, with foot status (~ Dutch *fonologie*)
Weak and semiweak positions in vowel reduction and schwa syncope in English?

• Burzio (1994: 113, footnote 14 – also cited in van Oostendorp 2000): in English, foot-medial open syllables: affected by reduction to a greater extent than foot-final syllables¹: Tatamagouchi (tætəma)gouchi preferable to (tætəmə)gouchi; cf. Dutch above, i.e., in semiweak position vowels are more resistant to reduction

• Burzio (ibid.): analogously: (panama) => no difference between final and nonfinal

¹ Notice that Burzio allows for ternary feet.
• Burzio (ibid.): syncope: *memorization: (mem’ri)zation, not * (memor’)zation
• but: memorization is not a good example since:
  - the segmental context (r_z) doesn’t support the deletion of the second schwa,
  - word-internal pre-tonic syncope is unacceptable (at least in certain registers/speech rates), cf. séparàte (v) vs. séparate/sép’rate (adj)^2
• instead: RP/BrE confectionery, functionary: -ʃnəri better than -ʃənri
• => analogous to Dutch vowel reduction data

^2 Stress clash avoidance is insufficient explanation: general tendency of stressed vowels to refuse to support weakening, cf. nationalize nash’nalize but *nation’lize (option of syllabic consonant formation is ignored).
Interim conclusions:

- the immediate post-tonic position is weak, the third syllable in a dactyl is semiweak in both consonant lenition and vowel reduction/syncope
- there is a “minimal domain” for lenition (comprising the foothead and the weak position): lenition outside that domain implies lenition within
- weak = recessive position within this domain; semiweak = recessive position outside this domain
Foot-based adjunction analyses: problems with "unfooted" syllables

- Davis (2005) (~ Withgott 1982, Jensen 2000): adjunction of stray syllable to the right (a): analogy with word-initial unstressed syllables (b):

```
a. Winnepesáukée

F₃ /
F /
F /

σₛ  σₜ  σₜ  σₛ  σₜ

winne pe sau kee

b. potáto

F₃ /
F /

σₜ  σₛ  σₜ

po ta to
```
• but: aspiration is stronger + no lenition is possible word-initially in, e.g., potato/tomorrow vs. possibility of tapping in, e.g., Navratilova (i.e., initial/medial asymmetry – see below)
• only applicable to nonfinal dactyls (competitive 😞)
• the other option: left-adjunction (∼ Dutch fonologie)
• for a final syllable, e.g., Anderson and Ewen (1987: 83): ambisuylabicity vs. absolute onsethood: *heretic*:

\[ 2[1[[he\{r\}e]]_1 [tic]]_2 \]

• arboreally: “weak” consonant is ambisuylabdic, “semiweak” is onset – theoretical problems: (i) ambisuylabicity; (ii) strict layering
• alternatively: complete analogy with Dutch *fonologie*:

```
  Word
     \   /
     Σ   Σ
    /   /
   Ft  Ft  Ft
  /   /   /
 σ  σ  σ  σ  σ  σ
 /   /   /
wi  nne  pe  sau  kee
```

• but: if *pe* is a foothead, how is it able to reduce its vowel to a schwa? Headless/unstressed foot??
• the problem persists: what shall we do with “unfooted” syllables? Degenerate (unary/subminimal) feet? Headless feet? Remain unfooted (immediately dominated by higher projection)? – all of these raise theoretical questions

• there is no uniform direction for adjunction (*potato* vs. *competitive*)

• plus: further asymmetries in pretonic unstressed position
• plus: further asymmetries in pretonic unstressed position:

**initially:**
C is strong: *potáto* (strong aspiration)
V is weak: *políce, suppóse*: pre-tonic syncope is possible; may even lexicalize: *pram* (from *perámbulator*), *s'pose, praps*

**medially:**
C is semiweak: *militarístic, Návraťilóva, abracadabra*, etc. (recall the "Withgott-effect")
V is semiweak: affected by reduction to a lesser extent: recall *Tatamagouchi* (Burzio 1994) + pre-stress syncope is blocked/restricted: *milit'ristic? nation'lize?* (lexicalized examples?)
## Comparison of pretonic unstressed syllables in English

<table>
<thead>
<tr>
<th></th>
<th>initial</th>
<th>medial</th>
</tr>
</thead>
<tbody>
<tr>
<td>consonant</td>
<td>stronger: <code>potáto, police</code></td>
<td>weaker: <code>capitalistic/militaristic</code> (cf. better)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>vowel</td>
<td>weaker: <code>potáto, police</code> (+ <code>pram, s'pose, praps</code>)</td>
<td>stronger: <code>?milit'ristic/nation'lize, Tatamagouchi</code></td>
</tr>
</tbody>
</table>

- 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, or raise theoretical problems
• alternatively: prominence relations should be reduced to lateral interactions, with less hierarchical structure (as in, e.g., CVCV phonology – Lowenstamm 1996, Scheer 2004)\(^3\) or at least with more linear contextual relations/constraints

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\(^3\) As proposed for this specific case in Balogné Béricès (2011).
next: Splitting ‘intervocalic’ into post-short and post-long (Balogné Bérces – Honeybone (2012))