LNGT0101
Introduction to Linguistics

Lingu-ist-ic-s
[lɪŋ-gʷɪ́-stɪks]
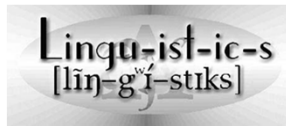
Lecture #11
Oct 17th, 2012

Announcements

- Reminder: HW3 is due Monday Oct 22nd, either in class, or by 5pm via e-mail. No extension will be given, so we avoid overlap with the midterm.
- Scores for HW2 have been posted. Average is 76/80 and median is 77/80.
- I also posted suggested solutions for HW1 and HW2.
- We're rather behind in the syllabus, so I may rely more on lecturing (and speaking fast) over the next couple of weeks, but do interrupt me if you have questions.

Today's agenda

- Any 'linguistic' aspects of last night's debate?
- Some unfinished business from Spanish phonology.
- Introducing morphology.

Spanish [d] and [ð]

26. Standard Spanish

Standard Spanish is an Indo-European language of the Romance family. Examine the phones [d] and [ð]. Determine whether they are allophones of one phoneme or of separate phonemes. If they are allophones of one phoneme, identify the type of distribution. If they are in complementary distribution, state a rule that describes the distribution. If [d] and [ð] are allophones of separate phonemes, give minimal pairs that prove this.

a. [drama]	'drama'	g. [komiða]	'food'
b. [dolor]	'pain'	h. [anda]	'scram'
c. [dime]	'tell me'	i. [sweldo]	'salary'
d. [kaða]	'each'	j. [durar]	'to last'
e. [laðo]	'side'	k. [toldo]	'curtain'
f. [oðio]	'hatred'	l. [falda]	'skirt'

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Spanish [b] and [β] and [g] and [ɣ]

33. Spanish

Examine the following data from Spanish and answer the questions which follow. Note that [β] represents a voiced bilabial fricative, and [ɣ] a voiced velar fricative.

a. [bino]	'he came'	h. [uβa]	'grape'	o. [siɣlo]	'century'
b. [diβino]	'divine'	i. [golpe]	'a hit'	p. [pweβlo]	'village'
c. [kaβo]	'end'	j. [gato]	'cat'	q. [laðron]	'thief'
d. [suβteraneo]	'subterranean'	k. [aɣo]	'I do'	r. [kaβra]	'goat'
e. [brotar]	'to sprout'	l. [iɣaðo]	'liver'	s. [loɣrar]	'to achieve'
f. [imbjerno]	'winter'	m. [tengo]	'I have'		
g. [amiɣo]	'friend'	n. [leɣal]	'legal'		

i. The allophones [b] and [β] are in complementary distribution, as are [g] and [ɣ]. Determine the conditioning environments for each pair, and state a rule that describes the distribution of the allophones.

ii. Refer to Exercise 26 (Standard Spanish) and the rule for the distribution of the allophones [d] and [ð]. Describe the distribution of [b], [d], [g] and [β], [ð], [ɣ] in the most general terms possible, assuming each pair of allophones follows the same pattern.

Morphology

1

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."
- So, …

Morphology

- How many morphemes are there in "open"?
- That's a *monomorphemic* or *simple word*.

- How about "reopen"?
- This has two units: "re-" and "open", forming a *multimorphemic* or *complex word*.
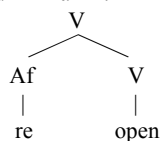
Morphology

- How about "reopened" then?
  Right. Three morphemes: *re-*, *open*, and *-ed*.
- Notice that while "re-" and "open" have meanings, "-ed" has the grammatical function of signaling past tense.
- To distinguish between these morphemes, we say that "open" is the **root** morpheme; "re-" is a *derivational* morpheme; and "-ed" is an *inflectional* morpheme.

# Not all morphemes are created equal: Some are free, and some are bound

- Another distinction between the three morphemes in "reopened" has to do with their ability to occur alone in the language.
- So, while "open" can stand alone in English (e.g., *I want to open the door*), "re-" and "-ed" are dependent morphemes; they cannot stand alone in English (**I re- the door*; **I -ed the door*).
- We call the former type **free** morphemes, and the latter type **bound** morphemes.

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.
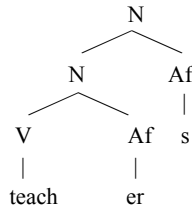
```
        V
       / \
     Af    V
     |     |
     re   open
```

Representing morphological structure

2
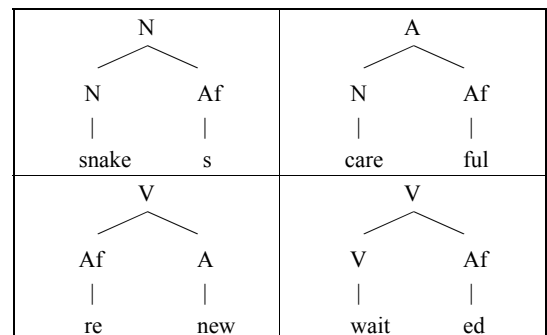
Representing multimorphemic words

- 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
```

Root vs. base

- To make a distinction between the indivisible root of the word and other parts of the word that have affixes combine with them, the term "**base**" (or "**stem**") is used.
- So, in the "teachers" example, while "teach" is the root that combines with the affix *-er*, "teacher" is the base that combines with the plural affix *-s*.

Types of bound morphemes by position

- Affixes are classified into four types depending on their position within the word with regard to the base morpheme:
  a. A *prefix* is a bound morpheme that precedes the base, e.g., "un-" in ***un**real*.
  b. A *suffix* is a bound morpheme that follows the base, e.g., "-ing" in *read**ing***.

Types of bound morphemes by position

  c. An *infix* is a bound morpheme that occurs within the base, e.g., the morpheme "ta" in Akkadian:

   iʃriq "he stole" → iʃ**ta**riq "he stole for himself"

  d. A *circumfix* is a bound morpheme that occurs on both sides of the base, as in the case of the Egyptian Arabic negation morpheme "*maa...ʃ*":

   katab "wrote" → **maa**-katab-ʃ "didn't write"

Lexical vs. Grammatical morphemes

- Morphemes, whether free or bound, can also be categorized as either **lexical** or **grammatical**.
- Lexical morphemes have semantic content (e.g., nouns, verbs, adjectives, derivational affixes). These are what we earlier called **content words**.
- Grammatical morphemes serve a grammatical function (e.g., articles, conjunctions, prepositions, and inflectional affixes for plural, tense, case, etc.). These are what we called **function words**.

Roots are not necessarily words

- While the majority of roots in English are free morphemes, this is not necessarily the case in other languages.
- Roots in Arabic as well as other Semitic languages are not words; rather, the root consists of three consonants that are then put into a morphological pattern to derive a word:

Root	Pattern	Word
ktb	$C_1aC_2aC_3a$	→ kataba "wrote"
ktb	$C_1uC_2iC_3a$	→ kutiba "was written"
ktb	$C_1aC_2C_2aC_3a$	→ kattaba "caused to write"

- This nonconcatenative way of forming words is typically called *root and pattern morphology*.

Huckles and Ceives

- But even English has some roots that are not free morphemes, e.g.,
  - "kempt" in *unkempt*
  - "luke" in *lukewarm*
  - "huckle" in *huckleberry*
- The same can be said about roots of Latin origin, e.g.,
  - "ceive" in *deceive, perceive, receive*
  - "mit" in *submit, permit, commit*
- These are typically referred to as **bound roots**.

Derivational morphemes

- **Derivation** is an affixation process whereby a word with a new meaning and typically a new category is formed.
- The affixes involved in derivation are called *derivational morphemes*.
- A list of some English derivational morphemes from the O'Grady *et al*'s book is given on the handout.

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.
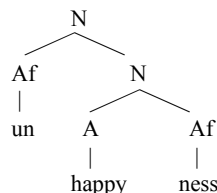- This helps resolve cases of ambiguity in morphological structure.

Morphological trees

- For example, how would the tree for "unhappiness" look like?

(a)

```
              N
           /     \
          A       Af
        /   \      |
      Af     A    ness
      |      |
      un   happy
```
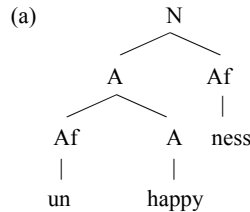
Morphological trees

- But we can also represent the structure as in (b) below:

(b)

```
              N
           /     \
         Af       N
          |     /   \
         un    A     Af
               |      |
             happy   ness
```

- So, which one is the correct structure?
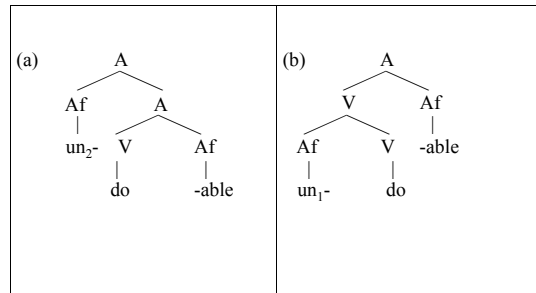
Morphological trees

- Let's draw trees for a couple of words.
  - undesirability
  - misrepresentations

The puzzle of the 'undoable'

What does 'undoable' mean?

Two meanings = Two trees

The puzzle of the 'undoable'

(a) A → Af [un$_2$-] + A [V [do] + Af [-able]]

(b) A → V [Af [un$_1$-] + V [do]] + Af [-able]

Constraints on derivation

- Derivation is also subject to constraints. For example, the suffix –*ant* can only combine with bases of Latin origin such as *assist* and *combat*, but not with native English bases such as *help* and *fight*.
- The suffix –*en* can only combine with monosyllabic bases that end with (**technical jargon alert**) an **obstruent** sound, e.g.,
    - white → whiten, and live → liven, but not
    - abstract → *abstracten
    - blue → *bluen
    - green → *greenen

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. 91).

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: 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: 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: 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

Variants of the same morpheme

- So far we've been ignoring exceptions. Time to look at these.
- For example, the plural -*s* morpheme is actually pronounced in three different ways:
  - (a) [-s] : cat → cats
  - (b) [-z] dog → dogs
  - (c) [-əz] kiss → kisses
- Also, not all nouns form their plurals by adding an -*s* suffix, e.g.,
  - (d) one man → two men (vowel change)
  - (e) one sheep → two sheep (zero change)
  - (f) one ox → two oxen (-*en* suffixation)

English Plural Allomorphy

- Since all these cases involve the same morphological operation of plural formation, we do not want to say that there are multiple plural morphemes in English.
- Rather, there is only **one** plural morpheme that can take different guises. Technically, we say that the plural morpheme in English has different **allomorphs**:

(a) [-s] allomorph:	cat → cats
(b) [-z] allomorph	dog → dogs
(c) [-əz] allomorph	kiss → kisses
(d) vowel change allomorph:	man → men
(e) zero allomorph:	sheep → sheep
(f) -*en* allomorph:	ox → oxen

English Plural Allomorphy

- Allomorphy can be **lexically** or **phonologically** conditioned.
- The vowel change allomorph of the plural in English is lexical, for example.
- The [s], [z], and [əz] allomorphs, by contrast, are phonologically conditioned. Can you see why?

Past tense allomorphy in English

- Now, let's consider examples from the paradigm of past tense formation in English:
  - (a) walk → walked [wɔkt]
  - (b) love → loved [lʌvd]
  - (c) want → wanted [wantəd]; seed → seeded [sidəd]
  - (d) sing → sang
  - (e) cut → cut
  - (f) go → went
- What is the morpheme here? What are the allomorphs?

The past tense morpheme in English: [t], [d], or [əd]

a) walked /wɔkt/
b) cracked /kɹækt/
c) flipped /flɪpt/
d) hissed /hɪst/
e) huffed /hʌft/
f) hushed /hʌʃt/
g) munched /mʌntʃt/
h) drubbed /dɹʌbd/
i) dragged /dɹægd/
j) jogged /dʒɑgd/
k) fudged /fʌdʒd/
l) heaved /hivd/
m) wheezed /wizd/
n) fined /fajnd/
o) flitted /flɪtəd/
p) butted /bʌtəd/
q) padded /pædəd/
r) loaded /lodəd/
s) collided /kəlajdəd/
t) allowed /əlawd/
u) sowed /sod/

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Other morphological processes

Suppletion

- The "go-went" example is an example of suppletion, which is the replacement of a morpheme by an entirely different morpheme to indicate a grammatical contrast.
- Suppletive forms are found in many other languages:
  French: *aller* "to go" → *ira* "he/she will go"
  Spanish: *ir* "to go" → *fue* "he/she went"
  Classical Arabic ʔimraʔa(t) "woman" → nisa:ʔ "women"

Cliticization

- Cliticization is a morphological operation that does not create new words, but still combine two morphemes together in one word.
- English shows cliticization in cases of contraction, e.g.,
  I am → *I'm*   we have → *we've*
  want to → *wanna*
- French and other Romance languages show cliticization with pronouns, e.g.,
  Je t'aime.   Suzanne les voit.
  I you-like   Suzanne them sees
  "I like you."   "Suzanne sees them."

Reduplication

- *Reduplication* is a grammatical operation that marks a grammatical or semantic contrast by repeating all or part of the base to which it applies.
- Turkish and Indonesian exhibit *full* reduplication:
  Turkish: javaʃ "slowly" → javaʃ javaʃ "very slowly"
  Indonesian: oraŋ "man" → oraŋ oraŋ "all sorts of men"
- Tagalog exhibits *partial* reduplication:
  lakad "walk" → lalakad "will walk"
  takbuh "run" → tatakhuh "will run"

Forming plural in Samoan

Singular verb	English translation	Plural verb	English translation
nofo	'he sits'	nonofo	'they sit'
moe	'he sleeps'	momoe	'they sleep'
alofa	'he loves'	alolofa	'they love'
savali	'he walks'	savavali	'they walk'
maliu	'he dies'	maliliu	'they die'
atamaʔi	'he is intelligent'	atamamaʔi	'they are intelligent'

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Tone placement

- Some languages use tone to mark grammatical contrasts, e.g., Mono-Bill (spoken in Congo) uses a high tone to mark past tense and a low tone to mark the future:

    dá "spanked" vs. *dà* "will spank"

    wó "killed" vs. *wò* "will kill"

Next class agenda

- Morphological analysis. Have a look at the exercises from the textbook on Zulu (pp. 109-110), Swedish (pp. 110-111), Cebuano (p. 111), and Turkish (p. 115).
- Processes of word-formation. Read Chapter 3, pp. 100-108.
- Morphological typology: How languages differ. Read the .pdf file on the syllabus table on the website before Monday's class.