## Seminar 17312 Introduction to Linguistics

Institute for English Philology Winter Semester 2020/2021

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From phonology to morphology

## Recap: Syllabification

## Syllabification (!)

> The Maximal Onset Principle: as many consonants as possible in the onset, but nucleaus has to be „the most clearly audible part of the syllable" (Plag et al. 2009: 60);
$>$ "Where two syllables are two be divided, any consonants between them should be attached to the right-hand syllable" (Roach 2009: 61);
> However: this happens "within the restrictions governing syllable onsets and codas" (ibid.);
$>$ Isolated syllables never end in: /I/, le/, læ/, IN/, /d/, /ъ/ ! (Roach 2009: 61);
> SONORITY SEQUENCING PRINCIPLE: "sounds preceding the nucleus (i.e. onsets) must raise in sonority, and sounds "following the nucleus (i.e.) must fall in sonority" (Plag et al. 2009: 61)

- sonority: "clear audability"; measured in relation to other sounds (ibid., p. 60)
(44) Sonority scale
vowels > [w], [j] > [.I] > [l] > nasal > fricatives, > plosives consonants affricates


## Syllabification


girl

house

pink

be

## Syllabic consonants

- [I], [n], [m] and [r] can occupy the NUCLEUS POSITION
- in weak syllables without vowels

Syllabic /II:
one or more consonants followed by „-le"
$\checkmark<$ bottle> ['bdtl]
$\checkmark<c a t t l e>[$ 'kætl]
$\checkmark$ couple ['k^pl]]
Syllabic n : in the word-medial and word-final positio

$\checkmark$ <button> ['b^tṇ]
$\checkmark<h a p p e n>[' h æ p n ̧]$
Syllabic $/ \mathrm{m} /$ and $/ \mathrm{\eta} /$ : in the process of assimilation
$\checkmark<$ rhythm> [rIð(ə)m]
$\checkmark$ <cupboard> /k^pbrd/ (rhotic dialects, e.g. AmE)
In syllables without vowels, consonants have to take over 'vowel' function
$\rightarrow$ consonants that are most 'vowel-like' in quality (Roach 2009: 68-71).

## Morphology: Types of morphemes

## What is morphology?

## MORPHOLOGY:

"[...] the study of the internal structure of words, the rules that govern it, as well as the ways of creating new words" (Plag et al 2009: 70).
„[...] examines how words are created, structured and changed" (Bieswanger \& Becker 2017: 75); "the grammar of words" (ibid., p. 76).

## What is a word?

- Ortographic words (written language);
- Phonological words (spoken language);
- Linguistic signs: arbitrary combination of a sound image and a concept
(Bieswanger \& Becker 2017: 76)


## Word types and word tokens

Word types: "particular words"
Word tokens: "occurences of words"

The students borrowed a red book and a yellow book.

How many types and how many tokens?

## Morphemes

- Morphe (Greek) - form, shape
- Minimal units of grammatical structure (Carstairs-McCarthy 2002: 144)
- Traditional view: smallest meaningful units (ibid.,16-17; Kortmann 2005: 85. Bieswanger \& Becker 2017: 80)
- can carry grammatical and lexical information (ibid.)


## Phonemes and morphemes: difference

Recap:
Phoneme is the smallest linguistic unit capable of distinguishing between meaning (Mair 2012: 39).

MORPHEME is the minimal unit CAPABLE OF EXPRESSING A MEANING of its own (Mair 2012: 39-40).

Morphemes as MEANINGFUL UNITS. A word must consist of at least one morpheme (Plag et al 2009: 71).

The morpheme is placed between BRACES <higher> \{high\} \{-er\} \{-er\} expresses a greater degree or the comparative form of adjectives

## Morphemes

Words consisting of one morpheme: MONOMORPHEMIC or SIMPLEX WORDS

Words that contain one or more morpheme: POLYMORPHEMIC or COMPLEX WORDS (Plag et al. 2009: 72; Bieswanger \& Becker 2010: 80)

Unique morphemes (cranberry morphemes): morphemes that occur just in one word in a language (Plag et al. 2009: 73)

| cranberry | sustain |  |
| :--- | :--- | :---: |
| strawberry (COMPLEX WORDS) | vs |  |
| blackberry | pertain (SIMPLEX WORDS) |  |
| blueberry | custain |  |
|  | obtain (ibid.) |  |

## Cranberry morphemes (unique morphemes)

Cranberry morphemes do not carry an independent meaning:

- \{cran\} only occurs in cranberry
- From a synchronic perspective, it does not have a lexical meaning, but it distinguishes cranberry from strawberry, blackberry, blueberry, etc.
- These kinds of morphemes are called UNIQUE MORPHEMES or CRANBERRY MORPHEMES (Plag et al 2009: 73; Bieswanger \& Becker 2017: )


## Morphemes

[...] morphemes must:

1. be identifiable from one word to another
2. contribute in some way to the meaning of the whole word (Carstairs-McCarthy 2002: 17)

## Types of morphemes:

FREE MORPHEMES: can stand on their own: \{mother\}

BOUND MORPHEMES (affixes): morphemes that only appear in combination with other morphemes: \{hood\}
(Plag et al 2009: 76, Bieswanger \& Becker 2017: 81)

## Types of morphemes: free morphemes

- The ones which belong to lexical word classes (such as nouns, verbs, adjectives)
- The ones which belong to grammatical or functional word classes (pronouns, prepositions, conjunctions, articles) (Kortmann 2005: 87)


## Types of morphemes: bound morphemes

Two kinds of bound morphemes:

1. Derivational/lexical morphemes (lexical information): "create new lexemes via affixation" (Kortmann 2005: 87; Bieswanger \& Becker 2017: 82).
2. Inflectional morphemes (grammatical information): "produce new word forms" (Kortmann 2005: 87)

## Bound morphemes: affixes

AFFIX: "Bound morpheme that is attached to a root or a base" (Plag et al. 2007: 224)

On the basis of the position of the bound morpheme to the modified word, bound affixes can be divided into:

PREFIXES: attach before the base (in English, participate in derivation): un-happy, dis-honest, dis-courage, ir-responsible

SUFFIXES: attach after the base (participate in derivation and inflection): cheer-ful, heart-less, girl-ish, white-ness, structur-al, blend-er (Plag et al. 2009: 77-78, Kortmann 2005: 87)

INFIXES: are inserted into be base. No infixes in English, but whole words can be inserted into a base: abso-bloody-lutely (Plag et al 2009: 78).

## Derivational morphemes: examples

- Suffix \{-er\}: formation of agentive nouns from verbs (bake -> baker) or inhabitants of a place (London -> Londoner);
- Suffix \{-ness\} turns adjectives into abstract nouns: (Mair 2012: 41)


## Inflectional forms of the same lexeme

do not have to be listed in the dictionary because they are "grammatically conditioned" (Carstairs-McCarthy 2002: 28)
perform, performs
performed
performing

| $\uparrow$ | $\uparrow$ |
| :--- | :--- |
| word forms | lexeme |
| (in italics) | (in small capitals) |
| Inflectional variants |  |
| of a lexeme |  |
| (ibid, p. 30) |  |

## Suppletive forms

BE: am, is, are, were

GO: go, went
$\rightarrow$ one lexeme consisting of several unrelated root morphemes
$\rightarrow$ grammatically conditioned
"[...] go and went are said to be distinct roots (and hence distinct morphemes) standing in a suppletive relationship as representatives, in different grammatical contexts, of one lexeme" (CarstairsMcCarthy 2002: 33)

## Types of morphemes



## Terms: base, stem, root

## BASE:

serves "as the basis to attaching other, usually bound, morphemes, such as -hood and -ment (Plag et al 2009: 76); "word or part of a word viewed as an input to a derivational process or inflectional process, in particular affication" (Carstairs \& McCarthy 2002: 141). Bases can be simplex (do not contain any further morphemes) or complex (Plag et al 2009: 77); „any form to which an affix is attached to (...)" (Beiswanger \& Becker 2017: 83).

## STEM:

"[...] bases to which bound morphemes carrying grammatical meaning attach" (Plag et al. 2009: 76).

## ROOT:

"within a non-compound word, the morpheme that makes the most precise and concrete contribution to the word's meaning, and is either the sole morpheme or else the only one that is not a prefix or a suffix" (Carstairs-McCarthy 2002: 145). Most roots are free in English (ibid.); „(...) single morphemes that cannot be morphologically analysed any further" (Bieswanger \& Becker 2017: 83).

## Stem, base, root: differences

ROOT: "what remains when taking away all affixes [...]" (Kortmann 2005: 89); STEM: "what remains once all inflectional suffixes are taken away [...]" , „, minimal lexical unit" (ibid.);
BASE: "what remains in each case if the derivational affixes are taken away [...]"(ibid.,).
a. stem: removal-s
c. base : remov(e)-als
b. root: re-mov(e)-al-s
d. base : removal-s, remov(e)-als, re-mov(e)-als
(ibid.)

## Morphological analysis of words



| globe | is the root and the base for the suffix -al |
| :--- | :--- |
| global | is the base for the suffix -ise |
| globalise | is the base for the suffix -ation |
| globalisation | is the resulting derivative |

Plag et al (2009: 79)


## Free roots vs bound roots

$\begin{array}{ll}\text { a. } & \text { read-able } \\ \text { hear-ing } \\ \text { en-large } \\ \text { perform-ance } \\ \text { white-ness } \\ \text { dark-en } \\ \text { seek-er }\end{array}$
free root
$+$
bound morpheme (affix)
b. leg-ible audi-ence
magn-ify
rend-ition
clar-ity
obfusc-ate
applic-ant
bound root + bound morpheme (affix)

Carstairs-McCarthy (2002: 19)

## Combining forms

"Bound morpheme, more root-like than affix-like, usually of Greek or Latin origin, that occurs only in compounds, usually with other combining forms. Examples are poly-and -gamy in polygamy (Carstairs-McCarthy 2002: 145)
Other examples:
electroscopy (2 bound roots)
\{electro-\}: bound root, combining form (also in electrolysis)
\{-scopy\}: bound root, combining form (also in microscopy)
auditorium
\{audi-\}: bound morpheme, combining form (also in audience)
\{-torium\}: bound morpheme, combining form (also in sanatorium)
but:
microfilm
\{micro-\} bound root
\{film\} free root
(Carstairs-McCarthy 2002: 21)

## Free roots

Words that have more than one root are called compounds

- two free roots: bookcase, motorbike
- two bound roots: electrolysis, microscopy (CarstairsMcCarthy 2002: 21)


## Morphological processes

- DERIVATIONAL MORPHOLOGY: "Area of morphology concerned with the way in which lexemes are related to one another (or in which one lexeme is derived from another) through processes such as affixation" (Carstairs-McCarthy 2002: 142);
- INFLECTIONAL MORPHOLOGY: "Area of morphology concerned with changes in word shape (e.g. through affixation) that are determined by, or potentially affect, the grammatical context in which a word appears (ibid., p. 144);
- COMPOUNDING: the process of combining roots (free or bound) (ibid., p. 59).


## Morphemes \& allomorphs

## Terms

MORPHEME is the mental representation, an abstraction over all the allomorphs of what we consider one morpheme (Kortmann 2009: 83); "[...] an abstract category that exists in our minds" (Plag et al 2009: 83).

MORPH is the physical realisation of a morpheme.

ALLOMORPH is a contextually determined realisation of a morpheme (Kortmann 2005: 90); Allomorphes are different MORPHS representing the same MORPHEME (Plag et al 2009: 83)

## Morphemes



Plag et al. (2009: 75)

## Morphemes


(Plag et al 2009: 74)

## Similar relations

## MORPHEME -> ALLOMORPH PHONEME -> ALLOPHONE

But:
Phonemes: "realisations of an abstract phonological category" Allomorphes: "realisations of an abstract morphological category"
(Plag et al 2009: 83)

## Allomorphs

- "different morphs realising the same morpheme" (Plag et al 2009: 83);
- different "realisation variants" of a morpheme (Mair 2012: 41);
- "pronunciation variants" of a morpheme, "among which the choice is determined by context (phonological, grammatical or lexical)" (Carstairs-McCarthy 2002: 141): phonological conditioning, morphological conditioning, lexical conditioning (Plag et al 2009: 88).

AIITITM

## Allomorphs: indefinite article (phonological conditioning)



Plag et al (2009: 84)

## Allomorphs - plural and genetive \{-s\}

The $\{-\mathrm{s}\}$ marking plural or genitive in nouns or third-person singular of the present tense in verbs has three phonetic realisations: [s], [z], [rz/əz]. [s] is present after all voiceless consonants (<cats>, <baths>), except [s], [], [t]. [z] is present after all vowels and voiced consonants (<boys>, <girls>), except [z], [3], [d3].
[ zz$]$ is found after sibilants [s], []], [t]], [z], [3], [d3] (<roses>, <judges>, <races>).

Different allomorphs stand in COMPLEMENTARY DISTRIBUTION.
(Mair 2012:41-42, Plag et al 2009: 86)

## Morpheme \{PLURAL\}: phonological conditioning



Plag et al (2009: 86)

## Allomorphs of the suffix <-ed>: phonological conditioning

[Id]: when a preceding sound is [t] or [d]: wanted /wontid/ otherwise:
[t]: when a preceding sound is voiceless: walked /wo:kt/
[d]: after a vowel or a voiced consonant: played /pleid/ dragged dragged /drægd/

## Irregular plural forms: lexical conditioning

| a. | [tu: $\theta$ ] | teeth | [ti: $\theta$ ] |
| :---: | :---: | :---: | :---: |
|  | [guis] | geese | [giss] |
|  | [mavs] | mice | [mais] |
| b. sheep | [ $[\mathrm{i}: \mathrm{p}$ ] | sheep | [ [i:p] |
| c. ox | [0ks] | oxen | ['oksən] |
| d. child | [tfarld] | children | ['ţIld.ıən] |
| Plag et al (2009: 86) |  |  |  |
| $\begin{aligned} & \text { tooth - teeth [ } \\ & \text { goose - geese } \end{aligned}$ | $\begin{aligned} & -[i:] \\ & :]-[i:] \end{aligned}$ | VOWEL ALTERNATION/VOWEL CHANGE (within a stem) |  |
| mouse - mice <br> (ibid., p. 75) | S] - [ar] |  |  |

## Irregular plural forms: lexical conditioning

(26)


Plag et al (2009: 87)

## Irregular plural forms: morphological conditioning

conclude<br>conclusion<br>conclusive

[kən'klu:d]
[kən'klu:3-ən]
[kən'klu:s-Iv]

Morpheme \{CONCLUDE\}:
[kən'klu:d]
[kən'klu:3] when the suffix [ən] is attached
[kən'klu:s] when the suffix [Iv] is attached (Plag et al 2009: 88)

## Phonological, lexical and morphological conditioning of allophones: summary

Phonological conditioning of allophones: „[...] the distribution of allomorphs is governed by the sound structure" (Plag et al. 2009: 83) that "follows or precedes a given morpheme" (ibid., p. 86).

Lexical conditioning: the shape of morpheme "depends on the individual word" (ibid. p. 86-87).

Morphological conditioning: the shape of a morpheme depends on the other adjacent morpheme (ibid., p. 88)

## Morphological processes

## Morphological processes



## Inflection

- NOUNS
$\{-s\} \quad$ plural
$\{-s\} \quad$ genitive
- VERBS
\{-s\} 3. person singular
\{-ed\} past
\{-ing\} present participle
\{-ed\} past participle
- ADJECTIVES \{-er\} comparative \{-est\} superlative


## DECLENSION

CONJUGATION

## Inflectional suffixes

affix function
$-s \quad$ creates the plural form of nouns
's creates the genitive form of nouns
-ed creates the past tense form of verbs
$-s \quad$ creates the third person singular (he/she/it) plays, stops, cares present tense form of verbs
-ing creates the progressive form of verbs
-er creates the comparative form of warmer, colder adjectives
-est creates the superlative form of warmest, coldest adjectives

## examples

cats, days
Peter's, John's
played, stopped, cared
(is/are) playing, going, writing

Plag et al (2009: 90)

## Inflectional forms of the same lexeme

do not have to be listed in the dictionary because they are "grammatically conditioned" (Carstairs-McCarthy 2002: 28)
perform, performs
performed

PERFORM
performing

| $\uparrow$ | $\uparrow$ |
| :--- | :--- |
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## Inflection vs. derivation

## inflection

Only suffixes (in English)

Creates WORD-FORMS or grammatical words
(e.g. bake - bakes - baked)

Grammatical function

## NEVER changes WORD-CLASS

can be attached to almost every word of a given class
have the same meaning in all words they attach to

Both suffixes and prefixes

Creates new LEXEMES
(e.g. bake - baker- bakery)

Primarily ‘lexical'/'content'

## CHANGE WORD-CLASS

 prefix: rarely (e.g. large - enlarge) suffix: often)can be attached to certain words of a given class
do not always have the same meaning

## Derivation

- combination of at least one free morpheme and at least one bound morpheme resulting in a new lexeme
- through AFFIXATION: process of attaching affixes: prefixes $\&$ suffixes = PREFIXATION \& SUFFIXATION
- Most prefixes preserve word/class> both happy and unhappy are adjectives
- Most suffixes change word class:
happy - happiness (adjective -> noun)
forget - forgetful (verb -> adjective)
fiction - fictional (noun -> adjective)
...but not all of them:
green - greenish (adjective - adjective)
devil - devilry (noun - noun)
- Derivation creates a new lexeme
- Result of derivation is a derivative (Plag et al 2009: 93-95)


## Inflectional vs derivational suffixes


word meaning
'put into a computer'
'put into a hospital'
'make (more) modern'
'make (more) regular'
'provide with a brother'
'provide with a gutter' 'more than one car' 'more than one table' 'more than one shoe' 'more than one cottage'
affix meaning/function
'put into X '
'put into X'
'make (more) $X$ '
'make (more) X'
'provide with X '
'provide with X ' 'more than one'
'more than one'
'more than one'
'more than one'

Plag et al (2009: 91)

## Word-formation processes



## Compounding

Compounding is a combination of at least two (or more) free morphemes resulting in a new lexeme. It has been a mainstay of the English word-formation system since Old English times.
The most common type is NOUN+NOUN COMPOUNDS: apple pie
Result of compounding is a compound, in which pie is the head, modified by apple.

Other types:
adjective + noun blackboard, medical student
adjective + adjective blue-green
noun + adjective power-hungry
verb + noun pickpocket
verb + verb to stir-fry, to kick-start
(Mair 2012: 45)

## Compounding

ATTENTION! Spelling is not a reliable indicator of compound status in English
Words can be spelled as TWO WORDS: apple pie
or HYPHENATED: blue-green
or as ONE WORD: blackboard
Sometimes all orthographic variants are possible: breadbin, bread bin, bread-bin

The MEANING OF COMPOUNDS is motivated by, but not always
predictable from, the meanings of the individual morphemes.
REMEMBER! Word stress in compounds is usually on the MODIFIER: bláckbird, gréenhouse
(Plag et al 2009: 99-101)

## Compounding

a. a bláckboard
'a board for writing on with chalk'
a blúebell
'a plant which has blue flowers
in the shape of a bell'
a rédcoat
'a British soldier in the
$18^{\text {th }}$ and $19^{\text {th }}$ centuries'
b. a black bóard
'a board which is black in colour'
a blue béll
'a bell which is blue
in colour'
a red cóat
'a coat which is red
in colour'
a. are nominal compounds
b. syntactic constructs
(Plag et al 2009: 100)

## Compounds

- contain two constituents: left-hand constituent and right-hand constituent
- each of these constituents can be complex in itself: wildlife sanctuary
- compounds have one element that is semantically and grammatically more important, which is called the HEAD, which is usually the right-hand element. The left-hand element is the MODIFIER
law firm 'a kind of a firm'
law firms- inflectional suffix is attached to the right-hand element
law (N) firm (N) - word class of the whole compound (N) (Plag et al. 2009: 100-102)


## Types of compounds

Distinguished on the basis of word-classes of their heads:

- NOMINAL: glasshouse
- ADJECTIVAL: colour-blind
- VERBAL: deep-fry
(Plag et al 2009: 103)


## Types of compounds

|  | Noun | Adjective | Verb |
| :--- | :--- | :--- | :--- |
| Noun | morning paper | colour-blind | to housekeep |
| Adjective | fast-food | dark-blue | to deep-fry |
| Verb | playground | - | to crash-land |
| Preposition | overweight | - | - |

Plag et al (2009: 104)

## Semantic types of compounds

- Endocentric compounds (modifier-head compounds): 'A+B denotes a special kind of B': small talk, medical student, blackboard (Kortmann 2005: ; Mair 2012: 45);
- Exocentric compounds: 'A+B denotes a special kind of an unexpressed semantic head', a metonymic character; none of the components refers to the referent directly: pickpocket, redhead, paperback, egghead (Mair 2012: 46);
- Copulative compounds (a sum of two qualities): stir-fry, bitter-sweet, sleep-walk
- (Kortmann 2005: 101; Mair 2012: 45);
- Appositional compounds: 'A + B provide the same descriptions for the same referent': actor-manager, writer-director, actor-director (Kortmann 2005: 101).


## Conversion

CONVERSION (zero-derivation, zero-affixation, syntactic homonymy) is the creation of a new word without any formal or external change to the base.
The most common types are NOUN-TO-VERB, VERB-TO-NOUN, ADJECTIVE-TONOUN and ADJECTIVE-TO-VERB CONVERSION.
NOUN TO VERB bottle> to bottle
VERB TO NOUN to coach > a coach
ADJECTIVE TO NOUN heavy > a heavy

Other types include: ADVERB TO VERB: down > to down
PREPOSITION TO VERB: up> to up: The kept upping the price.
ADJECTIVE TO VERB: narrow > to narrow
PREPOSITION TO NOUN: up > up ups and downs
Derivatives have usually more complex meaning than their base and relay on base for their meaning.
This process is exteremely productive in present-day English due to few infectional endings.
(Plag et al 2009: 105; Mair 2012: 47-48)

## Conversion

Some borderline examples (they do not fully meet the criteria of conversion):
to object (verb) /əb'd3ekt/
to import (verb) /im'po:t
to record (verb) /ri'ko:d/
object (noun) /'dbd3Itt/
import (noun)/'impo:t
record (noun) /'reko:d/

Different prounounciation and word stress for nouns and verbs!
(Mair 2012: 48)

## Shortening

- Deleting linguistic material
- CLIPPINGS involve the removal of the beginning or end of a longer word:

$$
\begin{aligned}
& \text { doctor -> doc } \\
& \text { laboratory -> lab } \\
& \text { omnibus -> bus }
\end{aligned}
$$

Names -> truncation Patricia -> Pat

- BLENDS represent the phonetic merger of two words:

$$
\begin{aligned}
& \text { breakfast + lunch -> brunch } \\
& \text { smoke + fog -> smog }
\end{aligned}
$$

- ABBREVIATIONS:

ACRONYMS combine the initial letters of multi-word combinations and can be pronounced as regular words: North Atlantic Treaty Organisation -> NATO

If initial letters are pronounced separately, these abbreviations are called INITALISMS/ ALPHABETISMS
e.g. United Kingdom -> UK
e.g. televison - TV
e.g. British National Corpus -> BNC

Plag et al (2009: 106-108)

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