INTD0112 Introduction to Linguistics

Lecture #9
March 15th, 2007

Announcements

- Homework 3 is due tomorrow by 10am, either by e-mail or by hand.
- Speaking of Homework 3, any questions?
- Also, your takehome midterm exam will be posted by Friday morning at the very latest and is due a week after.

Some unfinished business from last time: Syllabic phonology

- Syllable structure is relevant to phonological rules.
- We have already seen some examples where the syllable boundary sign is used in phonological rules.
- But now since we actually know what a syllable is, it is easy to state these generalizations in terms of syllable structure.

Aspiration one more time

- For example, where does aspiration of voiceless stops in English occur?
- Voiceless stops are aspirated syllable-initially, and unaspirated elsewhere.
- "Elsewhere" here means two contexts: (a) in a syllabic onset after 's', or (b) in a coda.

Vowel length in English

- Remember the rule for vowel length in English?
- Vowels are lengthened before voiced nonsononrant consonants, but not before voiceless consonants:

  bad   [bæ:d]   bat   [bæt]
  leave   [li:v]   leaf [lif]

Vowel length in English

- But now consider these cases:

  obey [owbej]
  redo [ɹidu]

- Why is there no vowel lengthening here?
- Because the rule actually applies only when the voiced consonant following the vowel is in coda position.

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 "minimal unit of meaning or grammatical function in the language".
- So, …

Morphology

- The word "open" in English has one morpheme. We call it a *monomorphemic* or *simple word*.

- But how about "reopen"?
  This has two units: "re-" and "open", each a morpheme with a different meaning that contributes to the overall meaning of the whole word. This is a *multimorphemic* or complex word.

Derivational vs. Inflectional morphemes

- How about "reopened" then? How many morphemes are there?
  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" seems to be an independent morpheme, that is, it 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

- 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:
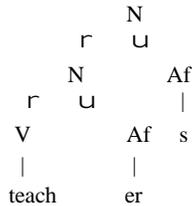
```
            V
        ┌───┴───┐
       Af       V
        │        │
       re      open
```
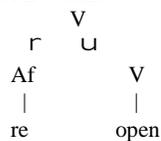
Representing morphological structure

N	A
┌──┴──┐	┌──┴──┐
N Af	N Af
| |	| |
snake s	care ful
V	V
┌──┴──┐	┌──┴──┐
Af A	V Af
| |	| |
re new	wait ed

Representing multimorphemic words

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

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

Root vs. base

- To make a distinction between the root of the word and other parts of the word that also have affixes combine with them, the term "base" is used.
- So, in the "teachers" example, while "teach" is the root and base for the affix *-er*, "teacher" is the base for 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., "re-" in *reopened*.
  b. A *suffix* is a bound morpheme that follows the base, e.g., "-ed" in *reopened*.

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:

   išriq "he stole" → iš**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 "ma…š":

   katab "wrote" → ma-katab-š "didn't write"

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

- 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 affixational 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 is given in your textbook in table 4.6, p. 119.

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
```
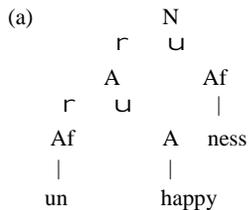
Morphological trees

- 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?

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 an obstruent, e.g.,

  white → whiten, but not

  abstract → *abstracten

  blue → *bluen

Two classes of Derivational affixes

- Derivational affixes can also be distinguished into two types with regard to whether or not they trigger phonological changes in the base form they attach to.

Class 1 Affixes

- Affixes that trigger phonological changes are called Class 1 affixes, e.g.,

  -ity   san-ity

  -ize   public-ize

  -ive   product-ive

Class 2 Affixes

- Affixes do not trigger phonological changes in the stem are called Class 2 affixes, e.g.,

  -ness   happi-ness

  -ly   quick-ly

  -dom   free-dom

Co-occurrence of Class 1 and Class 2

- Interestingly, in English words where both types of classes co-occur, Class 2 affixes cannot intervene between the root and Class 1 affixes:

  (a) nat-ion-al   (b) decis-ive-ness

       root 1   1   root   1   2

  (c) care-ful-ness   (d) *care-less-ity

       root 2   2   root   2   1

Inflectional morphemes

- Inflectional morphemes combine with a base to typically 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

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 do not (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, not all nouns form their plurals by adding an –*s* suffix, e.g.

    (a) one man → two men (internal change)

    (b) one sheep → two sheep (zero change)

    (c) one ox → two oxen (-*en* suffixation)

Variants of the same morpheme

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

    (a) –*s* allomorph: book → books

    (b) vowel change allomorph: man → men

    (c) zero allomorph: sheep → sheep

    (d) –*en* allomorph: ox → oxen

Past tense allomorphy in English

- Now, let's consider examples from the paradigm of past tense formation in English:

    (a) walk → walked

    (b) sing → sang

    (c) cut → cut

    (d) go → went

- What is the morpheme here? What are the allomorphs?

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"

    Russian: *xorofo* "good" → *lutʃʃe* "better"

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 "quickly" → javaʃ javaʃ "very quickly"

  Indonesian: oraŋ "man" → oraŋ oraŋ "all sorts of men"
- Tagalog exhibits partial reduplication:
  lakad "walk" → lalakad "will walk"

  takbuh "run" → tatakhuh "will run"

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"

Some morphology problems.

Next class agenda

- Morphology cont. : Compounding and other processes of word formation. Chapter 4.
- Morphological typology