Overview—prosodic licensing: Some phonological structures (e.g., a particular feature matrix) or contrasts can appear only if they are affiliated with (licensed by) certain prosodic positions.

1. Stray Erasure

Harris (1969, 1983): Spanish C~Ø alternations (data in orthography except for key part, only relevant morpheme boundaries marked)

<table>
<thead>
<tr>
<th>to X</th>
<th>Xion</th>
<th>Xer</th>
<th>Xive</th>
<th>Xed</th>
<th>Xure</th>
</tr>
</thead>
<tbody>
<tr>
<td>abso[rb]-er</td>
<td>abso[r-s]ión</td>
<td></td>
<td></td>
<td>abso[r-t]o</td>
<td>‘absorb’</td>
</tr>
<tr>
<td>compu[ng]-ir</td>
<td>compu[n-s]ión</td>
<td></td>
<td>compu[ng]-ivo</td>
<td></td>
<td>‘move to remorse’</td>
</tr>
<tr>
<td>fu[ng]-ir</td>
<td>fu[n-s]ión</td>
<td></td>
<td></td>
<td></td>
<td>‘act as’</td>
</tr>
<tr>
<td>u[ng]-ir</td>
<td>u[n-s]ión</td>
<td></td>
<td></td>
<td></td>
<td>‘anoint’</td>
</tr>
<tr>
<td>escu[lp]-ir</td>
<td>escu[l-t]or</td>
<td></td>
<td></td>
<td>escu[l-t]ura</td>
<td>‘sculpt’</td>
</tr>
<tr>
<td>disti[ng]-ir</td>
<td>disti[n-s]ión</td>
<td></td>
<td></td>
<td>disti[n-t]o</td>
<td>‘distinguish’</td>
</tr>
</tbody>
</table>

- What are plausible underlying forms of these stems?
- What constraint might be driving the alternations?
- What happens when the UR for abso[nt] is syllabified?

► In Spanish, segments must be licensed by affiliation to some syllable. If they aren’t affiliated, they get deleted (stray erasure).

2. Compare to stray epenthesis…

…which we’ve seen in Japanese and which also occurs in Spanish (Harris again):

- hemi-[sf]iero ‘hemisphere’ [esf]era ‘sphere’
- yugo-[sl]avo ‘Yugoslav’ [esl]avo ‘Slav(ic)’
- in-[sp]irar ‘to breathe in’ [esp]irar ‘to breathe’

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Assuming the forms on the left reflect URs, what happens when \textit{sfera} or \textit{fratr- nal} is syllabified, and because of what constraint?

What distinguishes the environments where stray erasure occurs in Spanish from those where stray epenthesis occurs?

Describe the Spanish data with a Sommerstein-style conspiracy (constraint plus rules it can trigger).

Itô (1986) proposes that stray epenthesis is an option that is available in some languages (and there, sometimes restricted to particular environments) but not others; stray erasure, on the other hand, is available as a last resort in every language. (Something to think about: what kind of cross-linguistic evidence could support or falsify this claim?)

Thoughts on Ponapean?

We’ll now see that some types of prosodic structure seem to be better licensers than others.

3. **Positional licensing—Guguyimidjir example**

Australian language from Australia with 20-30 fluent speakers and 200-300 speakers who prefer English

(data taken from Kager 1996\textsuperscript{3}, originally from Haviland 1979\textsuperscript{4})


waaṟiɣan  ‘moon’
waaḍa  ‘crow’
guƣumƣu  ‘meat hawk’
dawa ‘star’
gambuugu  ‘head’
damaarbuga  ‘magpie goose’
buduunbuga  ‘thunder’
buuraay  ‘water’
muułumul  ‘dove’
daaraljan  ‘kangaroo’
jiʔaajgaɾ  ‘old man’

Certain suffixes normally cause the preceding syllable to lengthen:

/maʔal+nda/  ma.ʔaʔal.nda  ‘clay-ERG’
/ŋalgal+ŋu/  ŋal.ɡaʔal.ŋu  ‘smoke-PURP’

but
/wulunŋuʃ+nda/  wu.٭unŋuʃ.nda  ‘lightning, flame-ERG’
/baŋibaj+ŋu/  ba.ʃi.ŋaŋ.ŋu  ‘bone-PURP’

What prosodic position(s) license(s) long vowels in Guguyimidjir?

4. **Prosodic licensing—Catalan example**

Indo-European language from Spain, Andorra, and France with about 6,500,000 speakers.
(based on Beckman 1998, data originally from Hualde 1992)

gos  ‘dog (m.)’  gosə  ‘dog (f.)’  gos pətɪt  ‘little dog’  goz ɮlaw  ‘blue dog’
gris  ‘grey (m.)’  grizə  ‘gray (f.)’  gris pətɪt  ‘pale gray’  griz ɮloʃəŋ  ‘bluish gray’

Determine the underlying form of each morpheme.

What prosodic position licenses a contrast in [voice]?

How does the [s] in gris get its value for [voice]?

This is an example of indirect licensing: [voice] doesn’t need to be affiliated exclusively with the licensing position, only with some licensing position.

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In *direct licensing*, by contrast, the licensed structure has to be affiliated with the licensing position and nothing else.

The Catalan example is notable also because in this case, indirect licensing means that it’s not a particular feature value that requires licensing, but rather a contrast (this is common).

5. **Common licensors** (see Beckman 1997 for examples)
   - Beginning of word (first syllable, first foot…)
   - Syllable onsets (as opposed to codas)
   - Stressed syllables
   - Roots (as opposed to affixes)

6. **Why beginnings of words?**
   Beckman cites psycholinguistic evidence that word beginnings…
   - are better cues for lexical retrieval than later parts of the word
   - are what people in a “tip-of-the-tongue” state tend to recall best
   - are where errors are most noticeable
   - are where errors are less likely to be fixed in a shadowing task

   *Note on Guguyimidjir:* Kager proposes that the first two syllables in Guguyimidjir form a *prosodic word* (unit of structure two levels above the syllable) nested within a (potentially) larger prosodic word, and that long vowels can be described as limited to that initial prosodic word.

7. **Why syllable onsets?**
   Steriade (1999)’s licensing by cue: 7 “The likelihood that distinctive values of the feature F will occur in a given context is a function of the relative perceptibility of the F-contrast in that context.”

   Cues to voicing and aspiration come in large part from VOT (voice onset time)—the duration of the interval between release of the consonant and voicing in a following vowel or sonorant. So voicing and aspiration are poorly cued in a C that is not followed by a vowel or at least a sonorant.

   Cues to place of articulation are also concentrated (for most places) in the C-to-V transition.

   *Evidence for this view:*
   - Although (post)aspiration tends to be neutralized in non-pre-sonorant contexts (Sanskrit, Takelma, Sre, Greek, Klamath, Khasi), *pre*-aspiration tends to be neutralized in non-*post-*
sonorant positions (Scots Gaelic, Bernera Gaelic, Leurbost Gaelic, Toreva Hopi, Fox, Papago, Tarascan, Lappish).

- In languages that limit the distribution of place contrasts, most place contrasts are licensed by a following vowel or sonorant (Japanese, Late Latin, Diola Fongny). The cues to retroflexion (lowered F3 and F4), however, are most strongly manifested in the transition from the preceding vowel, and retroflexion is licensed by a preceding vowel (Gooniyandi, Djinang).

(By the way, Steriade argues in this paper that syllable structure itself is irrelevant. For example, in Gujarati and Parsi Gujarati, post-aspiration is licensed by a following sonorant and obstruent-sonorant sequences like pl are syllabified p.l. The sonorant in those cases licenses aspiration on the preceding stop, even though it is in a syllable coda.)

8. **Why stressed syllables?**

Crosswhite (2001), adopting a Steriadean licensing-by-cue approach: “perceptually challenging” vowel qualities (i.e., non-corner vowels) are licensed by stressed positions in languages where stressed vowels are longer than unstressed.

Crosswhite suggests that perceptibility is increased in these longer, stressed vowels because the cues are available for a longer period.

9. **Why roots?**

This one is more controversial, since there seem to be a lot of counterexamples (remember Limos Kalinga and Acehnese labial dissimilation?).

10. **Positional licensing vs. positional faithfulness**

Beckman actually argues for a somewhat different account of these cases: it’s not that some structure or contrast must be licensed by a particular position, but rather that that position is the only one that gets to hang on to its underlying properties.

We haven’t seen anything so far that could encode the notion of an underlying form “getting to hang on to” its properties.

The two views do make different predictions…If we have time, let’s see an example from Beckman:

**Guarani** (group of Tupi languages spoken in Paraguay, Argentina, Bolivia, and Brazil with about 5 million speakers)

Vowels contrast for nasality (a vs. ã), and there is a three-way contrast among nasal stops, oral stops, and prenasalized stops.

\[
\begin{align*}
/tupä/ & \quad ëü'pä \quad ‘god’ & /tupa/ & \quad tu'pa \quad ‘bed’ \\
/piɾĩ/ & \quad pï'ɾĩ \quad ‘to shiver’ & /piri/ & \quad pi'ɾi \quad ‘rush’
\end{align*}
\]

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/mbaʔe/ mǎʔe ‘to see’ /mbaʔe/ mbaʔe ‘thing’
/huʔu/ hũʔũ ‘to be bland’ /huʔu/ huʔu ‘cough’
/akĩ/ a'kĩ ‘to be tender’ /akĩ/ a'ki ‘to be wet’
/potĩ/ ṭoṭĩ ‘to be done for’ /poti/ poᵗi ‘to be clean’

What rule do you observe above?

root UR

/ndupã/ nō-ʔō-nuʔũ-ĩ ‘I don’t beat you’
not 1-you beat negation

/heʔdu/ nō-ʔō-heʔn du-i ‘I don’t hear you’
not 1-you hear negation

/haihu/ ndo-ro--thumbnails ‘I don’t love you’
not 1-you love negation

/γwata/ ŋō-mb-γwα.ta ‘I made you walk’
I-you causative walk

/pora/ ŋō-mō-poʔṟa ‘I embellished you’
I-you causative nice

/xεdu/ ŋō-mō-xẽn du ‘I made you hear’
I-you causative hear

Do the alternations above obey the rule?

Identify the exceptions below. Any ideas?

ũ'mã-ʃa-γwα ‘like those’
re-ʃo-tã-ʔarãmõ ‘if you go’
ã-nâ-ʔẽn du ‘I hear myself’
mbaʔe'mbãlʃi ‘sadness’

What is this consistent with, the idea that some feature value is licensed only in a certain position, or the idea that some feature doesn’t change in a certain position?

(But what about Guguyimidjir? Beckman’s theory of “positional maximization” could work there.)

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9 We won’t get into the nasality on this suffix. Beckman says it’s unclear exactly when you can get nasality spreading rightward spreading—maybe only on suffixes.