INTD0112
Introduction to Linguistics

Lecture #10
Oct 7th, 2009

Announcements

- Reminder: Hang Du's talk is today at 4:30pm in RAJ conference room.
- Fall break is next week. Since HW 3 is due on the Wednesday right after the break, I advise you to look at it today and tomorrow, and come to my office hours on Friday if you have questions.
- Speaking of questions, any questions?
- I kind of miss Mr. D. Advocate, but we're kind of behind in the syllabus, so let's keep him on vacation for now.

Morphology

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

- 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?

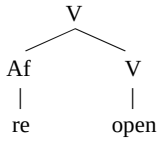
  Right. Three morphemes: *re-*, *open*, and *-ed*.
- Notice that while "re-" and "open" have meanings, "-ed" has the grammatical function of signaling past tense.
- To distinguish between these morphemes, we say that "open" is the ***root*** morpheme; "re-" is a ***derivational*** morpheme; and "-ed"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

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

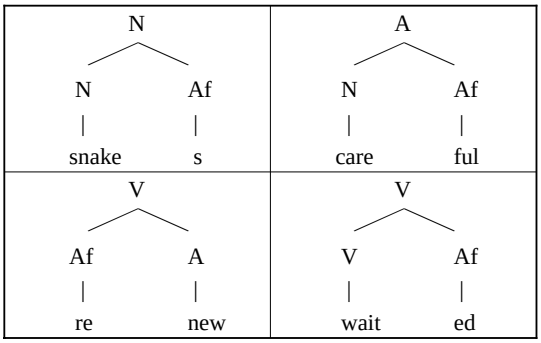
- Another distinction between the three morphemes in "reopened" has to do with their ability to occur alone in the language.
- So, while "open" seems to be an independent morpheme, that is, it can stand alone in English (e.g., *I want to open the door*), "re-" and "-ed" are dependent morphemes; they 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:

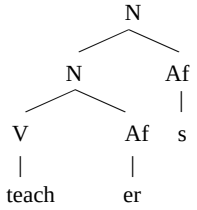


Representing morphological structure



Representing multimorphemic words

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



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**" (or "**stem**" as in your textbook) 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., "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"

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). They are also called **content morphemes**.
- Grammatical morphemes serve a grammatical function (e.g., articles, conjunctions, prepositions, and inflectional affixes for plural, tense, case, etc.). They are also called **function morphemes**.

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's book is given on the handout.

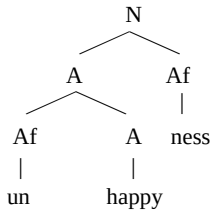
Derivational morphemes

- 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?

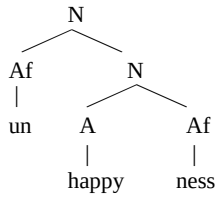
(a)



Morphological trees

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

(b)



- 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 (**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 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

- A list of inflectional morphemes in English is given on the handout.

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, 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 (internal 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?

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

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 "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"

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 be the form meaning "to become dark"?
- If [pumukaw] means "to become white," what would be the form meaning "white" in Bontoc?

Morphological analysis: Zulu

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”
umfundi “reader”	abafundi “readers”

Morphological analysis: Zulu

fundisa “to teach”	funda “to read”
lima “to cultivate”	baza “to carve"

- Suppose now that I told you that “abadlali” means “players” in Zulu. What’s the form for “player”? What’s the form for “to play”?

Some take-home morphology problems

- Turkish.
- Michoacan Aztec.
- Cebuano.

Next class agenda

- Morphological typology: How languages differ. Read the section on morphological typology in Chapter 11, pp. 255-65.
- We also start syntax. Chapter 5.

HAVE A GOOD BREAK, EVERYONE!