Homework

- For Monday 1/31
  - Read Chapter 2
  - Do exercises 1.2 and 1.3
Morphology

- Morphology is the study of the systematic covariation in the form and meaning of words.
- Morphology as battleground
- Morphology as rain forest
- What is a word?
  - Orthographic words
  - Phonological words
  - Syntactic words
  - Semantic words
Words

- We can also distinguish between notions of ‘word’ by the level of abstraction
  - A *lexeme* is a ‘dictionary word’, an abstract entity (emic category), written in SMALL CAPS
  - A *word form* is a concrete orthographic or phonological (or ...) entity
  - A *morphosyntactic word* is a particular combination of morphosyntactic features
  - A *paradigm* is a set of word forms the belong to a particular lexeme
Words

Lexeme | Word forms | Morphosyntactic words
---|---|---
WALK | walk, walks, walking, walked | WALK+1sg+Pres, WALK+3pl+Pres
The fundamental insight of morphology is that words with related forms tend (in a systematic way) to have related meanings.

- Word forms like *house* and *houses* are related by virtue of the lexeme *HOUSE*.
- Word forms like *walks* and *cars* are related via the plural suffix *-s*.
- Word forms like *houses* and *oxen* inhabit the same slot (3rd person singular present) of different paradigms.
- Kinds of form/form and meaning/meaning relations.
Form relations: Affixation

- Bases, stems, roots
- Affixation: prefix, suffix, infix
- Tagalog: insert -um- after first consonant
  
  - aral  um-aral  ‘teach’
  - sulat s-um-ulat  ‘write’  *um-sulat
  - gradwet gr-um-adwet  ‘graduate’  *um-gradwet

- Ulwa: insert -ka- after stressed syllable
  
  - bás  ‘hair’  bás-ka  ‘his hair’
  - ásna  ‘clothes’  ás-ka-na  ‘his clothes’
  - arákbus  ‘gun’  arák-ka-bus  ‘his gun’

- Suffix > prefix > infix
Form relations: Reduplication

- Affixation with phonology of affix derived from stem
- Classical Tibetan

  thibpo ‘dense’ thibthib ‘very dark’
  ŋkhyogpo ‘crooked’ ŋkhyogŋkhyog ‘torturous’
  ŋtherpo ‘glossy’ ŋtherŋther ‘polished’
  zimbu ‘thin’ zimzim ‘fine as hair’

- Classical Tibetan

  ŋkholba ‘insensible’ khalkhol ‘stunned’
  glenpa ‘stupid’ glanglen ‘very stupid’
  ŋanpa ‘bad’ ŋanŋon ‘miserable’
  rdzub ‘deceit’ rdzabrdrdzub ‘imposture’
  sņo ‘plant’ sņasņo ‘vegetables’
Form relations: Reduplication

- Copying into a prosodically defined template
- Ilokano
  
<table>
<thead>
<tr>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>kaldíŋ</td>
<td>kal-kaldíŋ</td>
</tr>
<tr>
<td>púsa</td>
<td>pus-púsa</td>
</tr>
<tr>
<td>kláse</td>
<td>klas-kláse</td>
</tr>
<tr>
<td>jyánitor</td>
<td>jyan-jyánitor</td>
</tr>
<tr>
<td>róʔot</td>
<td>ro:-róʔot</td>
</tr>
<tr>
<td>trák</td>
<td>tra:-trák</td>
</tr>
</tbody>
</table>

- Reduplicative infixes (Samoan plural)
  
  alofa ‘love (sg.)’
  alolofa ‘love (pl.)’
Form relations: process morphology

- Vowel changes

- Terena nasals

  emoʔu  ‘his word’  emõʔu  ‘my word’
  owoku  ‘his house’  õwõŋgu  ‘my house’
  pïho  ‘he went’  mbiho  ‘I went’

- Arabic

  katab  perfect active
  kutib  perfect passive
  aktub  imperfect active
  uktab  imperfect passive
Form relations: process morphology

- Irish consonant mutation

- Lenition

  \[
  \begin{align*}
  p \rightarrow & \text{ ph} \ [f] \quad b \rightarrow \text{ bh} \ [v]/[w] \\
  t \rightarrow & \text{ th} \ [h] \quad d \rightarrow \text{ dh} \ [j]/[\chi] \\
  c \rightarrow & \text{ ch} \ [x] \quad g \rightarrow \text{ gh} \ [j]/[\chi] \\
  m \rightarrow & \text{ v} \ [v]/[w] \quad s \rightarrow \text{ sh} \ [h]
  \end{align*}
  \]

- Eclipsis

  \[
  \begin{align*}
  p \rightarrow & \text{ bp} \ [b] \quad b \rightarrow \text{ mb} \ [m] \\
  t \rightarrow & \text{ dt} \ [d] \quad d \rightarrow \text{ nd} \ [n] \\
  c \rightarrow & \text{ gc} \ [g] \quad g \rightarrow \text{ ng} \ [\eta]
  \end{align*}
  \]
Form relations: process morphology

- Irish possessives
  
  1sg  \( mo \) + Lenition
  
  2sg  \( do \) + Lenition
  
  3sg.fem  \( a \) + No mutation
  
  3sg.masc  \( a \) + Lenition
  
  1pl  \( ár \) + Eclipsis
  
  2pl  \( bhur \) + Eclipsis
  
  3pl  \( a \) + Eclipsis

- Examples:
  
  \( a \) theach  \([ə h'ax]\)  ‘his house’
  
  \( a \) teach  \([ə t'ax]\)  ‘her house’
  
  \( a \) dteach  \([ə d'ax]\)  ‘their house’
Form relations: process morphology

• Consonant changes in Finnish

  matto 'mat'  mato-lla 'on the mat'
  kukka 'flower'  kuka-n 'of the flower'

• Consonant gradation

  tupa 'hut'  tuva-ssa 'in the hut'
  katu 'street'  kadu-lla 'on the street'
  jalka 'foot'  jala-n 'of the foot'
  kenkä 'shoe'  kengä-n [kenŋän] 'of the shoe'
  polke- 'trample'  polje-n 'I trample'
  särke- 'break'  särje-n 'I break'
Form relations: stress

- **English**
  
  *récord*
  
  *recórd*

- **Russian (окно ‘window’, место ‘place’)**

<table>
<thead>
<tr>
<th>Case</th>
<th>Sing</th>
<th>Pl</th>
<th>Sing</th>
<th>Pl</th>
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<tbody>
<tr>
<td>nom</td>
<td>oknó</td>
<td>ókna</td>
<td>mésto</td>
<td>mestá</td>
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<tr>
<td>acc</td>
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<td>mésto</td>
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<td>gen</td>
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<td>ókon</td>
<td>mésta</td>
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<td>okné</td>
<td>óknax</td>
<td>méste</td>
<td>méstax</td>
</tr>
</tbody>
</table>
Form relations: tone

- DhoLuo ‘taste soup’ (! = downstep, é = high tone è = low tone)

<table>
<thead>
<tr>
<th></th>
<th>Imperfective</th>
<th>Perfective</th>
</tr>
</thead>
<tbody>
<tr>
<td>1sg</td>
<td>á ! bílò kàdò</td>
<td>à bílò kàdò</td>
</tr>
<tr>
<td>2sg</td>
<td>í ! bílò kàdò</td>
<td>ì bílò kàdò</td>
</tr>
<tr>
<td>3sg</td>
<td>ó ! bílò kàdò</td>
<td>ò bílò kàdò</td>
</tr>
<tr>
<td>1pl</td>
<td>wá ! bílò kàdò</td>
<td>wà bílò kàdò</td>
</tr>
<tr>
<td>2pl</td>
<td>ú ! bílò kàdò</td>
<td>ù bílò kàdò</td>
</tr>
<tr>
<td>3pl</td>
<td>gí ! bílò kàdò</td>
<td>gì bílò kàdò</td>
</tr>
</tbody>
</table>
Form relations

- **Saanich metathesis**

<table>
<thead>
<tr>
<th>Non-actual</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>se</td>
<td>se-ʔ</td>
</tr>
<tr>
<td>wéqəs</td>
<td>wé-ʔ-qəs</td>
</tr>
<tr>
<td>t'sə</td>
<td>t'əs</td>
</tr>
<tr>
<td>q'k'w</td>
<td>q'ək'w</td>
</tr>
<tr>
<td>sc'ə</td>
<td>səc'</td>
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</tbody>
</table>
Meaning relations

- Two main types: inflection and derivation
- Inflectional morphology relates word forms that belong to a single lexeme
- Inflectional categories vary a lot by language, but typically include
  - inherent properties, e.g., tense, mood, or number
  - government properties, e.g., case, agreement
  - concord properties
Inflection

- Japanese verb inflection

- \textit{kak-u} ‘writes’
- \textit{kak-e-ba} ‘would write’
- \textit{kak-oo} ‘let's write’
- \textit{kak-i-tai} ‘want to write’
- \textit{kak-e-ru} ‘can write’
- \textit{kak-a-nai} ‘not write’
Inflection

- Government in Archi

*tow-mu nesen χuzenni-s at' harsboqi*

he-ERG now master-DAT meat.ABS will.cook

‘Now he will cook the meat for the master.’

*nac'a-n cal-um-caj naq'w caq'uli*

bird-GEN feather-PL-ERG ground.ABS covered

‘The bird's feathers covered the ground.’

*jamur wi'taru laha-q' os t'inna twozur erdili*

this seven girl-PART one slightly shy was

‘Of the seven girls, one was somewhat shy.’
Inflection

- Concord in Marind

\[
e-pe \ anem \ e-pe \ akek \ ka \\
\text{I-the man I-the light. I is} \\
\text{‘The man is light.’}
\]

\[
u-pe \ anum \ u-pe \ akuk \ ka \\
\text{II-the woman II-the light. II is} \\
\text{‘The woman is light.’}
\]

\[
e-pe \ de \ e-pe \ akak \ ka \\
\text{III-the wood III-the light. III is} \\
\text{‘The wood is light.’}
\]

\[
i-pe \ behaw \ i-pe \ akik \ ka \\
\text{IV-the pole IV-the light. IV is} \\
\text{‘The pole is light.’}
\]
Derivational morphology

• Derivational morphology relates lexemes

• Functional derivation
  
  act-or

• Featural derivation
  
  actr-ess

• Category-changing derivation
  
  new  new-ness
  budget  budget-ary

• Valence changing derivation
Morpheme

- Many kinds of form/form and meaning/meaning relations
- Where does this leave morphemes as “the smallest meaningful constituent”?
- Two approaches
  - Morphemes as things, sometimes very abstract
  - Morphemes as rules, usually affixation
- Another challenge comes from cumulative expression in inflectional paradigms

Serbo-Croatian $ovc$- ‘sheep’

$ovca$ NOM.SG  $ovcu$ ACC.SG
$ovce$ NOM.PL  $ovce$ ACC.PL