LNGT0101
Introduction to Linguistics

Lingu-ist-ic-s
[lĭn-gʷí-stɪks]

Lecture #6
Oct 5th, 2015

Announcements

- The Middlebury Linguistics Club.

- HW2 will be posted on Wed.

Today's agenda

- Discussion of article on error correction and video clip by Weird Al.
- Do some more morphology problems.
- Morphological structure (trees)
- Morphological analysis of datasets.

Morphology

- Morphology is the study of word structure and word formation in human language.
- The main unit of analysis in morphology is the **morpheme**, which is defined as "the minimal unit of meaning or grammatical function in the language."

Taxonomy of morphemes

- There are multiple ways to classify morphemes.
- Morphemes can be free or bound.
- Bound morphemes can be either prefixes, suffixes, infixes, or circumfixes.
- Morphemes can be either inflectional or derivational.
- Content vs. function morphemes.
- Some roots can be bound (English *huckles* and *ceives*). In Semitic, roots are bound.

Dataset 1. Hyderabadi Telugu (India)

1.	pilla	'child'	8.	pillalu	'children'
2.	puwu	'flower'	9.	puwulu	'flowers'
3.	tʃiima	'ant'	10.	tʃiimalu	'ants'
4.	doma	'mosquito'	11.	domalu	'mosquitos'
5.	godugu	'elephant'	12.	godugulu	'elephants'
6.	tʃiire	'sari'	13.	tʃiirelu	'saris'
7.	annagaaru	'elder brother'	14.	annagaarulu	'elder brothers'

Dataset 2. Kewa (Papua New Guinea)

1.	ada	'house(s)'	5.	adanu	'group(s) of houses'
2.	pora	'path(s)'	6.	poranu	'group(s) of paths'
3.	yana	'dog(s)'	7.	yananu	'group(s) of dogs'
4.	nu	'net bag(s)'	8.	nunu	'group(s) of net bags'

Dataset 4. Swahili (Uganda)

1.	mtoto	'child'	5.	watoto	'children'
2.	mtu	'person'	6.	watu	'people'
3.	mpiʃi	'cook'	7.	wapiʃi	'cooks'
4.	mgeni	'stranger'	8.	wageni	'strangers'

- What is the morpheme for each of the following in Guaymi:
  - past tense:
  - present tense:
  - 'speak':

Dataset 10. Guaymí (Panama)

1.	kuge	'burns	5.	kugaba	'burned'
2.	blite	'speaks'	6.	blitaba	'spoke'
3.	kite	'throws'	7.	kitaba	'threw'
4.	mete	'hits'	8.	metaba	'hit'

What is the morpheme for each of the following in Ch. Mazatec:
- past tense:
- progressive aspect:

Dataset 12. Chiquihuitlán Mazatec (Mexico)
Phonemic tone is not indicated.'

1.	faʔa	'takes'	7.	tʃha	'speaks'
2.	tifaʔa	'is taking'	8.	titʃha	'is speaking'
3.	kafaʔa	'took'	9.	katʃha	'spoke'
4.	sæ	'sings'	10.	fi	'goes'
5.	tisæ	'is singing'	11.	tifi	'is going'
6.	kasæ	'sang'	12.	kafi	'went'

Dataset 9. Isthmus Zapotec (Mexico)
Phonemic tone and stress not indicated.

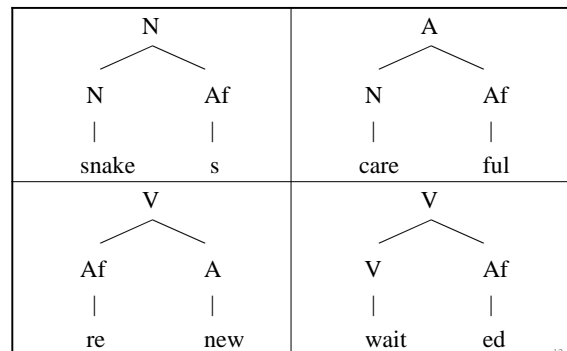|					
1.	ɲee	'foot'	12.	kaʒigitu	'your (pl) chins'
2.	kaɲee	'feet'	13.	kaʒigidu	'our chins'
3.	ɲeebe	'his foot'	14.	ʒike	'shoulder'
4.	kaɲeebe	'his feet'	15.	ʒikebe	'his shoulder'
5.	ɲeeluʔ	'your foot'	16.	kaʒikeluʔ	'your shoulders'
6.	kaɲeetu	'your (pl) feet'	17.	diaga	'ear'
7.	kaɲeedu	'our feet'	18.	kadiagatu	'your (pl) ears'
8.	ʒigi	'chin'	19.	kadiagadu	'our ears'
9.	kaʒigi	'chins'	20.	biʃozedu	'our father'
10.	ʒigibe	'his chin'	21.	biʃozetu	'your (pl) father'
11.	ʒigiluʔ	'your chin'	22.	kabiʃozetu	'your (pl) fathers'

Representing morphological structure

- In languages like English, free morphemes are typically roots and bound morphemes are typically affixes and both types combine together to form words.
- We can represent that graphically in the form of a tree diagram, where V = verb, N = noun, A = adjective, and Af = affix.
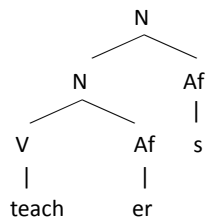
```
        V
       / \
     Af    V
     |     |
     re   open
```

Representing morphological structure

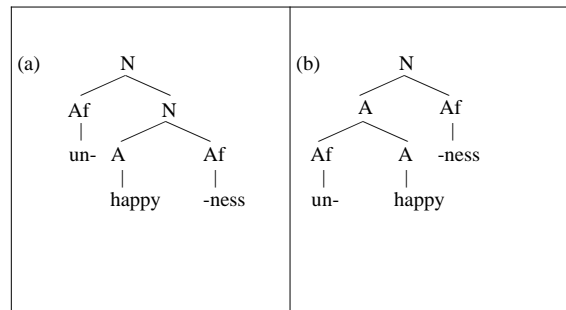| N	A
N Af | | snake s	N Af | | care ful
V	**V**
Af A | | re new	V Af | | wait ed
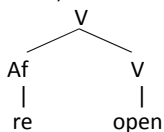
Representing multimorphemic words

- We can also use trees to represent the internal structure of more complex words such as *teachers*:

```
              N
           /     \
          N       Af
        /   \      |
       V     Af    s
       |     |
     teach   er
```

Morphological trees: Which tree is the correct one for 'unhappiness'? Why?

(a)
```
           N
        /     \
       Af      N
       |     /    \
      un-   A      Af
            |      |
          happy   -ness
```

(b)
```
           N
        /     \
        A      Af
      /   \    |
     Af    A   -ness
     |     |
    un-   happy
```
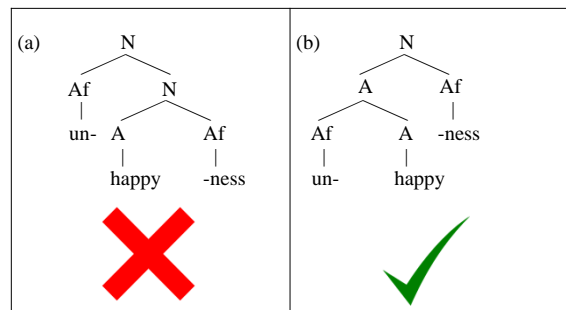

Derivational morphemes

- Notice that each derivational morpheme is typically used with a particular lexical category. For example, -*able* is used to derive an adjective from a verb (*doable*); -*ize* is used to derive a verb from a noun or an adjective (*hospitalize*, *modernize*), etc.
- This helps resolve cases of ambiguity in morphological structure.
- A list of some English derivational morphemes from O'Grady *et al*'s 2005 book is given on the handout.

Morphological trees: Which tree is the correct one for 'unhappiness'? Why?

(a)
```
           N
        /     \
       Af      N
       |     /    \
      un-   A      Af
            |      |
          happy   -ness
```
❌

(b)
```
           N
        /     \
        A      Af
      /   \    |
     Af    A   -ness
     |     |
    un-   happy
```
✓

Morphological trees

- Let's draw trees for the following words.
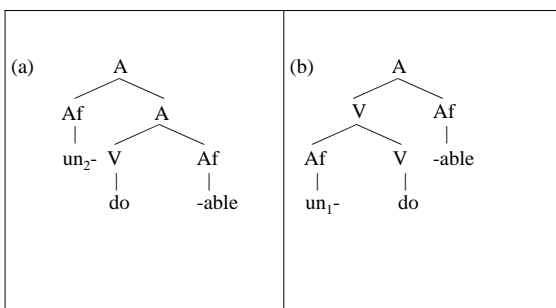
  undesirability

  misrepresentation

  undoable

The puzzle of the 'undoable'

What does 'undoable' mean?

Two meanings = Two trees

The puzzle of the 'undoable'

```
(a)          A
        ┌────┴────┐
       Af         A
        │     ┌────┴────┐
      un₂-    V         Af
              │         │
             do        -able
```

```
(b)          A
        ┌────┴────┐
        V         Af
    ┌───┴───┐     │
   Af       V   -able
    │       │
   un₁-    do
```

A tool for drawing trees

- http://ironcreek.net/phpsyntaxtree/
- You need to learn the bracketing notation to be able to use this tool. Here are a couple of examples:
- [N [N [V *teach*] [Af *-er*]] [Af *-s*]]
- [N [A [Af *-un*] [A [V *desire*] [Af *-able*]]] [Af *-ity*]]

Inflectional morphemes

- Inflectional morphemes combine with a base to change the grammatical function of the base, e.g.,

Inflectional affix	Example
plural *-s*	book-s
3ʳᵈ third person singular *-s*	visit-s
comparative *-er*	young-er

- A list of inflectional morphemes in English is given in your textbook (p. 47).

Derivational vs. inflectional affixes

- How do we distinguish between derivational and inflectional affixes?
- Remember that the main distinction is that derivational affixes change the meaning of the base (e.g., *create* vs. *creat-ive*), while inflectional affixes change the grammatical function of a word, but not really its core meaning (e.g., *wait* vs. *wait-ed*).

Derivational vs. inflectional affixes: (1) Category change

- Derivational affixes typically change the category of the base, but inflectional affixes do not:
  - poison (N) + -ous → *poisonous* (A)
  - refuse (V) + -al → *refusal* (N)
  - optimist (N) + -ic → *optimistic* (A)
- Compare:
  - hat (N) + plural -s → *hats* (N)
  - look (V) + past tense -ed → *looked* (V)
  - old (A) + superlative -est → *oldest* (A)

Derivational vs. inflectional affixes: (2) Order

- Another difference between derivational and inflectional affixes has to do with the order in which they combine with the base: A derivational affix has to combine with the base before an inflectional affix does, e.g.,

  free-dom-s   *free-s-dom

  black-en-ed   *black-ed-en

Derivational vs. inflectional affixes: (3) Productivity

- A third difference between the two types of morphemes has to do with productivity: Inflectional morphemes have relatively few exceptions, whereas derivational affixes are restricted to combine with certain bases.
- So while plural -s can combine with virtually any noun (irregular forms aside), the affix -ize can only combine with certain adjectives:

  modern-ize, but no *new-ize

  legal-ize, but not *lawful-ize

Morphological analysis

Bontoc

[fikas] "strong"	[fumikas] "to become strong"
[kilad] "red"	[kumilad] "to become red"
[fusul] "enemy"	[fumusul] "to become an enemy"

- How are verbs formed from adjectives/nouns in Bontoc?
- If the word for "dark" in Bontoc is [ŋitad], what would the form meaning "to become dark" be?
- If [pumukaw] means "to become white," what would the form meaning "white" in Bontoc be?

Turkish

17. Following is a list of words from Turkish. In Turkish, articles and morphemes indicating location are affixed to the noun.

deniz	'an ocean'	evden	'from a house'
denize	'to an ocean'	evimden	'from my house'
denizin	'of an ocean'	denizimde	'in my ocean'
eve	'to a house'	elde	'in a hand'

   a. What is the Turkish morpheme meaning 'to'?
   b. What kind of affixes in Turkish correspond to English prepositions (e.g., prefixes, suffixes, infixes, free morphemes)?
   c. What would the Turkish word for 'from an ocean' be?
   d. How many morphemes are there in the Turkish word *denizimde*?

Zulu

5. Part One:

   Consider the following nouns in Zulu and proceed to look for the recurring forms.

umfazi	'married woman'	abafazi	'married women'
umfani	'boy'	abafani	'boys'
umzali	'parent'	abazali	'parents'
umfundisi	'teacher'	abafundisi	'teachers'
umbazi	'carver'	ababazi	'carvers'
umlimi	'farmer'	abalimi	'farmers'
umdlali	'player'	abadlali	'players'
umfundi	'reader'	abafundi	'readers'

   a. What is the morpheme meaning 'singular' in Zulu?
   b. What is the morpheme meaning 'plural' in Zulu?
   c. List the Zulu stems to which the singular and plural morphemes are attached, and give their meanings.

Zulu

Part Two:

The following Zulu verbs are derived from noun stems by adding a verbal suffix.

fundisa	'to teach'	funda	'to read'
lima	'to cultivate'	baza	'to carve'

   d. Compare these words to the words in section A that are related in meaning, for example, *umfundisi* 'teacher,' *abafundisi* 'teachers,' *fundisa* 'to teach.' What is the derivational suffix that specifies the category verb?
   e. What is the nominal suffix (i.e., the suffix that forms nouns)?
   f. State the morphological noun formation rule in Zulu.
   g. What is the stem morpheme meaning 'read'?
   h. What is the stem morpheme meaning 'carve'?

Swedish

en lampa	'a lamp'	en bil	'a car'
en stol	'a chair'	en soffa	'a sofa'
en matta	'a carpet'	en tratt	'a funnel'
lampor	'lamps'	bilar	'cars'
stolar	'chairs'	soffor	'sofas'
mattor	'carpets'	trattar	'funnels'
lampan	'the lamp'	bilen	'the car'
stolen	'the chair'	soffan	'the sofa'
mattan	'the carpet'	tratten	'the funnel'
lamporna	'the lamps'	bilarna	'the cars'
stolarna	'the chairs'	sofforna	'the sofas'
mattorna	'the carpets'	trattarna	'the funnels'

Swedish

a. What is the Swedish word for the indefinite article *a* (or *an*)?
b. What are the two forms of the plural morpheme in these data? How can you tell which plural form applies?
c. What are the two forms of the morpheme that make a singular word definite, that is, correspond to the English article *the*? How can you tell which form applies?
d. What is the morpheme that makes a plural word definite?
e. In what order do the various suffixes occur when there is more than one?
f. If *en flicka* is 'a girl,' what are the forms for 'girls,' 'the girl,' and 'the girls'?
g. If *bussarna* is 'the buses,' what are the forms for 'buses' and 'the bus'?

Cebuano

7. Here are some nouns from the Philippine language Cebuano.

sibwano	'a Cebuano'
ilokano	'an Ilocano'
tagalog	'a Tagalog person'
inglis	'an Englishman'
bisaja	'a Visayan'
binisaja	'the Visayan language'
ininglis	'the English language'
tinagalog	'the Tagalog language'
inilokano	'the Ilocano language'
sinibwano	'the Cebuano language'

a. What is the exact rule for deriving language names from ethnic group names?
b. What type of affixation is represented here?
c. If *suwid* meant 'a Swede' and *italo* meant 'an Italian,' what would be the words for the Swedish language and the Italian language?
d. If *finuranso* meant 'the French language' and *inunagari* meant 'the Hungarian language,' what would be the words for a Frenchman and a Hungarian?

Next class agenda

- More morphological analysis of datasets.
- Word-formation processes.
- Morphological typology.
- Finish reading chapter 2 if you haven't already.
- Also read this chapter on morphological typology.