Class 14: Structure above the segment II

To do
- Kalinga assignment (on last week’s material) is due Friday
- Next reading Hall 2006 (due Tuesday)
- Project: have talked to me a second time by the end of next week

Overview: Last time we reviewed evidence for skeleta, syllables, and moras. This time let’s see grids, feet, and prosodic words.

1 Reasons to handle stress with a metrical grid
- Stress relations are often represented as a grid (Liberman 1975).
  - Rows (a.k.a. ‘layers’) represent degrees of stress; columns are associated with stress-bearing units (syllables, typically).

\[
\begin{array}{cccccc}
  & x & x & x & x & x \\
  x & x & x & & & \\
  x & x & x & x & x & x \\
  re & con & ci & li & a & tion (example from Hayes)
\end{array}
\]

  - Grids are subject to the inviolable Continuous Column Constraint: for every grid mark (except on the bottom layer) there must be a grid mark in the same column on the layer below.

- Locality
  English phrasal stress rule (a.k.a. nuclear stress rule): place main stress on last word of phrase\(^1\)
  - But sometimes main stress ends up several syllables from the end of the phrase—makes for an awkward rule
  - Example from Hayes: hypothètical imitators (or maybe hypothetical imitators).

Grid version of the rule is local:
\[
\begin{array}{c}
  x x \\
  x x \\
\end{array} \rightarrow \begin{array}{c}
  x \\
  x x \\
\end{array} = \text{“if the top layer of the grid has exactly two marks, add another mark to the second one”}
\]

  - Any amount of white space is allowed between and on either side of \(x\)s on the same layer when matching representations up to the structural description
  - The structural description could match any (adjacent) rows of the grid

  - Draw grids for hypothetical and imitators in isolation; put them together and apply this rule.

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\(^1\) This can be overridden by focus. Also, watch out for compounds.
The optional English rhythm rule (Prince 1983): really an interaction between a constraint NOCLASH and a rule Move-X.

NOCLASH: * x x (if two grid marks are adjacent on their layer, the grid marks under them can’t also be adjacent on their layer)

Move-X: Move one grid mark along its layer (triggered by NO-CLASH)

English-specific detail: only leftward movement is allowed here.

- Draw the grids for Mississippi and legislators. If you put them together, is NO-CLASH violated?

- Apply Move-X if necessary—where can X move to without violating the Continuous Column Constraint?

- In what way might this operation appear non-local? In what way is it local?

- The rich get richer: in the rhythm rule, Prince notes that the stress retracts onto the strongest preceding syllable. Here are some of Hayes’s examples...

- Draw grids for Sunset Park and Zoo, and then put them together and apply Move-x to resolve/alleviate the clash. Where can the moved x land?

- Let’s use the rhythm rule to figure out grids for totalitarian tendencies (more than one possible outcome?) and Constantinople trains
• And the poor get poorer (Hayes): Consider the derivation of *paréntal* from *párent*. When –*al* is added, assume that stress rules add stress to the new penult (*paréntal*). Then main stress is assigned (*pàréntal*).

  o Draw the grid for *paréntal*. What constraint is now violated? Can Move-X help?

  o Assume a rule ‘Delete (one) *x*’ that can be triggered by constraint violation (though not by NoCLASH, apparently). What options do we have for applying that rule?

2 Reasons to add feet

2 Minimality: size restrictions on content words

  - Estonian (Prince 1980): ≥ two moras, word-final C doesn’t count
    /tänava/ tänav ‘street (nom.sg.)’
    /konna/ kon:n ‘frog (nom. sg.)’
    /kana/ kana (*kan) \(V\)-deletion blocked ‘chicken (nom. sg.)’

    /k+tats+s/ íktats ‘I offer’
    /hs+ya?ks+s/ íhsya?ks ‘you are cutting’

  - These look suspiciously like feet: maybe moraic trochees for Estonian ((LL) or (H)), syllabic trochees for Mohawk (oo)

  - Hayes 1995: Can we just say that “every word must be able to undergo the stress rule” (without invoking feet in the stress rule)? Try it for Mohawk, which has penultimate stress.

  - From Hayes 1995: Pitta-Pitta [Australian, prob. no speakers]—words also must be ≥ 2 sylls.\(^2\)
    káku ‘older sister’
    kákila ‘coolamon, car, buggy’
    kálakùra ‘type of corroboree’

  o What would be the main stress rule for Pitta-Pitta?
  o Does our rule exclude subminimal words (*ka)? What about other formulations of the rule?

But: There is much debate about how well minimum-word requirement really lines up with foot shape crosslinguistically: see Golston 1991, Garrett 1999, Blumenfeld 2011.

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\(^2\) Data warning: To get these examples I took words from Blake’s “Pitta Pitta wordlist” (coombs.anu.edu.au/SpecialProj/ASEDA/docs/0275-Pitta-Pitta-vocab.html), which doesn’t mark stress, and then added in the stresses according to Hayes’ reporting of Blake's (1979) description.
• Trochaic languages are more common than iambic; with feet, we can characterize one parameter setting as more common (doesn’t explain that fact, though).

• Various consonantal rules apply to the “strong” or “weak” syllable of a foot, even if the foot is not supposed to have any stress (i.e., in languages reported to have no secondary stress). See González 2002 for a case of this and a case of something even more complicated.

• Expletive infixation in English (McCarthy 1982):
  
  Mo(nònga)-(fucking)-(héla)
  (Øs)-(fucking)-(wégo)
  (Àpa)-(fucking)-(làchi)(cóla), (Àpa)(làchi)-(fucking)-(cóla)
  (Tàta)ma-(fucking)-(góuchi) – (Tàta)-(fucking)-ma(góuchi)

  *but can it be described in terms of lapse and clash?*

• Latin enclitic stress (Steriade 1988; Jacobs 1997):
  
  Latin stresses the penult if it’s heavy, otherwise the antepenult (data from Jacobs/Hayes):
  
  (cà.me)<ram> (ár.bo)<rem> pe(dês)<trem> vo(lup)(tá):<tem>
  (sí.mu)<la:> do(més.ti)<cus> a(mi)<cus> (li.be)(ra:ti)(ót):<nem>

  But, it’s different when you add an enclitic: Steriade proposes that
  
  (i)<ta> ‘so’ (i)(tá)=<que> ‘and so’ *(i.ta)=<que>
  (mú)<sa> ‘Muse’ (mu)(sá)=<que> ‘and the Muse’ *(mú.sa)=<que>
  (li:mi)<na> ‘thresholds’ (li:mi)(ná)=<que> ‘and the thresholds’ *(li:mi:na)=<que>
  (no)<bis> ‘us’ (no)(bis)=<cum> ‘with us’
  (no)(bis)=(cúm)=<que> ‘and with us’

  Steriade’s solution: when a clitic is attached, only previously unfooted material can be footed: old feet can’t be readjusted (let’s step through a couple of these)

  To deal with the following data, Jacobs proposes that not only final syllables, but also final enclitics are extrametrical:
  
  (id) ‘this’ (id)=<circo:> ‘therefore’ *(id)=(cír)<co>
  (id)=(cir)(có:)=<que> ‘and therefore’
  (quá:)<prop> ‘wherefore’ *(qua:)=(pró)p<ter>
  e(á): ‘there’ e(á)=<prop> ‘therefore’ *e(a:)=<prop><ter>
  e(a:)=(prop)( tér)=<que> ‘and therefore’
  (ú)<bi> ‘where’ (u)(bi)=<li:bet> ‘wherever’

  o Bring on the dissent and counter-analysis for all of these...
19 Feb. 2015

• Asymmetric foot inventory

<table>
<thead>
<tr>
<th></th>
<th>trochees</th>
<th>iambs</th>
</tr>
</thead>
<tbody>
<tr>
<td>quantity-insensitive</td>
<td>attested</td>
<td>unattested</td>
</tr>
<tr>
<td>quantity-sensitive</td>
<td>attested: moraic (L), (H)</td>
<td>attested: “uneven” (L), (H), (L)</td>
</tr>
</tbody>
</table>

- Hayes (1995) argues, through an extensive typological survey, that these 3 are the only foot types. There are claimed to be no languages with syllabic iambs.

[Altshuler 2006 gives a convincing counterexample—Osage—complete with acoustic data: there is a length distinction in vowels, but still stress on all even-numbered syllables, regardless of length. There are words with stress on all the odd-numbered syllables, suggesting trochees, but Altshuler argues from suffixation that those are exceptions; the language is iambic by default.]

3 Why the asymmetry? (skip if short on time)
- Rice 1992, ch. 5 Reviews and replicates Woodrow 1909, 1911, 1951b. Schematically,

- Grouping preference is stronger for duration-varying stimuli than for amplitude-varying stimuli.
- Subjects were played various binary, 7-repetition sequences of tones varying in tone duration, intertone pause duration, and tone pitch (Rice didn’t test intensity; Woodrow did) and had to say whether each was weak-strong or strong-weak.

Percent trochaic (strong-weak) response (Rice p. 195)

<table>
<thead>
<tr>
<th>Stimulus 1</th>
<th>Stimulus 2</th>
<th>Stimulus 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1</td>
<td>59.62</td>
<td>67.31</td>
</tr>
<tr>
<td>Group 2</td>
<td>46.15</td>
<td>38.46</td>
</tr>
<tr>
<td>Group 3</td>
<td>57.69</td>
<td>50.00</td>
</tr>
<tr>
<td>Group 4</td>
<td>51.92</td>
<td>57.69</td>
</tr>
</tbody>
</table>

Difference increases ----->
(except Group 1, where duration changes)

3 I tried to read Woodrow 1909 but in the time I could spare for the task it was just about impenetrable, so unfortunately I have none of his raw results to share with you. Apparently Fraisse 1963 is a good source on classic time-perception research too, if you're interested.

Ling 201A, Phonological Theory II. Winter 2015, Zuraw
The duration-alternating stimuli (Group 2) produce the most “iambic” responses, more strongly so as the duration difference increases.

*Hayes 1995 cites also*

- similar evidence from musicians’ judgments Cooper & Meyer 1960: “Durational differences...tend to produce end-accented groupings; intensity differentiation tends to produce beginning-accented groupings” (p. 10; as quoted by Hayes p. 80)
- a study of Swedish poetry Fant, Kruckenber, & Nord 1991 in which…
  - reciters produced greater durational contrasts in iambic verse than in trochaic
  - musicians transcribing verse into musical notation “likewise reflected the pattern of the law in their choice of note values”
  - poets use greater contrast in number of phonemes (for accented vs. unaccented syllables) in iambic verse than in trochaic
  (see also Newton 1975 for English verse)

→ “Iambic/Trochaic Law” (Hayes 1995, p. 80)
  a. Elements contrasting in intensity naturally form groupings with initial prominence.
  b. Elements contrasting in duration naturally form groupings with final prominence.”

4 **A consequence of the asymmetry: trochaic shortening**

*Middle English.* This is apparently a bit controversial, but here’s the standard story (Mellander 2004):

- Assume footing as shown—I’m leaving as open/unsolved why these footings (issues: is it extrametricality or non-finality? which consonants are moraic?)

  - How can we analyze these?
    
    (sú:ð)  ‘south’  (sú:ð)<ne>  ‘southern’
    di(ví:n)  ‘divine’  di(ví:n)<tie>  ‘divinity’

- I couldn’t get clear Middle English data easily, so here are some Modern English examples that reflect the same phenomenon (whether or not it’s now synchronically real), from Prince 1990, pp. 13-14, with a couple of substitutions:

  - Analysis from above should extend straightforwardly:
    
    (ó:ð)mən  ‘omen’  (ó:ð)məs  ‘ominous’
    (sé:n)  ‘sane’  (sé:n)ri  ‘sanity’

  - How do these work? (These examples show that “trisyllabic shortening” is a bit of a misnomer) [Prince, following Myers 1987, says that the suffix –ic is, exceptionally, not extrametrical.]
    
    (kó:n)  ‘cone’  (kú:n)  ‘conic’
    (má:jm)  ‘mime’  (mí:m)  ‘mimic’
Can we explain the different pronunciations of the prefix? (Never mind why the final syllable is now getting footed—probably something to do with the = boundary)

- (ɹɛ́.bəl) ‘rebels’
- (ɹɛ́.kəd) ‘record’ (noun)
- (ɹɛ́.zi(denˌʒɔl) ‘residential’
- (ɹɛ́.fəs) ‘preface’
- (ɹɛ́.lət) ‘prelate’
- (ɹɛ́.məs) ‘premise’
- (ɹɛ́.zən(ˈteːˌʃən) ‘presentation’

(ɹɛ́.bəl) ‘rebels’
(ɹíː)(bèːt) ‘rebate’
(ɹíː)(læ̀k)(séː)ʃən ‘relaxation’
(ɹ̞.kɚd) ‘record’ (noun)
(ɹ̞.fɪ̀k)s ‘prefix’
(ɹ̞.pɪ̀(mɛ̀.ɾɨ)ˈteːʃən) ‘premeditation’

5 Turning our attention to larger constituents: Why do words matter in phonology?
- This was already an issue in SPE. Take a rule like...

\{u,i\} → Ø / +__# (Chomsky & Halle 1968, p. 239)
accounts for alternations in *bile-bilious, reptile-reptilian*

- What determines whether there’s a #? In SPE...
  - some #s are generated by syntactic brackets
  - some affixes have a # in their lexical entry (/#iv/)
  - #s can also be deleted, inserted, or changed by phonological rules

- OT stress and other constraints often refer to the word or to word boundaries:

\[
\text{ALIGN(Word, L; Foot, L), } \begin{vmatrix} +\text{son} \end{vmatrix} +\text{voice} \# 
\]

6 What counts as a word? Descriptive example from Samoan
- The domain of footing in Samoan is a lexical root (Noun, Verb, Adj), plus any associated bound morphemes after it (Zuraw, Yu & Orfitelli 2014):

  - Primary stress is trochee at right edge:

<table>
<thead>
<tr>
<th>la(vá:)</th>
<th>‘energized’</th>
<th>le(léi)</th>
<th>‘good’</th>
<th>(mán’u)</th>
<th>‘bird’</th>
<th>ma(nōŋ’i)</th>
<th>‘smell good’</th>
</tr>
</thead>
<tbody>
<tr>
<td>(sámr)</td>
<td>‘sea’</td>
<td>pu(liŋ’i)</td>
<td>‘pudding’</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(átra)</td>
<td>‘picture’</td>
<td>i(ŋəa)</td>
<td>‘name’</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(ŋífo)</th>
<th>‘tooth’</th>
<th>ŋi(f-o-a)</th>
<th>‘having teeth’</th>
</tr>
</thead>
<tbody>
<tr>
<td>sa(vá’i)</td>
<td>‘walk’</td>
<td>(sàva)(lī-ŋ’a)</td>
<td>‘parade’</td>
</tr>
<tr>
<td>(måfa)(tía)</td>
<td>‘stress out’</td>
<td>(måfa)t(á-ŋ’a)</td>
<td>‘distress’</td>
</tr>
</tbody>
</table>

- In a compound, each root starts its own stress domain:

  - a(lōfi)-(vāe) ‘sole of foot’ (assembly+foot) *(ālo)fi-(vāe)*
  - (āŋ’a)-le(āŋ’a) ‘bad behavior’ (bad+behavior) *(a(ŋale)(āŋ’a)*

*Ling 2014, Phonological Theory II. Winter 2015, Zuraw*
\( (HL) \) foot not tolerated \( \Rightarrow \) “trochaic shortening”—domain again includes suffixes

\[
\begin{align*}
(fúsˑi) & \text{ ‘hug’} & Ũ(u)(sí-a) & \text{ ‘hug-ERG’} & /fusi/ \\
(\text{túsˑi}) & \text{ ‘write’} & Ũ(u)(sí-a) & \text{ ‘write-ERG’} & /tusi/ \\
(màː)(lòː)(lóː) & \text{ ‘restv’} & (màː)(lòː)(ló-ŋˑa) & \text{ ‘restN’}
\end{align*}
\]

\textbf{Certain vowels have to foot together, e.g. /ai/, /au/:}

\[
\begin{align*}
(\text{mái}) & \text{le ‘dog’} & \text{cf. ma(élˑa) ‘hollow’} \\
(\text{máu}) & \text{ŋa ‘mountain’} & \text{cf. ma(ótˑa) ‘pastors house’}
\end{align*}
\]

\textbf{...but not across a boundary that includes the beginning of a root:}

\[
\begin{align*}
(\text{fàʔa})-(úlu)-(úlˑu) & \text{ ‘be subject to’ (ulu ‘head’) } *\text{fa(ʔà-u)}(lu)-(úlˑu) \\
(\text{fàna})-(iʔa) & \text{ ‘dynamite for fishing’ (shoot + fish)} \\
(\text{pòna})-(iia) & \text{ ‘Adam’s apple’ (knot + neck)}
\end{align*}
\]

\textbf{In summary, if p-word is domain of footing,}

\begin{itemize}
\item [root]p-word
\item [root-suffix]p-word
\item prefix-[root]p-word
\item [root]p-word-[root]p-word
\end{itemize}

\( \Rightarrow \) every root initiates a new p-word.

\textbf{This is a very common pattern cross-linguistically (see Peperkamp 1997 for a review and some in-depth case studies).}

\section{How can an analysis capture what counts as a word?}

\textbf{Following Peperkamp 1997, we can do it with ALIGN constraints (McCarthy & Prince 1993), such as ALIGN(LexWord, L; PWord, L).}

\textit{o} Let’s try some tableaux for Samoan.
8 English example

- Many English function words (i.e., not Nouns, Verbs, or Adjectives) have weak and strong forms.

<table>
<thead>
<tr>
<th></th>
<th>strong</th>
<th>weak</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>to</strong></td>
<td>ṭʰu</td>
<td>ṭʰə</td>
</tr>
<tr>
<td><strong>at</strong></td>
<td>æt</td>
<td>æt</td>
</tr>
<tr>
<td><strong>for</strong></td>
<td>fɔɾ</td>
<td>fɔ-</td>
</tr>
<tr>
<td><strong>a</strong></td>
<td>æt</td>
<td>ø</td>
</tr>
<tr>
<td><strong>and</strong></td>
<td>ænd</td>
<td>n</td>
</tr>
</tbody>
</table>

- I’m going __ London next summer. Where are you going __?
- I’m looking __ Campbell Hall. What are you looking __?

- Selkirk 1995 proposes two possible structures:

- To avoid cluttering the tableau, assume that the “t[u]”s form a foot with stress; “t[ə]”s are unfooted.

<table>
<thead>
<tr>
<th></th>
<th>to London</th>
<th>ALIGN (LexWd,L,PWd,L)</th>
<th>ALIGN (PWd,R,LexWd,R)</th>
<th>FOOTMUST BEDOMINATED BYPWORD</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>[ tʰu London ]PWd</td>
<td>*!</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b</td>
<td>[ tʰə London ]PWd</td>
<td>*!</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c</td>
<td>tʰu [ London ]PWd</td>
<td></td>
<td>*!</td>
<td></td>
</tr>
<tr>
<td>d</td>
<td>tʰə [ London ]PWd</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e</td>
<td>[ tʰu ]PWd [ London ]PWd</td>
<td>*!</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f</td>
<td>[ tʰə ]PWd [ London ]PWd</td>
<td>*!</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Focus changes things: *I need a flight TO London, not FROM London.*)

- **looking at**: draw a phonological tree that causes *at* to be pronounced in its full form
Fill in the tableau (we needed to add some constraints). Assume “[æ]t” is footed, “[ə]” isn’t.

<table>
<thead>
<tr>
<th>looking at</th>
<th>ALIGN (LexWd,R, PWord,R)</th>
<th>ALIGN (PPhrase,R, Pwd,R)</th>
<th>ALIGN (PWd,R, LexWd,R)</th>
<th>FOOTMUST BEDOMINATED</th>
<th>PWORDMUST CONTAIN FOOT</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>[looking æt]pwd</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b</td>
<td>[looking æt]pwd</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c</td>
<td>[looking]pwd æt</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d</td>
<td>[looking]pwd æt</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e</td>
<td>[looking]pwd [æt]pwd</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f</td>
<td>[looking]pwd [æt]pwd</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

⇒ looking needs to end a p-word, but phrase wants to end w/ a p-word, so at must end its own p-word.

9 Dutch example (Gussenhoven & Jacobs 1998, p. 250 )

- In Dutch, resyllabification applies across some morpheme boundaries but not others. I’m including an inserted glottal stop since I think that’s what’s intended as the evidence for syllabification.

\[
\begin{align*}
\text{[ont.][ʔi.χan]} & \text{v} \text{ ‘dispossess’ } \text{[[kerk]N, [ʔøyI]N} & \text{N} \text{ ‘barn owl’ } \text{[[te:.kə.n]v ŋ]N} & \text{ ‘drawing’} \\
\text{[on,][ʔe:.vən]} & \text{A} \text{ ‘uneven’ } \text{[[rein]N, [ʔa:k]N} & \text{N} \text{ ‘Rhine barge’ } \text{[[vən.də.l]v a:.r]N} & \text{ ‘walker’}
\end{align*}
\]

- G&J propose that resyllabification is blocked across a p-word boundary (parentheses below mark p-words)...

\[
\begin{align*}
\text{(ont.)-(ʔi.χan)} & \text{ (kerk.)-(ʔøyI)} & \text{(te:.kə.nŋ)} \\
\text{(on.)-(ʔe:.vən)} & \text{ (rein.)-(ʔa:k)} & \text{ (vən.də.la:.r)}
\end{align*}
\]

- Let’s fill in the alignment constraints:

<table>
<thead>
<tr>
<th>/\text{[on} [e:.vən]A \text{]} /</th>
<th></th>
<th></th>
<th>Onset</th>
<th>NoCoda</th>
</tr>
</thead>
<tbody>
<tr>
<td>(\text{on}) (e:.vən)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(\text{on})(e:.vən)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(\text{on.})(e:.vən)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>/\text{[[te:.kən]v ŋ]N} /</th>
<th></th>
<th></th>
<th>Onset</th>
<th>NoCoda</th>
</tr>
</thead>
<tbody>
<tr>
<td>(te:.kə.nŋ)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(te:.kən) (ŋ)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(te:.kə) (ŋ)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
What should happen to function words, like pronouns and determiners, assuming the same ranking?

<table>
<thead>
<tr>
<th>/[rip]V [ən]det [kat]N/ called a cat</th>
<th>ONS</th>
<th>NoCoda</th>
</tr>
</thead>
<tbody>
<tr>
<td>(rip.) (ən.) (kat)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(ri. pən) (kat)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

10 More evidence in Dutch: long-vowel diphthongization (p. 252)

- /eː, oː, əː/ become [eə, oə, əə] before [r], regardless of syllabification:
  
  - [meər]N ‘more’
  - [χoər]N ‘smell’
  - [koər]V in]N ‘test’

- Why doesn’t the alternation apply here:
  
  - [[[meː [rəi.z]V -]]V  ‘to accompany’

11 More evidence in Dutch: conjunction reduction (see also Booij 1985)

*just spelling here, not IPA*


- Why not *absurd en banaliteit?*

12 The phonological word in some other languages

- Sanskrit, Turkish, Hungarian, Malagasy, Tagalog, Bengali, and Italian have pretty much the same p-word boundaries as Samoan or Dutch, with some slight wrinkles.

- In Italian, for example, only prefixes that are semantically transparent stand outside the stem’s p-word (Peperkamp 1997, van Oostendorp 1999):
  
  - (a)-(sociale) ‘asociale’ but (re-sistenza) ‘resistance’

  - Provides a way to test Italian speakers’ morphological intuitions: see Baroni 2001 on N. Italian intervocalic voicing of /s/, which applies only if the surrounding vowels are in the same p-word.
Ling 201A, Phonological Theory II. Winter 2015, Zuraw

- Yidiny (Australian language, with very few remaining speakers. Nespor & Vogel 1986, data from Dixon 1977)
  - Penults of odd-syllabled p-words lengthen—no long vowels otherwise.
    
    gu.da:ga ‘dog’ gu.da.ga-gu ‘dog-purp.’
    mu.ɖam ‘mother’ mu.ɖa:m-gu ‘mother-purp.’
    ma.ɖi:n-da-ŋ ‘walk up-pres.’ ga.li:-na ‘go-purp.’
    ga.liŋ ‘go-pres.’ ŋu.naŋ.ga-ra:-n.da ‘what-dat.’
  
  - Based on the data above, are suffixes part of the p-word?
  - So what should we make of examples like these, with longer suffixes:
    gu.ma:.ri-da.ga:-ŋu ‘red-inch.-past’ ma.ɖi:n.da-ŋa.liŋ ‘walk up-pres’

13 Do we need the p-word?

In 2006, a group of us spent about 40 hours debating the issue (see www.linguistics.ucla.edu/people/zuraw/courses/prosword_2006.html for handouts).

Results were inconclusive:
- Often, interleaving phonology and morphology can do the job (add some affixes too late for certain processes to see them).
- But there was a residue of cases where it seemed like we really might need the p-word. The last handout at the link above sums up the pro and con arguments.

To sum up
- We’ve seen various ways we might want to enrich representations “above” the segment.
- Next week, I want to look at representations “below” the segment (autosegmentalism, underspecification, a little feature geometry) and their relationship to phonetics.

References


