ARBC0225/LNGT0225
Arabic Linguistics

علم اللسانيات العربية

Lecture #9
March 14th, 2012

Announcements

- Presentations on Monday from Karin Ryding's book on verb patterns.
- The book is on reserve at the Davis Library.
- Due to the presentations, I'm extending the deadline for homework 2 to Wednesday March 21 in class, or by 5pm via e-mail.

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

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

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

Derivational vs. Inflectional morphemes

- 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.

7

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. But there are exceptions.
- 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**.

8

Root vs. Stem

- 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 "**stem**" (or "**base**") 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*.

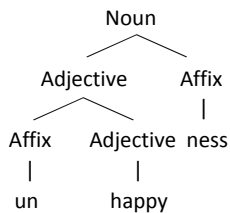9

Representing multimorphemic words

- We can use tree diagrams to represent the internal structure of words such as *teachers*, where we can see the concatenation of morphemes to form words.

```
              Noun
             /    \
          Noun    Affix
         /    \      |
      Verb   Affix   s
       |       |
     teach     er
```
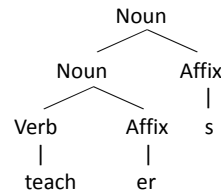
10

Morphological trees

- Similarly, for the word 'unhappiness':

```
              Noun
             /    \
       Adjective  Affix
        /    \      |
     Affix  Adjective ness
       |       |
      un     happy
```

11

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 *unreal*.
  b. A **suffix** is a bound morpheme that follows the base, e.g., "-ing" in *reading*.

12

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 "*ma…ʃ*":

> katab "wrote" → ma-katab-ʃ "didn't write"

13

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

14

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***.

15

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

16

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. *creative*), while inflectional affixes change the grammatical function of a word, but not really its core meaning (e.g., *wait* vs. *wait**ed***).

17

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)

- **Note**: N = noun; V = verb; A = Adj.

18

Derivational vs. inflectional affixes: Productivity

- A second 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

19

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 or ablaut)
    - (e)   one sheep → two sheep (zero change)
    - (f)   one ox → two oxen   (-en suffixation)

20

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) ablaut allomorph:	man → men
(e) zero allomorph:	sheep → sheep
(f) -en allomorph:	ox → oxen

21

Other morphological processes

22

Other morphological processes

- Human languages make use of several other morphological processes. We discuss only four of these here: Suppletion, cliticization, reduplication, and subtraction.

23

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"

- Classical Arabic نساء as plural of إمرأة is a case of suppletion.

24

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."
- If the **clitic** follows its host morpheme, it is called an **enclitic**; if it precedes it, it is called a **proclitic**.

25

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 (take the initial CV of the stem and repeat it at the beginning of the word):
  - lakad "walk" → lalakad "will walk"
  - takbuh "run" → tatakbuh "will run"

26

Subtraction

- Occasionally, words can be formed by subtraction, i.e., removing part of the word to change its meaning or usage.
- In English, nicknames are formed by subtraction, e.g., *Thomas → Tom*.

27

Where classical morphology fails

- Suppose we try to do a classical morphological analysis of Arabic words, where would that take us?
- How can we draw a morphological tree for يكتبون or كتابة, for example?

28

A different kind of morphology

- The problem with languages like Arabic and similar Semitic languages is that their morphology is not concatenative.
- Hence we need a different kind of morphology, a non-concatenative morphology, which is frequently referred to as *root and pattern morphology*.

29

Roots and patterns

- As a Semitic language, Arabic uses what is called a root and pattern morphology for its word structure.
- A **root** الجذر is a semantic abstraction, typically consisting of 3 consonants.
- A **pattern** الوزن is a 'template' for the root. A pattern typically contains vowels (called vocalic melody) and may also have prefixes and suffixes.
- The placement of a root into a template leads to word-formation in Arabic. We will discuss how this works for both verbs and nouns in the language.

30

5

Arabic verb morphology

• هم يدرسون اللغة العربية في ميدلبري، ولكنهم سيسافرون إلى مصر **ويدرسونها** أكثر.

[wayadrusuunaha:]

wa-	ya-	drus-	uu-na	ha:
proclitic conjunction meaning 'and'	inflectional prefix for the imperfect المضارع	verb stem	inflectional suffixes marking 3rd person plural masculine and the indicative mood	enclitic pronoun meaning 'it'

Arabic verb morphology

• Arabic verbs inflect for aspect/tense:
  - the perfect aspect/tense الماضي
  - the imperfect aspect/tense المضارع
• They inflect for subject agreement in
  - person: 1st, 2nd, and 3rd),
  - number (singular مُفرَد, dual مُثنّى, and plural جَمع),
  - gender (masculine مُذكَّر and feminine مُؤنَّث).

Arabic verb morphology

• They also inflect for mood:
  - indicative المرفوع
  - subjunctive المنصوب
  - jussive المجزوم
• They can also host proclitics (e.g., conjunctions) and enclitics (e.g., object pronouns).

Arabic verb morphology

• The fundamental question in Arabic verbal morphology is this: How does a root make it all the way from a semantic abstraction like DRS to ويدرسونها؟

Verb patterns أوزان الفعل

• The starting point to understand verb morphology in Arabic is the study of the ten most common verb templates in the language, which you may be familiar with from your Arabic language classes (or maybe not yet).
• We discuss these here in detail.

الوزن الأول: $C_1aC_2VC_3$

المصدر	المضارع	الماضي	الوزن
unpredictable دراسة شُرب كِبَر	يَفعَل/يَفعُل/يَفعِل يدرُس يَشرَب يكبُر	فَعَل/فَعِل/فَعُل دَرَسَ شَرِب كَبُرَ	I

Ablaut in Form I

Ablaut in Form I of the verb (adapted from John McCarthy's morphology article in the *EALL*)

Example	Gloss	Frequency in Wehr (1971)	Remarks
katab/yaktub	'to write'	34%	
ḍarab/yaḍrib	'to beat'	28%	
ʃarib/yaʃrab	'to drink'	17%	
faʃal/yafʃal	'to do'	15%	C_2 or C_3 is a guttural consonant
balud/yablud	'to be stupid'	6%	Adjectival meaning

الوزن الثاني: $C_1aC_2C_2aC_3$

المصدر	المضارع	الماضي	الوزن
تَفعيل	يُفَعِّل	فَعَّلَ	II
تدريس	يدرّس	درّس	
تشجيع	يشجّع	شجّع	
تدخين	يدخّن	دخّن	
تكسير	يكسّر	كسّر	

الوزن الثالث: $C_1a{:}C_2aC_3$

المصدر	المضارع	الماضي	الوزن
مُفاعَلة	يُفاعِل	فاعل	III
مشاهدة	يشاهد	شاهد	
مساعدة	يساعد	ساعد	
معاملة	يعامل	عامل	

الوزن الرابع: $ʔaC_1C_2aC_3$

المصدر	المضارع	الماضي	الوزن
إفعال	يُفعِل	أفعَلَ	IV
أنزل	ينزل	أنزل	
إرسال	يرسل	أرسل	
إشراف	يشرف	أشرف	
إعلام	يعلم	أعلم	

الوزن الخامس: $taC_1aC_2C_2aC_3$

المصدر	المضارع	الماضي	الوزن
تَفَعُّل	يَتَفَعَّلَ	تَفَعَّلَ	V
تعرُّف	يتعرّف	تعرّف	
تخرُّج	يتخرّج	تخرّج	
تغيُّب	يتغيّب	تغيّب	
تغيُّر	يتغيّر	تغيّر	

الوزن السادس: $taC_1a{:}C_2aC_3$

المصدر	المضارع	الماضي	الوزن
تَفاعُل	يَتَفاعَل	تفاعَلَ	VI
تبادُل	يتبادل	تبادل	
تراسُل	يتراسل	تراسل	
تعانُق	يتعانق	تعانق (hug)	

الوزن السابع: ?inC₁aC₂aC₃

المصدر	المضارع	الماضي	الوزن
انـفـعـال انقطاع انشغال	يَـنـفَـعِل ينقطع ينشغل	انـفَـعَلَ انقطع انشغل	**VII**

الوزن الثامن: ?iC₁taC₂aC₃

المصدر	المضارع	الماضي	الوزن
افـتِـعـال استماع انتقال التحاق اشتراك	يَـفـتَـعِل يستمع ينتقل يلتحق يشترك	افـتَـعَل استمع انتقل التحق اشترك	**VIII**

الوزن التاسع: ?iC₁C₂aC₃C₃

المصدر	المضارع	الماضي	الوزن
افعِلال احمرار ازرقاق	يَـفعَلَّ يحمرّ يزرقّ	افعَلَّ احمرّ (to become red) ازرقّ (to become blue)	**IX**

الوزن العاشر: ?istaC₁C₂aC₃

المصدر	المضارع	الماضي	الوزن
استِـفـعـال استنجار استخدام استعداد استماع	يَـستَـفـعِل يستأجر يستخدم يستعدّ يستمتع	استَـفـعَلَ استأجر استخدم استعدّ استمتع	**X**

الجذر الرُباعي Quadriliteral Roots

- Quadriliteral roots come in a few forms, but the most common are two:

  C₁VC₂VC₃VC₄, e.g.,

  - ترجم (to translate)
  - سيطر (to dominate)

- A second common form, derived via reduplication, is **C₁VC₂VC₁VC₂**, e.g.,

  - زلزل (to shake)
  - ثرثر (to chatter)

Next class agenda

- Presentations on Verb Patterns from Ryding's book.
- More on verb morphology. Continue reading Holes' Chapter 3, pp. 99-117.