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?
    [wʊd ju pʰl̥iːz stap ðæt ɹækɪt˺]

    I haven't seen my brother for ages.
    [aj hævn̩t sĩːn maj bɹʌðəɹ fəɹ ejdʒəz]

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: [t˺]

    - Syllabicity for nasals and liquids: [n̩]

    - Devoicing for liquids and glides: [w̥]

    - Nasalization for vowels: [ũ]

    - Lengthening for vowels: [uː]

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, ŋ].
- Schwa never occurs in a stressed syllable:
    brother [bɹʌðəɹ]   abrupt [əbɹʌp˺t˺]

Comments on HW 2

- Prepositions/articles/pronouns/conjunctions/ auxiliaries, typically undergo vowel reduction (as well as some other forms of reduction):
    "for" [fɔɹ] → [fəɹ]
    "of" [av] → [əv]
    "them" [ðɛm] → [ðəm]
- Follow this link for a list: http://ell.phil.tu-chemnitz.de/phon/connect/weakForms.html

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Comments on HW 2

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

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 Σ, Θ, 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 → government → governmental → 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:
Have you folks been *menued* yet?

- **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*)

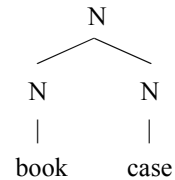 *perros calientes*   (from English *hot dogs*)

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:
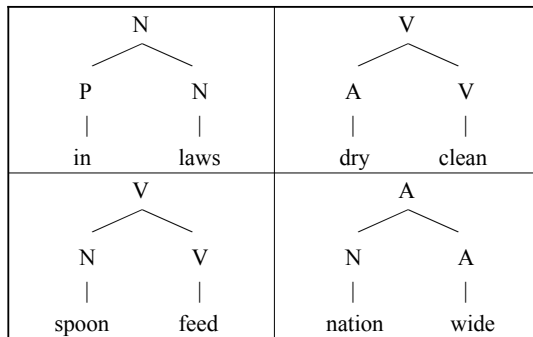
    post + card → *postcard*
    post + office → *post office*
    book + case → *bookcase*
    sister + in + law → *sister-in-law*

Compounding

- Like word structure, the internal structure of a compound can be represented using trees:
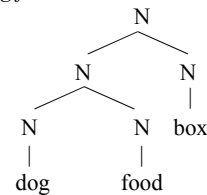
```
          N
         / \
        N   N
        |   |
      book case
```

Structure of compounds

N	V
P N | | in laws	A V | | dry clean
V	A
N V | | spoon feed	N A | | nation wide

Structure of compounds

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

```
            N
          /   \
        N      N
       / \     |
      N   N   box
      |   |
    dog  food
```

Properties of English compounds

- Stress placement:
    ˈ*greenhouse* vs. *green* ˈ*house*
    ˈ*blackboard* vs. *black* ˈ*board*
- Modification by "very":
    We live next to a very green house.
    *We live next to a very greenouse.
- Inflectional morphemes are added to the compound as a whole:
    drop kick → drop kicked, *dropped kick
    bear hunter → bear hunters, *bears hunter

Endocentric vs. exocentric compounds

- Semantically, compounds can be divided into two types:
    A. **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
    B. In **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:

Singular		Plural
club foot	→	
Bigfoot	→	
policeman	→	
Walkman	→	

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):

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

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:
      3NEUT.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:

  Isolating <--x-------x--------------------x--->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):

      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) :

    Katerihwaiénstha'

    "I am a student. [Literally: I habitually cause myself to have ideas.]"

Morphological typology: Index of synthesis

- Or Mohawk again, though rather more ridiculously:

    Washakotya'tawitsheraherkvhta'se'

    "He made the thing that one puts on one's body (i.e., the dress) ugly for her."

- We call languages like Tiwa, Eskimo, and Mohawk, *polysynthetic* languages.

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:

no-kali	"my house"	no-pelo	"my dog"
no-kali-mes	"my houses"	mo-pelo	"your dog"
mo-kali	"your house"	mo-pelo-mes	"your dogs"
i-kali	"his house"	i-pelo	"his dog"

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-omai	"1sg.Pres.Passive.Indicative (I am being released)"
lu-oimi	"1sg.Pres.Active.Optative (I might release)"
lu-etai	"3sg.Pres.Active.Indicative (He is being released)"

Morphological typology: Index of fusion

- 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-------------------------------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-**ga** Mary-**o** butta   Japanese
   John-**SU** Mary-**OB** hit
   "John hit Mary."
b. Sak Uwári **shako**-núhwe's   Mohawk
   Sak Uwari he/her-likes
   "Sak likes Uwari."
c. Sak Uwári **ruwa**-núhwe's   Mohawk
   Sak Uwari she/him-likes
   "Uwari likes Sak."

Case and agreement systems
(aka alignment systems)

Case and agreement systems: Japanese

- Consider the following sentence from Japanese, for example:
  John-**ga** Mary-**ni** hon-**o** yatta
  John-**SU** Mary-**IOB** book-**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., -*ga*):

  John-**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

  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** tikissimanngilaq
     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 agreement

- The animacy of a nominal may have effects on the morphology and syntax of a language.
- For example, in Tangut (Tibeto-Burman: extinct), verb agreement operates according to the following hierarchy:

    1st person > 2nd person > other

ni tɪn nga ɪn ldɪə   thɪ-**nga** ku that tsɪ vɪəthɪ-**na**
2s if 1s ACC indeed chase-1 then 3s also chase-2
"If indeed you are chasing me, then chase her too."

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 lijó
     1s-cooked   child food
     "I cooked the child food."
  b. *ke-phehétesé lijó   ngoaná
     1s-cooked   food child
     Intended meaning: "I cooked food to the child."

Animacy effects on Case

- Animacy may also affect case marking. In Malayalam (Dravidian) animate objects take accusative case, but inanimate objects take nominative.
  a. awal   awane kantu
     she-nom him-acc saw
     "She saw him"
  b. awal   pustakan kantu
     she-nom book-nom saw
     "She saw the book."

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-**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.

Class number	Prefix	Typical meaning
1	*m-, mw-, mu-*	singular: persons
2	*wa-, w-*	plural: persons (a plural counterpart of class 1)
3	*m-, mw-, mu-*	singular: plants
4	*mi-, my-*	plural: plants (a plural counterpart of class 3)
5	*ji-, j-, Ø-*	singular: fruits
6	*ma-, m-*	plural: fruits (a plural counterpart of class 5, 9, 11, seldom 1)
7	*ki-, ch-*	singular: things
8	*vi-, vy-*	plural: things (a plural counterpart of class 7)
9	*n-, ny-, m-, Ø-*	singular: animals, things
10	*n-, ny-, m-, Ø-*	plural: animals, things (a plural counterpart of class 9 and 11)
11	*u-, w-, uw-*	singular: no clear semantics
15	*ku-, kw-*	verbal nouns
16	*pa-*	locative meanings: close to something
17	*ku-*	indefinite locative or directive meaning
18	*mu-, m-*	locative meanings: inside something

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

- Baker, M. 2001. *The atoms of language*. New York: Basic Books.
- Comrie, Bernard. 1989. *Language universals and linguistic typology*. 2nd edition. Chicago: University of Chicago.
- Whaley, L. 1997. *Introduction to typology: The unity and diversity of language*. Sage Publications.