Lecture 2 – Morphemes: Their Nature and Limits

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MorphologyFest
A Saussurean Sign

Semantics: ‘Felis catus, a small furry domesticated carnivorous mammal that is valued by humans for its companionship and for its ability to hunt vermin and household pests’

Syntax: Noun, Common, Count ...

Phonology: /kæt/

The connections here are irreducible: the vowel /æ/ doesn’t correspond to the “small, furry” part, or the final /t/ to the property of being a count noun, etc.
Partially Motivated Signs

- *amorphous* ‘characterized by absence of form’, ADJ
- Parts of form related to parts of content:
  - amoral, atonal, asymmetric,…
  - metamorphosis, anthropomorphomorphic, dimorphism,…
  - courageous, dangerous, glorious,…

\[
\text{WITHOUT} \quad \text{FORM} \quad \text{CHAR-BY}
\]

\[
\mu_1 \quad \mu_2 \quad \mu_3
\]

\[
X \quad X \quad X \quad X \quad X \quad X \quad \text{e} \quad \text{i} \quad \text{m} \quad \text{c} \quad \text{r} \quad \text{f} \quad \text{e} \quad \text{s}
\]
Morphemes

- Bloomfield: ‘a linguistic form which bears no partial phonetic-semantic resemblance to any other form’
- Problem: phonaesthemes: $gl$- (glow, glimmer, gleam, glitter...); $sl$- (slip, slide, slither, slime...); $fl$- (flash, flare, flicker...)
- Why is $gl$+immeer (cf. shimmer) different from huckle+berry?

\[
\begin{align*}
\mu_1 & : 'SHINE FAINTLY WITH WAVING LIGHT' \\
\mu_2 & : 'LIGHT' \\
\end{align*}
\]
American Structuralist Morphology

- Morphemes are homogeneous, indivisible atomic units of linguistic form linking some component(s) of meaning with a set of mutually exclusive allomorphs that express it.
- Each morpheme has a determinate semantic content, and each allomorph has a determinate phonological form.
- Words are composed exhaustively of morphemes.
- Each morpheme in a word is represented by one and only one allomorph; and each allomorph represents one and only one morpheme.
The Ideal (Least Complex) Case

- Every X and every part of the meaning is linked to exactly one \( \mu \).
- Every \( \mu \) is linked to at least one X and to some part of the meaning.
- None of the lines cross.
Complexity of Exponence

- Real morphology is not like that.
- Circumfixes (e.g. Slavey *ya--tį* ‘preach, bark, say’; cf. *yabtį* ‘s/he preaches, barks, says’, *xayadatį* ‘s/he prayed’, *nayə'witi* ‘we will discuss’; Rice 2012)
- Infixes (e.g., Mēbengokre [Je] *fāgnān* ‘to spend almost all (pl.)’, sg. *fānān*; Salanova 2012)
- Multiple exponence (e.g. Choctaw *akiiyokiittoo* ‘I didn’t go’; cf. *iyalittoo* ‘I went’; Broadwell 2006)

Batsbi (Tsova-Tush): tišin c’a daň d-ox-d-o-d-an-iš
old house PV CM-destroy-CM-TR.PRES-CM-EVID I-2PL.ERG
You (PL) are evidently tearing down the old house

- Cumulative morphs (e.g. Latin *amō* ‘I love’, cf. *amābam* ‘I loved, was loving’)
Complexity of Exponence

Discontinuous relations:
Indonesian *kebisaan* ‘ability’

Icelandic: ‘have’

Subjunctive: hefðir
Present: hefur
Plural: höfðuð ([ö]<a/ by phonological u-Umlaut)
1, 3 sg: hafði
Complexity of Exponence

- Empty morphs:
  - Cree o-t-ōspwākan ‘his pipe’, cf. ospwākan ‘pipe’
    Wolfart 1973
  - English crime/criminal, long/lengthen etc.
- Superfluous morphs
  - English strengthen, strengthen
  - French doucement (cf. doux/douce)
- Zero morphs (e.g. Russian genitive plural дам from дама ‘lady’)
- Conclusion: Form <-> Content mappings are not in general surjective (‘onto’) in either direction.
Non-Concatenative Morphology: Apophony

- English:
  - *mouse/mice, man/men, woman/women*
  - *sing/sang/sung/*/song), sit/sat, write/wrote*
  - *sell/sale, blood/bleed, food/feed*
  - *bath/bathe, breath/breathe, glass/glaze, use [jus]/use [juz]*

- North Saami: *guolli* ‘fish’, GEN/ACC *guoli*; *giehta* ‘hand’, GEN/ACC *gieda*

- Here content is signaled not by material overtly present in the word but rather by the *relation* between the shape of this word and that of another.
Non-Concatenative Morphology: Apophony

The logic of such relations may not be directional: cf. West Circassian, where transitive verbs in $C(ə)$ are related to intransitives in $Ce$, but the relation may go either way.

(a) se-т̣ə ‘I write (intrans.)’; зə-т̣əλ se-т̣ə ‘I write a letter’
(b) ʃə̃э-ɾ me-ꭁə̃č’е ‘the woman washes, does the dishes (intrans.)’; ʃə̃э-ɾ me-ꭁə̃ɾ ye-ꭁə̃č’ə́ ‘the woman washes (trans.) the dishes’
(c) me-ла̃ζ’e ‘he works’; yə-χə-te ye-lẽζ’ə́ ‘he works his garden’
(d) ma-к’ə́ ‘he goes’; мə-γ’ə́-ɾ ye-k’ə́ ‘he goes this road’
Non-Concatenative Morphology: Apophony

- Morpheme-based alternatives
  - English as a Semitic language: sit/sat = /s-t/+ /ɪ/, /æ/
  - Zero suffix plus ‘morphologically conditioned phonological rule’
    - This simply transfers the process to another part of the grammar, while retaining its character as signaling specific content.
- Segmental suffix which ‘parasitizes’ some segment and substitutes its own features.
- This can be made to work for simple vowel or consonant apophony, but fails when the relation is not uniform or coherent (cf. Saami gradation, Celtic mutations)
Breton Mutations

<table>
<thead>
<tr>
<th>Unmutated</th>
<th>Soft</th>
<th>Spirant</th>
<th>Hard</th>
<th>Mixed</th>
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- **Soft Mutation**
  - After articles, feminine singular nouns and masculine plurals denoting people
  - except nouns beginning with /d/
  - After a number of proclitics
  - Adjectives following feminine singular nouns, masculine plurals denoting people; nouns following adjectives
  - except if the first word ends in a non-sonorant, only g-, gw-, m-, b-
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**Spirant Mutation**

- following he ‘her’, o ‘their’, ma/va ‘my’
- following numerals 3, 4, 9
- t- and k- only after infixed pronoun ’m ‘me’
- k- only after hor ‘our’
- Pask ‘Easter’ > Fask followin Sul ‘Sunday’ and Lun ‘Monday’
Breton Mutations

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- **Hard Mutation**
  - after *ho* ‘your (pl)’, infixed pronoun *’z* ‘you (sg), *da’z* ‘to your (sg)’, *ez* ‘in your (sg)’
## Breton Mutations

**Mixed Mutation**

- = soft mutation of b-, g-, gw-, m-; hard mutation of d-
- after verbal particles e and o; conjunction ma ‘if’

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Non-Concatenative Morphology: Subtraction

- Tohono O’odham Imperfective/Perfective: hihim/hihi ‘walk (pl.)’; hi:ŋ/khiŋ ‘bark’; huhuʔid/huhuʔi ‘chase’; cɨpoʔid/cɨpoʔ ‘brand’; coʔmi/coʔ ‘sew’
- In cases like these, some element of content is signaled by the absence of some material of form.
Morpheme-based alternatives

- Treat the relation as additive in the opposite direction
  - This generally entails large numbers of allomorphs for the supposed suffix – essentially one for every well formed syllable rhyme in e.g. Alabama.
  - In the Icelandic example, the vowel length in the deverbal noun only makes sense on the basis of the syllable structure of the infinitive

- Segmental suffix that ‘parasitizes’ a final segment, and infects it with a feature that requires its deletion.

- The fatal feature is quite arbitrary

- This doesn’t work well when varying amounts of material more than a segment need to be deleted.

‘Anti-Faithfulness’ Constraints
### North Straits Salish:

#### Klallam: CCV → CVC

<table>
<thead>
<tr>
<th>Non-Actual</th>
<th>Actual</th>
<th>gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>qq’í-</td>
<td>qíq’-</td>
<td>tie up, restrain</td>
</tr>
<tr>
<td>pkʷó-</td>
<td>pókʷ-</td>
<td>smoke</td>
</tr>
<tr>
<td>čkʷu-</td>
<td>čúkʷ-</td>
<td>shoot</td>
</tr>
</tbody>
</table>

#### Saanich: CCəC → CəCC

<table>
<thead>
<tr>
<th>Root</th>
<th>Non-Actual</th>
<th>Actual</th>
<th>gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>θkʷ-</td>
<td>θkʷót</td>
<td>θókʷt</td>
<td>straighten (something)</td>
</tr>
<tr>
<td>t’s-</td>
<td>t’sát</td>
<td>t’ást</td>
<td>break (something)</td>
</tr>
<tr>
<td>tʰ’ləkʷ’</td>
<td>tʰ’lókʷ’</td>
<td>tʰ’lókʷ’</td>
<td>pinch (something)</td>
</tr>
<tr>
<td>ƛ’pəx</td>
<td>ƛ’páx</td>
<td>ƛ’ápx</td>
<td>scatter (something)</td>
</tr>
<tr>
<td>xʷq’p’ət</td>
<td>xʷq’p’ət</td>
<td>xʷq’áp’t</td>
<td>patch (something)</td>
</tr>
</tbody>
</table>
Non-Concatenative Morphology: Metathesis

Halkomelem (Central Salish; cf. Urbanczyk 2011):

a. pq\textsuperscript{w}at ‘break it (substance)’
   paq\textsuperscript{w}t ‘breaking it’

b. xw\textsuperscript{k}’wat ‘pull it’
   xwak’\textsuperscript{w}t ‘pulling it’

c. sq’\textsuperscript{t}et ‘tear/split it’
   seq’\textsuperscript{t} ‘tearing/splitting it’

(one of several patterns, this one applying to stems of shape TTAT)

Svan (Kartvelian, \textit{apud} Mel’čuk 1997):

li-deg ‘go out’; li-dge ‘put out’
li-k\textsuperscript{w}es’ ‘break (intrans.); li-k\textsuperscript{w}s’e ‘break (trans.)’
Non-Concatenative Morphology: Metathesis

- A morpheme-based alternative (Stonham, 1994) for Saanich:
  - The ‘actual’ is marked (in all cases) by an affix consisting of a single unlinked mora.
  - With CVC roots, the extra mora is realized by initial CV reduplication; with others by adding a coda in the form of infixed ʔ; and with CCə roots by metathesizing to produce a moraic coda.
  - Footwork-problems aside, this fails because the stems in which metathesis occurs in Saanich have the shape CCəC, and thus already have codas. Stonham is misled by looking only at CCə-roots.
- Urbanczyk’s analysis of similar facts in Halkomelem makes it clear that a unified account of all ways of forming the ‘actual’ is not generally possible.
All of these phenomena represent additional complexity over the ‘morpheme as minimal sign’.

On that view – ‘Canonical Morphology’ in something like Corbett’s sense – morphology is just the syntax of small domains, and morphotactics is just ‘Merge.’

To the extent that isn’t true, though, morphology is genuinely different from syntax (and from phonology).

A linguistic sign relates a word’s content and its form. The content can be divided into its syntactic properties and its meaning; each of these can be further analyzed. The form can be analyzed into phonological segments (organized into syllables, feet, etc.). The relation between content and form may be partially systematic.