Morphological Analysis

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LING 350: The Structure of Words

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Last time...

- We explored **inflectional paradigms**.
- We explored the **lexicon** and what's specified in each **lexical entry**.
- We discussed **lexical norms, blocking,** and **lexicalization**.

Quiz

- You're only going to get two attempts from now on.
- One of you got everything wrong, and then just kept guessing new responses and submitting until all were right.
- This took 12 attempts.
- With three multiple choice questions and 4 answers per question, this means they put *every single wrong answer* before finding the right ones.

Viewing 56 of 57 gradable items

(Attempt 12 of 12)

- This wasn't against the rules, so fair play, but it violates the point of your grade — to reflect what you actually know — hence a policy change moving forward.

Grammatical words

- What's a grammatical word?

a form of a lexeme with a particular property for the grammatical categories number and case (p. 28)

- What is syncretism?

the phenomenon that two or more grammatical words have the same word form (p. 28)

- What's a word form?

'concrete word as used in a sentence.' The concrete words *walk*, *walks*, *walked*, and *walking* can be qualified as word forms of the lexeme WALK. (p.3)

Grammatical words

Let's unpack the definition of *grammatical word* a little bit.

a form of a lexeme with a particular property for the grammatical categories number and case (p. 28)

What's a lexeme?

What is meant by number?

What's case?

Grammatical words

Polish words KOT 'cat' and KOBIETA 'woman'

	SINGULAR		PLURAL		What are these?
NOMINATIVE	kot	kobiet-a	kot-y	kobiet-y	
GENITIVE	kot-a	kobiet-y	kot-ów	kobiet	
DATIVE	kot-u	kobieci-e	kot-om	kobiet-om	
ACCUSATIVE	kot-a	kobiet-ę	kot-y	kobiet-y	
INSTRUMENTAL	kot-em	kobiet-ą	kot-ami	kobiet-ami	
LOCATIVE	koci-e	kobieci-e	kot-ach	kobiet-ach	
VOCATIVE	koci-e	kobiet-o	kot-y	kobiet-y	

What are these?

Grammatical words

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Each of these word forms contains a stem. Most also contain an affix.

Where do you see an example of **syncretism** here?

What's the **stem** in the words for 'cat'?

What's the **stem** in the words for 'woman'?

Do any of these words show **zero-ending**?

What's the PL.DAT form of 'cat'?

What's the SG.ACC form of 'woman'?

Grammatical words

Polish words KOT 'cat' and KOBIETA 'woman'

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How are these cases shown on these word forms?

What's nominative? | subject

The woman loves squirrels.

What's genitive? | possessive/ "of N"

The woman's squirrels are cute.

What's dative? | indirect object

She gave some peanuts to the squirrels.

What's accusative? | direct object

She pets the squirrels.

What's instrumental? | by means of

She looks at birds with binoculars.

What's locative? | on/at/in

There are birds in the nest.

What's vocative? | address

Animals, we love you.

Grammatical words

Let's fill in one of those tables for English.

|	Singular	Plural
Nominative	cat	cat-s
Genitive	cat-'s	cat-s-'
Dative	cat	cat-s
Accusative	cat	cat-s
Instrumental	cat	cat-s
Locative	cat	cat-s
Vocative	cat	cat-s

Where do you see an example of **syncretism** here?

What's the **stem** in the words for 'cat'?

Do any of these words show **zero-ending**?

Bound roots

- What does the book say about **neo-classical compounds** and **combining forms**?

- These are "bound roots," and not affixes, because each word must contain at least one stem...

- and words like *telescope* and *microphone* only contain these bound morphemes.
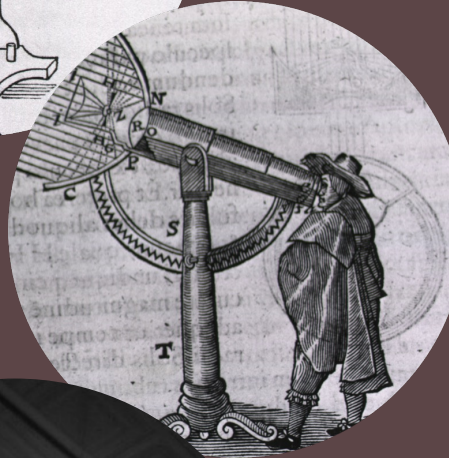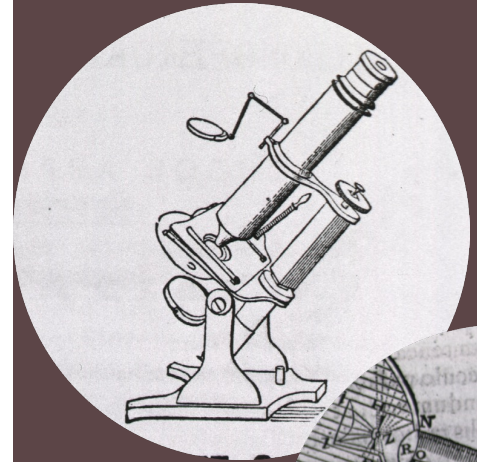
Bound roots

- What's going on with the following words?

conceive, deceive, perceive, receive
adduce, deduce, induce, produce, reduce
admit, permit, remit, transmit

- Simplex or complex?
- What prefixes do you see above?
- What bound roots?
- What information do we get from bound roots like *-mit*, *-duce*, and *-ceive*?

We know they are verbs.   We know how to make nouns out of them.

Discussion! (p.45, q.1)

- Identify the bound constituents of the following English words:

disagreeable	protolanguage
acceptability	versification
ungrammaticality	intolerance
discriminatory	productivity
permafrost	unidirectionality
fascination	

Allomorphy

- What is allomorphy?

[T]he phenomenon that a morpheme may have more than one shape, corresponds with more than one morph. (p.31)

- What's a morph?

A morph is a particular phonological form of a morpheme. (p.31)

- What does phonological form mean?

Pronunciation – the way you say the morpheme out loud.

- Allomorphy is when a given morpheme is pronounced differently in different contexts.

Allomorphy

- Really easy example in English comes from pluralization.
- How do we pluralize most normal nouns in English?
- The plural suffix in English is *-s*.

cat-s   dog-s   house-s

-s is pronounced [s]   -s is pronounced [z]   -s is pronounced [ɪz]

- [s], [z], and [ɪz] are three different morphs of the morpheme *-s*.

Allomorphy

• Why, though? Can we detect any pattern here?

houses, glasses, badges, watches, ashes, mazes ⊲ -s is pronounced [ɪz]
homes, mugs, computers, shoes, cicadas, knobs ⊲ -s is pronounced [z]
huts, cups, pocketbooks, myths, whiffs, planets ⊲ -s is pronounced [s]

• -s is pronounced [ɪz] after [ʃ] 'sh', [tʃ] 'ch', [dʒ] 'j', [s] 's', and [z] 'z'
• ...[z] after voiced sounds
• ...and [s] after voiceless consonants

Quick practice (p.47 q.10)

In Italian, adjectives can be derived from nouns and adjectives through the addition of the suffix *-oso* or *-astro*, as illustrated by the following examples:

fama 'fame'   *famoso* 'famous'

virtú 'virtue'   *virtuoso* 'virtuous'

giallo 'yellow'   *giallastro* 'yellowish'

blu 'blue'   *bluastro* 'bluish'

Give the stems for the four base words listed here.

Morphological operations

- This is the term for processes that create new words or word forms.
- They take a **base word** as their input, and churn out something new — either an inflected word form, or a new word altogether.

Inflection: $\text{brave}_A + \text{-er}_{\text{COMPARATIVE}} = \text{braver}_A$ (a word form of BRAVE)

Derivation: $\text{brave}_A + \text{-ery}_{\text{N-aff}} = \text{bravery}_N$ (a new lexeme, BRAVERY)

- In both of the above operations, we're adding an affix to the base word 'brave.' This is called **affixation**.
- What are some other examples?

Morphological operations

- Another type of affix is the **circumfix**, which simultaneously adds a prefix and a suffix, surrounding the base word.
- Dutch *fiets* 'cycle' → *ge-fiets-t* 'cycled'
- Italian *bella* 'beautiful' → *a-bell-ire* 'beautify'

Morphological operations

- Affixation – as seen in *bravery* and *braver* – is a type of concatenative morphology.
- What's the other kind of concatenative morphology mentioned in the text?

Compounding.

- In compounding, you add two words together. Some examples are *bookstore*, *doghouse*, and *bird-brain*.
- What are some other examples?

Morphological operations

Which of the following shows affixation, and which shows compounding?

a. $green_A$ + $-ery_{N-aff}$ = $greenery_N$
b. $green_A$ + $house_N$ = $greenhouse_N$
c. $green_A$ + $-ish_{aff}$ = $greenish_A$
d. $green_A$ + $party_N$ = Green $Party_N$

a. and c. show affixation.

b. and d. show compounding.

Where do compounds get their lexical category (e.g. noun, adjective, etc.)?

Morphological operations

- For each morphological operation, there is a limited set of **base words** that they can take as an input.

- Most are restricted to a base word of a particular syntactic category, e.g. *-able* takes in a V and outputs an A. (believe$_V$ → believable$_A$)

- Some are extremely general: *-s*$_{3SG.PRES}$ attaches to virtually all verbs.

- Others are very limited:

- What words can serve as an input for *-en*, meaning 'made of'?

| wooden | golden | earthen | woolen | silken | hempen |

Morphological operations

- When a morphological operation results in an output word with a different category than the input word, it is a **category-changing** or **class-changing** operation.
  - Which of the following demonstrate class-changing operations?

wood + -en = wooden

wealth + -y = wealthy

act + -or = actor

influence + -ial = influential

big + -est = biggest

love + -able = lovable

sing + -s = sings

swim + -ing = swimming

Morphological operations

- There are many other, non-concatenative morphological operations.
- What's **internal modification**?

The phones within the base change to create a new word form. "Standard examples are the patterns of vowel alternation in the roots of the so-called strong verbs in Germanic languages." p.36

- This can be seen in Dutch:

geef [γe:f] "to give"   gaf [γɑf] "gave"   gegeven [γəγe:vən] "given"
help [hɛlp] "to help"   hielp [hilp] "helped"   geholpen [γəhɔlpən] "helped"
schiet [sxit] "to shoot"   schoot [sxo:t] "shot"   geschoten [γəsxo:tən] "shot"

Morphological operations

- All the operations we've seen so far result in a change of the phonological form of the input word.

- **Conversion** is an operation that results in a change of syntactic category. It needn't change the phonological form of the input word.

	Noun	Verb
Dutch	fiets "cycle"	fiets-en "cycle"
English	chain	(to) chain
French	guide "guide"	guid-er "guide"
Latin	corona "crown"	coron-a-re "crown"

These verbs have the rule:
$[X]_N \rightarrow [[X]_N]_V$

English has no infinitival morphology, so our conversions are quite simple.

Morphological operations

- Verb to noun conversions in English often change the stress pattern.
- $[X]_V \rightarrow [[X]_V]_N$
- Which one's the noun?

      addréss vs. áddress

      advánce vs. ádvance

      convért vs. cónvert

The second column consists undisputably of nouns.

Practice (p.46 q.3)

In the following past tense forms of English verbs, the past tense suffix has three different phonetic shapes.

| kept | walked | kissed | hugged |

| lived | added | fitted | coded |

- Which are the three phonetic forms of this suffix?
- Formulate the rules (or rule) that account for this phonetic variation.

Practice (p.46 q.5)

Consider the following past tense forms of English:

kept, wept, slept.

Which kinds of operation have been used for making these verbal forms?

For February 29th…

- Read the rest of this chapter (pp.41–45).

- Submit your first writing assignment by 6:30pm:

    Consider the following English words:

    forbid, forget, forgive, forgo, forswear
    What evidence is there for them being complex? What evidence is there for them being simplex? Which do you think they are?
    There are good reasons to argue in either direction; I'm more concerned with your argument being morphologically sound and well-reasoned than with just getting the right answer, so be sure to explain your thinking and cite pages from the textbook. Should be about 300 words.

- Remember! There's no class next week, Feb. 22nd.