Class 15: Structure above the segment III, practice

To do
- Next reading Hall 2006 (due Thursday)
- Project: have talked to me a second time by the end of this week

Overview: Some more time on prosodic words, then practice with feet in OT.

1 Recap of descriptive example from Samoan
- Domain of footing (p-word) in Samoan is a lexical root (Noun, Verb, Adj), plus any associated bound morphemes after it (Zuraw, Yu & Orfitelli 2014):
  - [root]p-word
  - [root-suffix]p-word
  - prefix-[root]p-word
  - [root]p-word-[root]p-word
→ every root initiates a new p-word.

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

2 How can an analysis capture what counts as a word?
- Following (Peperkamp 1997), we can do it with ALIGN constraints ((McCarthy & Prince 1993)), such as ALIGN(LexWord, L; PWord, L).
  - Let’s try some tableaux for Samoan.
3 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>to</td>
<td>tʰu</td>
<td>tʰə</td>
</tr>
<tr>
<td>at</td>
<td>æt</td>
<td>ø</td>
</tr>
<tr>
<td>for</td>
<td>foɾ</td>
<td>fɾ</td>
</tr>
<tr>
<td>a</td>
<td>æt</td>
<td>ø</td>
</tr>
<tr>
<td>and</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 BE DOMINATED BY PWORD</th>
<th>PWORDMUST CONTAIN FOOT</th>
</tr>
</thead>
<tbody>
<tr>
<td>a [looking ᾪt]pwd</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b [looking ət]pwd</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c [looking]pwd ət</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d [looking]pwd ət</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e [looking]pwd [ət]pwd</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f [looking]pwd [ət]pwd</td>
<td></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.

4 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.


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

  (ɔnt.)-(ʔei.χən) (kɛrk.)-(ʔɛyl) (te.κə.nɪŋ)
  (ɔn.)-(ʔɛ.vən) (rɛin.)-(ʔa:k) (vɑn.də.la:r)

Let’s fill in the alignment constraints:

<table>
<thead>
<tr>
<th>/[ɔn [ɛ:vən]A ]N</th>
<th>DEP-?</th>
<th>NoCoda</th>
</tr>
</thead>
<tbody>
<tr>
<td>(ɔn.)(ʔɛ.vən)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(ɔ.n)(έ.vən)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(ɔ.νε.νən)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>/[[te.kə.n]v ɪŋ]N</th>
<th>DEP-?</th>
<th>NoCoda</th>
</tr>
</thead>
<tbody>
<tr>
<td>(te.κə.nɪŋ)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(te..κən.)ʔɪŋ</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(te.:κə.)nɪŋ)</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][ən][det][kat]]/</th>
<th>call a cat</th>
<th></th>
<th></th>
<th>DEPRE</th>
<th>NOCODA</th>
</tr>
</thead>
<tbody>
<tr>
<td>(rip.)(?ən.)(kat)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(ri.ən)(kat)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

- /e:, ø, o:/ become [eə, øə, oə] before [r], regardless of syllabification:

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- Why doesn’t the alternation apply here:

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

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just spelling here, not IPA
agriculture and horticulture

absurdity and banality
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- Why not *absurd en banaliteit?

7 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)):

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(a)-(sociale)  ‘asociale’  but  (re-sistenza)  ‘resistance’
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- 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.
• *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.li:n-da ‘go-pres.’
    - n.uja.-ga:-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.li ‘walk up-pres’

8 **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.

9 **Practice with footing the p-word in OT: Manam**


- Develop an OT analysis of Manam stress using feet.
- Assume that each vowel is the nucleus of its own syllable (e.g. [go.a.i]). Assume that consonants are always syllable onsets, except for non-prevocalic nasal (e.g. [lun.ta], [maŋ]).

| 1.  | ú  | ‘kind of fish trap’ |
| 2.  | gá | ‘*Morinda citrifolia*’ |
| 3.  | máŋ | ‘bird’ |
| 4.  | pátu | ‘stone’ |
| 5.  | dám”a | ‘forehead’ |
| 6.  | tágo | ‘not’ |
| 7.  | zére | ‘sorcery’ |
| 8.  | bázi | ‘wing’ |
| 9.  | sinjába | ‘bush’ |
| 10. | tanép”a | ‘chief’ |
| 11. | garíb”a | ‘flower sheath of palm tree’ |
| 12. | i-monáqo | ‘3sg.rl-eat’ |
| 13. | tanép”a-tína | ‘chief-int’ |
| 14. | bótaziŋa | ‘hole’ |

*try drawing feet first*

- trochaic or iambic?
- right- or left-aligned?
- what happens to leftovers: unfooted, or subminimal foot?
- which foot gets primary stress?
15. móa 'penis'
16. sái 'spoon'
17. róa 'spouse'
18. áe 'leg'
19. soʔái 'tobacco'
20. ðetéa 'side of canoe opposite outrigger'
21. i-boqáu '3sg.rl-be.bent'
22. ðoadéʔa 'then'
23. bòazíŋa 'hole'
24. i-mòatūbu '3sg-be.heavy'
25. ·únta 'moss'
26. móbwa 'victory leaf'
27. utáŋ '1sg.rl-cry'
28. émbeʔi 'sacred flute'
29. ŭnguma 'person from a village other than one’s own'
30. émbeʔi-tína 'sacred.flute-int'
31. i-dàn-dàn-la-láʔo '3sg.rl-crawl-rpl-lim-thither'
32. móbwa-tína 'victory.leaf-int'
33. málábóŋ 'flying fox'
34. ·áita 'who?'
35. móasi 'song'
36. ţáoga 'two pieces of wood rubbed against each other to produce fire’
37. bóesa 'Boesa Island'
38. góai 'star'
39. táua 'trading partner'
40. tamóata 'man'
41. i-pôasagéna '3sg.rl-be.tired'
42. góai-tína 'start-int'
43. róa-na-tína 'her real husband'
44. jàuja-tína 'good-int'
45. j-un-àu-tína 'he hit me a lot'
46. wàuwáu 'new'
47. diśoʔinóʔa 'they sat down first'

48. biēŋ 'Bieng (place)'

These shouldn’t present any problems for a preliminary analysis based on 1-14. But once you’re done, check that these still work.

Explain why these are different

Note: not *[èmbéʔi]

Not *[i-dan-dàn-la-láʔo]

Explain why these are different

- Why do these candidates win, instead of the candidate you would have expected based on the analysis up until now?
- You’ll have to invent a constraint here

I could only find one like this but don’t ignore it!
References