INTD0112
Introduction to Linguistics

Lecture #11
Oct 14th, 2009

Comments on HW 2

* Scores are lower than on HW 1 (average is 74, compared to 79 on HW1).
* Most problems were with transcription, particularly with aspiration, devoicing, and nasalization. Also, some problems had to do with recognizing vowels, which is not uncommon.

  * Would you please stop that racket?
  * I haven’t seen my brother for ages.

Comments on HW 2

* Also notice the following:
  * Only voiceless stops, (that is, [p, t, k]), in English undergo aspiration.
  * Vowels become nasalized only before nasals, that is, before [m, n, ɲ].
  * Schwa never occurs in a stressed syllable:
    * brother [brʌðə]  abrupt [əbrʌpt]

Comments on HW 2

* /e/ and /o/ will always have glides after them in English. So, in narrow phonetic transcription, they appear as [ei] and [ow].
* Vowel reduction is not the same as vowel deletion.

Narrow phonetic transcription features

* For future transcription exercises, here is a list of the narrow phonetic features that you need to know and mark:
  * Aspiration for voiceless stops: [tʰ]
  * (Optional) Non-release for stops: [t̚]
  * Syllabicity for nasals and liquids: [ŋ]
  * Devoicing for liquids and glides: [w]
  * Nasalization for vowels: [u]
  * Lengthening for vowels: [uː]
Comments on HW 2

- Please make sure you print out any homework/exam from the .PDF file, and not the .doc file. College computers do not have the SIL font installed on them, and all these symbols will appear as $\Sigma$, $\Theta$, etc., within the .doc file.
- Also notice that online tests are open book assignments.
- Also, when you send me your homework/exam by e-mail, make sure you append your full name to the file name (e.g., hw2_noam_chomsky).
- Read the questions carefully and answer each part of the question.
- Please do skip lines, or use 1.5/double spacing for transcription questions so I can write comments.

Back to Morphology

The puzzle of the “undoable”

- How would a morphological tree of “undoable” look like?

Morphology problems

- Turkish.
- Michoacan Aztec.
- Cebuano.

Today’s agenda

- Processes of word formation: How do we add words to the lexicon of our language? (Chapter 4)
- Morphological typology: How do languages differ morphologically? (Chapter 11, pp. 255-65)

Processes of word-formation (enriching the Lexicon)
Processes of word-formation

- There are systematic word-formation processes that take place across human languages.
- Depending on the language, some of these processes may or may not be available. But the result is the same: New words are always created and added to the dictionary of the language.

Derivation

- The most productive process of word formation in a language is the use of derivational morphemes to form new words from already existing forms, as we discussed last week:

  govern \(\rightarrow\) government \(\rightarrow\) governmental \(\rightarrow\) non-governmental

Word coinage

- Word coinage happens when a name of a product acquires a general meaning and gets used to refer to anything that has the same function of the original product:
  kleenex, kodak, nylon, Dacron

Conversion:

- Conversion (aka zero derivation) is the extension of the use of one word from its original grammatical category to another category as well.
  - For example, the word *must* is a verb (e.g. “You must attend classes regularly”), but it can also be used as a noun as in “Class attendance is a must”.
  - Same applies to “vacation”, a noun that can also be used as a verb, and “major”, an adjective that can be used as a noun and a verb.

Borrowing

- New words also enter a language through borrowing from other languages. English, for example, borrowed a lot of French words as a result of the Norman invasion which took place in 1066, and that’s why the English lexicon has a Latinate flavor to it, even though English did not descend from Latin. LINK
  - Here are some examples of foreign words that found their way into English:
    - leak, yacht (from Dutch)
    - barbecue, cockroach (from Spanish)
    - piano, concerto (from Italian)

Loan translations

- Related to borrowings are *loan translations*, where a new word or expression is created via translation of a foreign term, rather than actual borrowing of the term in the language, e.g.,
  - marriage of convenience (from French mariage de convenance)
  - perros calientes (from English hot dogs)
**Compounding**

- New words are also created through the common process of compounding, i.e. combining two or more words together to form a new complex word. Here are some examples of compounding:
  - post + card → postcard
  - post + office → post office
  - book + case → bookcase
  - sister + in + law → sister-in-law

**Structure of compounds**

<table>
<thead>
<tr>
<th>N</th>
<th>V</th>
</tr>
</thead>
<tbody>
<tr>
<td>P N</td>
<td>A V</td>
</tr>
<tr>
<td>in laws</td>
<td>dry clean</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>V</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>N V</td>
<td>N A</td>
</tr>
<tr>
<td>spoon feed</td>
<td>nation wide</td>
</tr>
</tbody>
</table>

**Properties of English compounds**

- Stress placement:
  - greenhouse vs. green house
  - blackboard vs. black board
- Modification by “very”:
  - We live next to a very green house.
  - We live next to a very greenhouse.
- Inflectional morphemes are added to the compound as a whole:
  - drop kick → dropped kick
  - bear hunter → bear hunters

**Compounding**

- Like word structure, the internal structure of a compound can be represented using trees:

```plaintext
    N
   /|
  N N
  / \
book case
```

**Structure of compounds**

- We can also use trees to represent the internal structure of cases of multiple compounding such as dog food box:

```plaintext
    N
   /|
  N N
  / \
  N N
  / \
  dog food
```

**Endocentric vs. exocentric compounds**

- Semantically, compounds can be divided into two types:
  - **Endocentric compounds**, which denote a subtype of the concept denoted by the rightmost component of the compound, e.g.,
    - dog food is a type of food
    - sky blue is a type of blue
  - **Exocentric compounds**, by contrast, the meaning of the compound does not follow from the meanings of its parts, e.g.,
    - redneck is not a type of neck
    - redhead is not a type of head.
Endocentric vs. exocentric compounds

- Observe the plurals:

<table>
<thead>
<tr>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>club foot</td>
<td></td>
</tr>
<tr>
<td>Bigfoot</td>
<td></td>
</tr>
<tr>
<td>policeman</td>
<td></td>
</tr>
<tr>
<td>Walkman</td>
<td></td>
</tr>
</tbody>
</table>

Acronyms

- Acronyms are words created from the initial letters of several words. Typical examples are NATO, FBI, CIA, UN, UNICEF, FAQ, WYSIWYG, radar, laser.
- Sometimes acronyms are actually created first to match a word that already exists in the language, e.g., MADD (Mothers against Drunk Drivers).

Back-formation

- Back-formation of words results when a word is formed from another word by taking off what looks like a typical affix in the language.
- For example, one of the very productive derivational morphemes in English is -er, which may be added to a verb to create a noun meaning “a person who performs the action of the verb”, e.g. teacher, writer.

Back-formation

- Sometimes, however, the reverse happens: A noun ending with an -er enters the language first and then a verb is “back-formed” from it by taking off the “er”.
- This was the case with the verb edit, which entered English as a back-formation from editor.
- Same applies to the pairs television-televise, self-destruction-self-destruct, donation-donate.

Clipping

- Another process of word-formation is clipping, which is the shortening of a longer word. Clipping in English gave rise to words such as fax from facsimile, gym from gymnasium, and lab from laboratory.

Blending

- Blending is another way of combining two words to form a new word. The difference between blending and compounding, however, is that in blending only parts of the words, not the whole words, are combined. Here’s a couple of examples:
  - smoke + fog → smog
  - motor + hotel → motel
  - information + commercial → infomercial
Eponyms

- Eponyms are words derived from proper names, e.g., “sandwich” from the Earl of Sandwich; “lynch” after William Lynch.

Morphological typology

- How do languages differ in their word structure?

Synthesis: How many morphemes does your language have per word?

- One aspect of morphological variation has to do with synthesis: Some languages may choose to “stack” morphemes on top of one another within words; others may elect to use at most one morpheme per word, and many others will fall somewhere between these two extremes.
- Let us start by comparing Yay to Oneida (examples cited in Whaley 1997:127):

Yay:

a. **mi ran tua ŋwa lew**
   not see CLASS snake CMPLT
   “He did not see the snake.”

Oneida:

b. **yo-nuhs-a-tho:lé:**
   ʒNEUT PAT-room-epenthetic-be.cold.STAT
   “The room is cold.”

Morphological typology: Index of synthesis

- On the so-called index of synthesis for morphological typology (Comrie 1989), understood as a continuum, Yay is considered an isolating language, whereas Oneida would be closer to the synthetic end of the scale, with English closer to the Yay-end than to the Oneida-end:

\[
\text{Isolating} \leftarrow \text{---} \rightarrow \text{Synthetic}
\]

Yay  English  Oneida

Morphological typology: Index of synthesis

- Some languages take synthesis to the extreme, though, marking all grammatical relationships on the verb with extensive affixation, thereby creating long and complex words that would correspond to whole sentences in languages like English, as the case is in Tiwa (example from Whaley 1997:131):

\[
\text{men-mukhin-tuwi-ban}
\]

Dual-hat-buy-PAST

“You two bought a hat.”
Morphological typology: Index of synthesis

- Or Eskimo:
  iglu-kpi-yuma-laak-tu-ŋa
  house-build-intend-anxious-reflexive-I
  “I’m anxious to build a house.”

- Or Mohawk (from Baker 2001:88):
  Katerihwaiensta’
  “I am a student. [Literally: I habitually cause myself to have ideas.]”

Morphological typology: Index of fusion

One-to-one or one-to-many?

- Synthetic languages, in turn, differ in whether morphemes are easily segmentable or not. Consider this paradigm from Michoacan Nahuatl, for example:

<table>
<thead>
<tr>
<th>Morpheme</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>no-kali</td>
<td>“my house”</td>
</tr>
<tr>
<td>no-kali-mes</td>
<td>“my houses”</td>
</tr>
<tr>
<td>mo-kali</td>
<td>“your house”</td>
</tr>
<tr>
<td>i-kali</td>
<td>“his house”</td>
</tr>
<tr>
<td>no-pelo</td>
<td>“my dog”</td>
</tr>
<tr>
<td>mo-pelo-mes</td>
<td>“your dogs”</td>
</tr>
<tr>
<td>i-pelo</td>
<td>“his dog”</td>
</tr>
</tbody>
</table>

Morphological typology: Index of fusion

- But now compare with Ancient Greek:
  lu-ō “1sg.Pres.Active.Indicative (I am releasing)”
  lu-ōmai “1sg.Pres.Active.Subjunctive (I should release)”
  lu-ōmai “1sg.Pres.Passive.Indicative (I am being released)”
  lu-ōmai “1sg.Pres.Active.Optative (I might release)”
  lu-ōmai “3sg.Pres.Active.Indicative (He is being released)”

On the so-called index of fusion for morphological typology, also conceived of as a continuum, Michoacan Nahuatl is considered an agglutinative language, whereas Ancient Greek would be closer to the fusional end of the scale:

Agglutinative ←--x-------------------------→ Fusional
Nahuatl     Greek

Head-marking vs. dependent-marking
How grammatical functions are realized?

- Another aspect of morphological variation among human languages has to do with whether languages mark grammatical functions such as "subject of" and "object of" on the head of the clause or on the dependents.
- Languages that mark grammatical functions on heads are called head-marking languages; languages that mark grammatical functions on dependents are called dependent-marking languages.
- Compare Japanese with Mohawk:

Head-marking vs. dependent-marking

a. John-\textit{ga} Mary-\textit{o} butta Japanese
   John-SU Mary-\textit{OB} hit
   “John hit Mary.”

b. Sak Uwári \textit{shako-}núhwe’s Mohawk
   Sak Uwari he/her-likes
   “Sak likes Uwari.”

c. Sak Uwári \textit{ruwa-}núhwe’s Mohawk
   Sak Uwari she/him-likes
   “Uwari likes Sak.”

Case and agreement systems (aka alignment systems)

Consider the following sentence from Japanese, for example:

John-\textit{ga} Mary-\textit{ni} hon-\textit{o} yatta
John-SU Mary-\textit{IOB} book-\textit{DOB} gave
“John gave Mary a book.”

So, what do we notice here?

- Nouns inflect for case: subjects appear with nominative case; direct objects appear with accusative case; and indirect objects appear with dative case.

Case and agreement systems: Japanese

Notice, crucially, however, that in intransitive clauses (those without an object), the case marker on the subject of a Japanese sentence remains the same (i.e., \textit{-ga}):

John-\textit{ga} Kobe-ni itta
John-NOM Kobe-to went
“John went to Kobe.”

Case and agreement systems: Greenlandic

As it turns out, not all languages behave that way. There are languages with a different case system. Compare, for example, the case marking in the following transitive and intransitive sentences from Greenlandic Eskimo (CM stands for “case marker”):

Case and agreement systems: Greenlandic
Case and agreement systems: Greenlandic

a. Juuna-p atuaga-q miiqa-nut nassiuppaa
   Juuna-CM book-CM child-CM send
   “Juuna sent a book to the children.”

b. atuaga-q tikissimangilaq
   book-CM hasn’t come
   “A book hasn’t come yet.”

What do we notice here?

Case and agreement systems: Greenlandic

- The subject of an intransitive clause carries the same case marker as the object of a transitive clause. Such case is typically referred to as “absolutive,” as opposed to the “ergative” case marker on the subject of a transitive verb.
- We call Japanese-type languages “nominative-accusative” languages, and Greenlandic-type languages “ergative-absolutive” languages.

Animacy, definiteness, gender and classifier systems

Animacy effects on word order

- Also, word order can be sensitive to animacy in some languages. For example, in Sesotho (Bantu), more animate NP objects have to precede less animate NP objects:
  a. ke-phehétesé ngoaná lìjó
     1s-cooked child food
     “I cooked the child food.”
  b. *ke-phehétesé lìjó ngoaná
     1s-cooked food child
     Intended meaning: “I cooked food to the child.”
Definiteness: Swahili agreement

a. Juma a-na-wa-penda watoto  
   (agreement “wa” with animate object)  Juma he-likes-them children  
   “Juma likes children.”  
   “Juma likes the children.”

b. Juma a-li-kamata gitara  
   (agreement “li” with inanimate, definite object)  Juma he-grabbed-it guitar  
   “Juma grabbed the guitar.”

c. Juma a-li-kamata gitara  
   (no agreement with indefinite, inanimate object)  Juma he-grabbed guitar  
   “Juma grabbed a guitar.”

Definiteness: Hebrew et- marking

- Hebrew shows a similar effect with regard to et- marking:
  a. ha-ish koteb dahar  
     the-man write word  
     “The man is writing a word.”
  b. ha-ish shomer et-ha-torah  
     the-man observe def-the-law  
     “The man is observing the law.”

Gender

- Languages may show gender marking on nouns and pronouns, as in many Indo-European languages.
- But some languages also show verb agreement in gender as well, e.g., Russian:
  babuška čitala (= Grandmother was reading.)  
  čelovek čital (= The man was reading.)

Classifier systems

- Some languages, notably the Bantu family, utilize a classifier system whereby each noun is assigned to a class and as such takes certain morphology in the singular and plural. Verbs and adjectives will also show classifier agreement.
- A list of classifiers in Swahili is given on the next slide.

Next class agenda

- Morphology: Verbal categories.
- Introduction to Syntax: Chapter 5.
Abbreviations used on the slides

- CLASS = classifier
- CMPLT = complete
- NEUT = neuter
- PAT = patient
- STAT = stative
- SU = subject marker; DOB = direct object marker; IOB = indirect object marker
- REAL = realis; IRR = irrealis
- CM = case marker

References