

Week 11: Morphology

Study Guide

Welcome back

Corresponds to the first morphology lecture

In case you missed it, we've made some changes to the course. We tried to keep things simple and fair, while helping you complete your work and connect with us under the new circumstances.

- (1) **Exams** will now be take-home and open-book; we've given you a full week to work on them.
- (2) **Language Journals** are still due April 13, but we will accept them without penalty through the last day of the semester (April 29).
- (3) **Extra Credit** is still possible via research participation (SONA online studies) or by watching an online linguistics talk. We've compiled a list of talks for you [here](#).
- (4) **Lectures** will be recorded as usual on [Panopto](#), but you'll also be able to join a live stream of the lecture at our usual class time if you want to.
- (5) **Recitation** will move to [Piazza](#) groups and Zoom. TAs will be available live during your usual recitation time, but you can also ask questions there anytime (and get an answer in 24 hours)
- (6) **Office Hours** will move to [Piazza](#). You can ask questions anytime and get an answer in 24 hours. You can also book us for face-to-face video chat [here](#).

Each week, I'll give you a specific goal and walk you through how to achieve it on the study guide (with links to videos and readings for more info).

Your goal this week is to figure out how to do morphological analysis.

Words and Morphemes

Corresponds to the first morphology lecture and section 4.1 and 4.4 of reading.

Throughout the course, we've talked about language as an unbounded discrete combinatorial system where we need to acquire both the parts and the rules for combining them. In morphology, we'll move up from the level of sound to the level of words. We'll ask what it means to be a **word**, and how words are composed out of smaller parts, especially:

- The nature of these **parts** (morphemes)
- The nature of the **rules that combine these parts into larger units**

Morphemes are the basic unit of morphology —the smallest meaningful units with which to build words.

- (1) Words can often be divided into these smaller parts (morphemes)

(a) dogs	walking	blackens	player-hater
dog-s	walk-ing	black-en-s	play-er hat-er
- (2) And these morphemes occur consistently in lots of words
 - (a) -s forms the plural

- (b) *-ing* forms a noun from a verb
- (c) *-en* forms a verb meaning 'become adjective'
- (d) *-er* forms an agentive nominal from a verb (a person or thing who does an activity)
- (3) But morphemes aren't just any smaller parts of words; they must have a consistent sound and meaning to be morphemes
 - (a) *-ank* is in *tank, plan, flank, drank*, etc. but it is not a morpheme. There is no consistent meaning for *-ank*, and the leftover pieces (*t-*, *pl-*, *fl-*, *dr-*) are not morphemes either.

Just as phonemes can have allophones (more than one sound form for the same abstract unit), morphemes can have **allomorphs** — more than one sound form for the same meaning unit.

- (1) Sometimes allomorphs are predictable based on the context. For example, in English, the regular form of the [plural] is often predicted by the phonological context.
 - (a) cat cat-s
 - (b) church church-es
- (2) Other times, which affix appears is not predictable based on the context. For Example, in English, the [past] tense has many idiosyncratic forms that are not well predicted by the context.
 - (a) kick kick-ed
 - (b) leave lef-t
 - (c) hit hit-∅

Morphemes can be categorized in a few ways:

- (1) Based on whether they can occur on their own or not
 - (a) **Bound morphemes** cannot appear on their own
 - (b) **Free morphemes** can appear on their own
- (2) And based on their purpose:
 - (a) **Content morphemes** have a referential function that is independent of their grammatical structure. We call these "open-class" because we can add new ones.
 - (b) **Function morphemes** are bits of syntactic structure, like prepositions or morphemes that express a grammatical notion (e.g. past tense). We call these "closed-class" because we can't add new ones.
- (3) In a complex word (e.g. *darken*):
 - (1) The **root** or **stem** is the basic or core morpheme (*dark*)
 - (2) The things added to it are the **affixes** (*-en*), which can be **prefixes** or **suffixes** depending on whether they occur before or after the thing they attach to. Or **infixes**, which occur in the middle of the word (e.g. *fan-f*ing-tastic*)

Morphological Processes

Corresponds to the first morphology lecture and section 4.2 of reading

- (1) **Affixation** forms new words by tacking on additional morphemes, either before (**prefix**), after (**suffix**), or right inside (**infix**) the root morpheme. Tagalog uses the infix *-um-* to form the infinitive form of verbs:

(a) Verb Stem		Infinitive	
lakad	'walk'	l <u>u</u> makad	'to walk'
bili	'buy'	bu <u>m</u> ili	'to buy'
kuha	'take, get'	ku <u>m</u> uha	'to take, to get'

(2) **Compounding** forms new words from two or more independent words. The words that form the compound can be:

- (a) Free morphemes: *girlfriend, backbird, textbook*
- (b) Words derived by affixation: *air-conditioner, ironing board, watch-maker*
- (c) Words formed by compounding themselves: *lifeguard chair, aircraft carrier*

(3) **Reduplication** forms new words by doubling an entire free morpheme (**total reduplication**) or part of it (**partial reduplication**).

- (a) Total reduplication forms the plural of nouns in Indonesian

Singular		Plural	
rumah	'house'	rumahrumah	'houses'
ibu	'mother'	ibuibu	'mothers'
lalat	'fly'	lalatlalat	'flies'

- (b) Partial replication to indicate future tense of verbs in Tagalog

Verb Stem		Future Tense	
bili	'buy'	bibili	'will buy'
kain	'eat'	kakain	'will eat'
pasok	'enter'	papasok	'will enter'

(4) **Alternations** make changes to a morpheme itself to make a change in meaning.

- (a) Some irregular plurals in English

<u>m</u> an	<u>m</u> en	[æ] ~ [ɛ]
<u>w</u> oman	<u>w</u> omen	[ʊ] ~ [ɪ]
<u>g</u> oose	<u>g</u> eese	[u] ~ [i]

(5) **Suppletion** is when there is no systematic similarity between stems and their inflected forms (inflections are phonologically unrelated to the root).

- (a) Some English verbs have suppletive past tenses

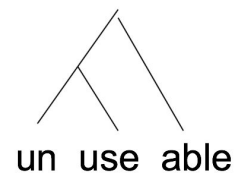
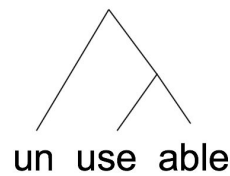
Present	Past
[ɪz] is	[wʌz] was
[goʊ] go	[wɛnt] went

Internal structure, inflection and derivation

Corresponds to the second morphology lecture and section 4.1 and 4.4 of reading

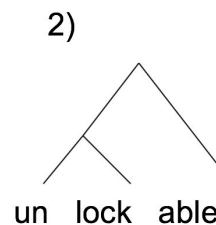
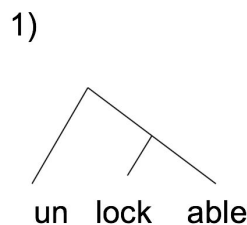
Morphemes are **not** just lined up like beads on a string. **The order in which rules apply creates a hierarchical structure.**

- (1) For example, *unusable* contains three pieces: *un- use, -able*. Should we add *-able* to use and then add *un-*? Or attach *un-* to use and then add *-able* to that?



-able attaches to a verb to create an adjective meaning “capable of being [verb]-ed”. Since there is no verb “unuse”, *-able* must first attach to *use* and then we can add the *un-*.

- (2) Different structures can give you different meanings. Remember *unlockable* from our first class? The two meanings — (1) not capable of being locked and (2) capable of being unlocked — correspond to two distinct structures.



Complex words and their meanings are not simply stored; rather, the parts are assembled to create complex meanings. Words can be formed by two distinct processes:

- (1) **Inflection** creates new forms of the same word in a way that introduces or expresses different grammatical properties, while retaining the same core notions of meaning (and category).
 (a) Example: *play* and *played* describe the same action, but situate it differently in time.
- (2) **Derivation** takes a word and creates a new one. Basic properties of derivation include:
 (a) Possible change of category (noun, verb, adjective): *pay*, *pay-ment*
 (b) New meaning is added: re-do means to “do again”
 (c) Change is not related to anything external (contrast this with inflection, which often has connections outside of the word, like agreement relating a subject to a verb).
 (d) Sometimes not productive and/or unpredictable meanings: *destroy/destruction* vs. *employ/*emplotion*; or *transmit* ‘send’/*transmis-sion* ‘sending’ (but also ‘car part’)
- (3) But remember: often the distinction between derivation and inflection is used as a helpful tool, not an absolute. For example, forming gerunds in *-ing* meets some of the criteria for both inflection (regularity, productivity) and for derivation (category change).
 (a) *John destroyed the house*; *John’s destroying the house upset me*

Morphological Types of Languages

Corresponds to the second morphology lecture and section 4.3 of reading

- (1) **Analytic languages** are made up of sequences of free morphemes — each word consisting of a single morpheme, used by itself with meaning and function intact. Mandarin, for example, has a highly analytic structure.

- (a) [wə mən tan tʃin]
I plural play piano
 'We are playing the piano'
- (b) [wə mən tan tʃin lə]
I plural play piano past
 'We played the piano'
- (c) [ta da wə mən]
s/he hit(s) I plural
 'S/he hits us'

(2) In **synthetic languages** bound morphemes are attached to other morphemes, so a word may be made up of several meaningful elements.

- (a) In **agglutinating languages**, it's relatively easy to determine the boundaries between morphemes, and each bound morpheme carries only one meaning. Swahili for example:

[ni-na-soma]	<i>I-present-read</i>	'I am reading'
[u-na-soma]	<i>you-present-read</i>	'You are reading'
[ni-li-soma]	<i>I-past-read</i>	'I was reading'
[u-li-soma]	<i>you-past-read</i>	'You were reading'

- (b) In **fusional languages**, it can be hard to tell where one morpheme ends and another begins (affixes are 'fused' with stems), and a single affix can convey several meanings. In Spanish, for example, verbs stems fuse with suffixes; we can isolate morphemes that indicate person and number (italics, below), but there is no free morpheme [abl-].

[ablo]	'I am speaking'	<i>[-o] first-person singular present</i>
[abla]	'S/he is speaking'	<i>[-a] third-person singular present</i>
[able]	'I spoke'	<i>[-e] first-person singular past</i>

- (c) In **polysynthetic languages**, highly complex words may be formed by combining several stems and affixes. Sora, a language spoken in India, for example:

[aninjamjɔten]
 [anin -jam -jɔ -te n] - same word, divided into morphemes
he catch fish non-past do
 'He is fish-catching'

[namkɪdtenai]
 [nam -kɪd -te -n -ai] - same word, divided into morphemes
catch tiger non-past do first person agent
 'I will tiger-catch'