

Ling 240

Morphology

Agenda

- Morphemes
- Word structure: how morphemes are represented in mind
- Morphological processes
- Homework 3

Mental grammar yet again

Phonology:

Rules on the sound system of language

Morphology:

Rules on complex word formation

But then...

What is a **word**?

But then...

What is a **word**?

Lexicon: Mental dictionary of *sound-meaning pairs*

Syllables? /a/, /pa/, /ta/, etc

“Words” that occur between ‘spaces’ in writing?

Syllables? /a/, /pa/, /ta/, etc

-no, they don't carry any meaning

“Words” that occur between ‘spaces’ in writing?

→ they can consist of smaller units that carry meaning in themselves:

flowerpot

Morphology

There appears to be a unit that's in between syllables and words that languages employ systematically

⇒ morphemes:

flowerpot

consists of the 2 **morphemes** 'flower' and 'pot'

So are morphemes those parts of a word that could stand by themselves?

unkind → one morpheme?

Morphology

So are morphemes those parts of a word that could stand by themselves?

unkind → one morpheme?

'unkind' also has two components which make up the meaning of the whole word:

Morphology

So are morphemes those parts of a word that could stand by themselves?

unkind → one morpheme?

un
kind

Knowing the meaning of each of these parts we can put them together to get the meaning of the whole.

Morphology

un: 'not'

kind: 'nice', 'helpful', 'tolerant'

Are these two morphemes of the same type?

Morphology

un: 'not'

kind: 'nice', 'helpful', 'tolerant'

Are these two morphemes of the same type?

'un' cannot occur just by itself whereas 'kind' can.

→ We classify morphemes into different categories.

Terminology

1. A morpheme that can be a word by itself is a:

free morpheme

Example: kind

2. A morpheme that is always attached to some other morpheme is called:

bound morpheme

Example: un-

3. A bound morpheme that is part of a complex word but does not belong to any lexical category (i.e., is not a verb, a noun, an adjective, etc.) is called:

an affix

Affix terminology

Types of affixes:

An affix that is attached to the front of a stem is called:

a prefix

Example: im - plausible

An affix that is attached to the end of a stem is called:

a suffix

Example: frighten - ing

An affix that is inserted into another morpheme is called:

an infix

Example: Cali - freaking - fornia

More Terminology

The core part of a complex word, i.e., the part that carries the major component of its meaning, is called:

a root

Example: over achiev er

More Terminology

The core part of a complex word, i.e., the part that carries the major component of its meaning, is called:

a root

Example:

over  er

More Terminology

The core part of a complex word, i.e., the part that carries the major component of its meaning, is called:

a root

Example: over ~~achiev~~ er

That component of a word to which another morpheme is added is called:

stem

Example: over ~~achiev~~ er

base for 'over'

Morphological structure

- a) fly
- b) desks
- c) untie
- d) tree
- e) dislike
- f) reuse
- g) slowly
- h) payment
- i) cheerful
- j) fastest
- k) deform
- l) premature
- m) preschool
- n) optionality
- o) kicked

Problematic cases:

But we also find complex words in English for which neither morpheme seems to be a free morpheme and the meanings are NOT transparent:

(a)		(b)
re ceive	vs	re - use
de ceive	vs	de - construct
per form	vs	de - form

What's the difference?

Problematic cases:

(a)

receive

vs

deceive

vs

perform

vs

(b)

re - use

de - construct

de - form

⇒ simple words
consisting of one morpheme

⇒ complex words
consisting of 2 morphemes

Allomorphs

Allomorphs:

If two affixes sound slightly different but carry the same meaning, then they are allomorphs of the same morpheme.

Example:

- im - plausible
- im - mature
- im - possible
- in - competent
- in - adequate
- in - active
- il - legal
- il - legitimate
- ir - relevant

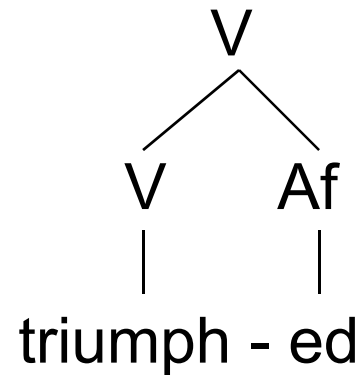
Morphological structure

Morphological structure can also be captured by a tree diagram:

triumph - ed

Morphological structure

Morphological structure can also be captured by a tree diagram:



word formation

Morphological rules: Word-formation processes

There are a few very common ways in which languages build more complex words out of morphemes:

- Derivation
- Compounding
- Inflection

(and some more)

Derivation

Example:

stem	Affix	resulting word
teach	-er	teacher

Derivation

What is characteristic of derivation?

-it's an **affixational process**

-the **meaning** of the resulting word is different from that of its base

-very often there is a **change in category**

teach (V) + er --> teacher (N)

But both the base and the affix have some contentful meaning:

-er: teacher

-able: manageable

-ful: hopeful

-ish: brownish

Derivation

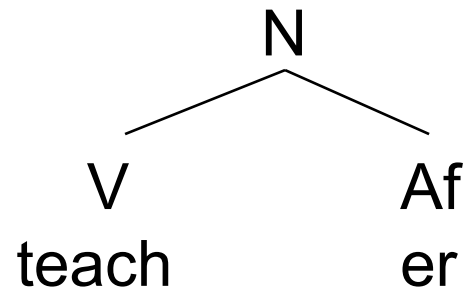
Now, we can draw trees that illustrate the internal structure of these words:

V
teach

Af
er

Derivation

Now, we can draw trees that illustrate the internal structure of these words:

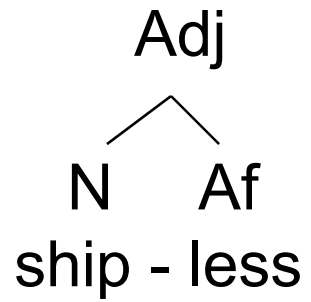


Try the following:

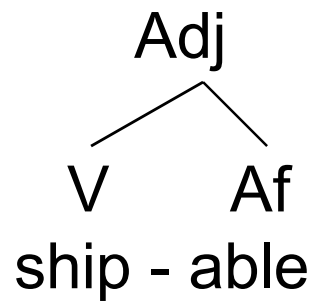
ship - less
ship - able

poison - er
poison - ous

Derivation

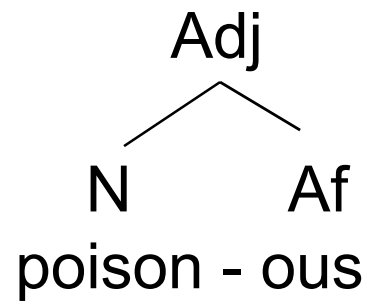
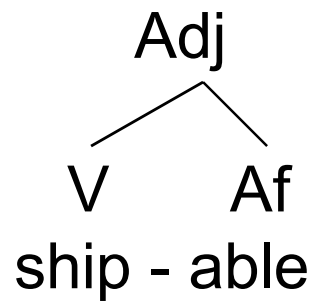
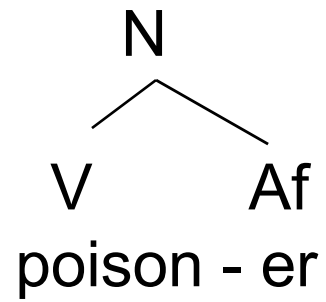
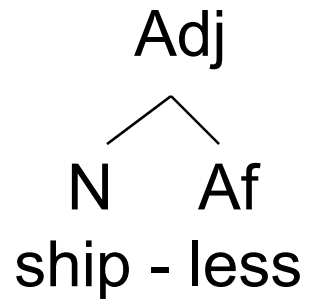


poison - er



poison - ous

Derivation

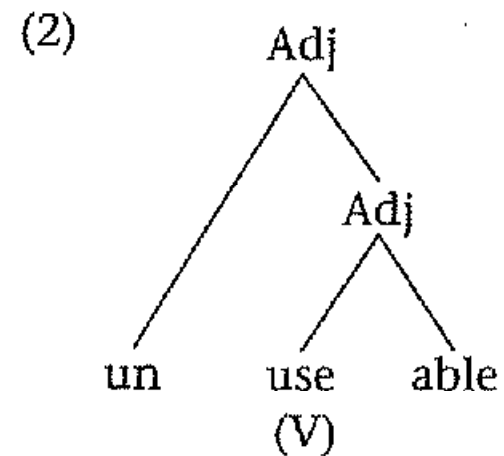
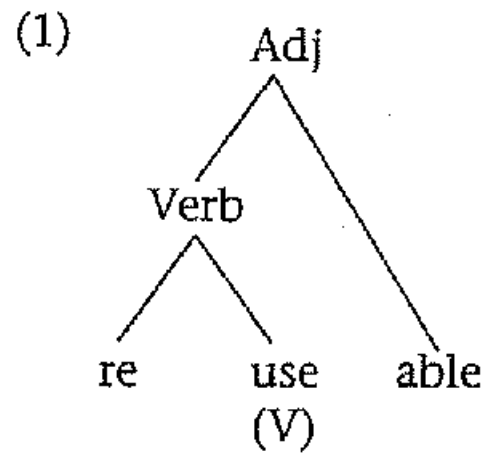


Morphological structure

What about “reusable” and “unusable”?

Morphological structure

What about “reusable” and “unusable”?

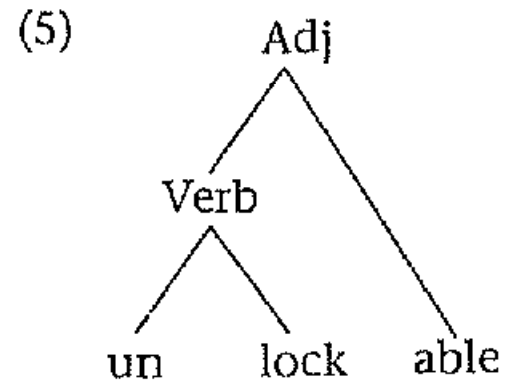
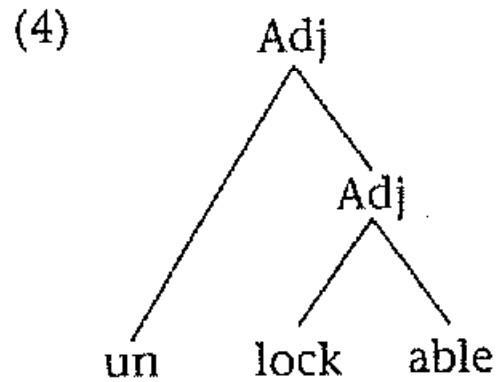


Morphological structure

What about “unlockable”?

Morphological structure

What about “unlockable”?



Mini exercise

- What kind of categories do the following affixes attach to? Think of words with these morphemes, and draw trees
 - dis-
 - -able
 - mis-
 - in-
 - -tion
 - -ness
 - pre-

Mini exercise 2

- Draw trees for the following words:
 - rewashable
 - unanswerable
 - reconstruction

Compounding

Compounding:

flowerpot

What is compounding?

Compounding

Compounding: flowerpot

What is compounding?

- Two already existing words are combined into a new one.
- There is no affixation but each of the parts can be assigned to a certain word category:

N + N	→	N	:	lawn mower
P + N	→	N	:	up shot
N + V	→	V	:	blow dry
P + Adj	→	Adj	:	over grown

Compounding

N + N	→	N	:	lawn mower
P + N	→	N	:	up shot
N + V	→	V	:	blow dry
P + Adj	→	Adj	:	over grown

⇒ The category of the right-most word determines the category of the whole compound

⇒ We call this part the **HEAD** of the compound

In English, the head of the compound is always the rightmost word (English is right-headed in this respect). Other languages might not have the head to the right, but to the left (left-headed).

Properties of compounding

The following sentence is ambiguous:

He lived in a [gɪnhɑʊs].

What are the two meanings?

Properties of compounding

The following sentence is ambiguous:

He lived in a [gʁɪnhɑʊs].

What are the two meanings?

1. Adj “green” + N “house”
2. “greenhouse” as a compound

Properties of compounding

The following sentence is ambiguous:

He lived in a [griːnhʌʊs].

What are the two meanings?

1. Adj “green” + N “house”
2. “greenhouse” as a compound

Difference in stress position

Recursion in morphology:

missile

anti-missile missile

anti-anti-missile missile missile

anti-anti-anti-missile missile missile missile

Caveat

wisdom tooth
policeman

sabor tooth (extinct species of carnivore)



Walkman (a type of portable audioplayer)



caveat

wisdom tooth

policeman

→ Endocentric compound

sabor tooth (extinct species of carnivore)

Walkman (a type of portable audioplayer)

→ Exocentric compound

caveat

wisdom tooth

policeman

→ Endocentric compound

sabor tooth (extinct species of carnivore)

Walkman (a type of portable audioplayer)

→ Exocentric compound

What are the plural forms of these words?

Inflectional morphology

In addition to word derivation and word compounding, we also have a third extremely common word formation process, and that is **inflection**.

What information does 'inflection' express?

Inflectional morphology

In addition to word derivation and word compounding, we also have a third extremely common word formation process, and that it **inflection**.

What information does 'inflection' express?

Grammatical information.

And what is grammatical information?

Inflectional morphology

In addition to word derivation and word compounding, we also have a third extremely common word formation process, and that it **inflection**.

What information does 'inflection' express?

Grammatical information.

And what is grammatical information?

plural vs singular (plural /-s/)

possessive marking (possessive 's)

tense marking (past tense /-ed/, participles)

aspect marking (progressive /-ing/)

agreement marking (third person /-s/)

comparative/superlative marking

Inflectional morphology

Inflection is predominantly expressed by affixation in English

So how do we distinguish an inflectional affix from a derivational one?

a) Category and meaning change:

-Very often (though not always) derivation changes the category of the base while inflection never does that.

-Whereas derivation changes the meaning of the base, inflection does not ('books' still refers to the same type of thing as 'book' does, but 'King' refers to something different than 'kingdom')

Inflectional morphology

Inflection is predominantly expressed by affixation in English

So how do we distinguish an inflectional affix from a derivational one?

a) **Category and meaning change:**

b) **Order**

Derivation applies before inflection:

America – America-n – American-ize – Americanize-d

Inflectional morphology

Inflection is predominantly expressed by affixation in English

So how do we distinguish an inflectional affix from a derivational one?

a) **Category and meaning change:**

b) **Order**

c) **Productivity**

Inflectional affixes can usually be attached to a whole word class (with very few exceptions)

Derivational affixes can usually only be attached to a small sub-class of a whole word class:

Plural /-s/: can apply to almost all nouns

-ful can be added to only a subset of all nouns:

hope-ful, dread-ful, faith-ful

*poison-ful, *president-ful, *nation-ful

Inflectional morphology

Inflection versus derivation:

- a) The farmer's cows escaped.
- b) It was raining.
- c) Those socks are inexpensive
- d) Jim needs the newer copy.
- e) The stongest rower continued.
- f) The pitbull has bitten the cyclist.
- g) She quickly closed the book.
- h) The aplphabetization went well.

Inflectional morphology

Inflection versus derivation:

red: derivation

green: inflection

- a) The farmer's cows escaped.
- b) It was raining.
- c) Those socks are inexpensive
- d) Jim needs the newer copy.
- e) The strongest rower continued.
- f) The pitbull has bitten the cyclist.
- g) She quickly closed the book.
- h) The alphabet-ization went well.

Other morphological processes

Affixation is not the only way to mark past tense or plural:

sing (present) → sang (past)

foot (sg) → feet (pl)

A process that substitutes one non-morphemic segment for another non-morphemic segment to mark a grammatical contrast

alternation

Other morphological processes

Affixation is not the only way to mark past tense or plural:

sing (present)	→	sang (past)
foot (sg)	→	feet (pl)

A process that substitutes one non-morphemic segment for another non-morphemic segment to mark a grammatical contrast

alternation

(2)	go (present)	→	went (past)
	is (present)	→	was (past)
	am (first person)	→	is (third person)

Process which replaces one morpheme by a completely different one:

suppletion

(3) rumah ~ 'house' → rumahrumah ~ 'houses'
ibu ~ 'mother' → ibuibu ~ 'mothers'
(Indonesian)

A process which marks grammatical contrast by repeating a part of the word

reduplication (total or partial reduplication)

Tagalog

bili "buy" → bibili "will buy"
kain "eat" → kakain "will eat"

Morphological analysis

8. Consider the following data from Bontoc. These data show an example of derivational morphology in which an adjectival root is turned into a verb. What type of affix is used to form the verb? Describe its placement in the word.

[fikas]	'strong'	[fumikas]	'he is becoming strong'
[kilad]	'red'	[kumilad]	'he is becoming red'
[bato]	'stone'	[bumiato]	'he is becoming stone'
[fusul]	'enemy'	[fumiusul]	'he is becoming an enemy'

- Find similar sounding words
- Check if they have different meanings, and if they do differ in meaning, identify which morpheme is responsible for the meaning change

Morphological analysis exercise!

1. Handout

2.

Open LF:

- p.184 Problem 31, 32

- if you want more, you can try p.191 Problem 46

For tomorrow

- Read **LF syntax**
- HW3, due tomorrow!
 - LF p.182; Problem **24** (a, b, c, d, m, n, o, p, x, y, z, aa), **25 & 26**
 - LF p.183; Problem **30**
- I'll return the exam and homework 2 at the beginning of class