

Foundations of Linguistics

MSc Language Science and Technology

Morphology I
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Overview: Morphology and syntax

Date	Topic	Reading	Assignments
25.10.23	Introduction		
30.10.23	Morphology I: Word formation	Haspelmath & Sims (2010) Chapter 1&2&3	
01.11.23	Morphology II: Inflection & Derivation; Hierarchical structure	Haspelmath & Sims (2010) Chapter 5 & 7 (if you have time, read Chapter 6 too)	Morphology assignment handed out Have to find another slot for this class
06.11.23	Syntax I: Word classes	Tallerman (2014) Chapter 1&2&3	Morphology assignment due
08.11.23	Syntax II: Heads, dependents, and beyond	Tallerman (2014) Chapter 4&5	Syntax assignment handed out
13.11.23	Syntax III: Grammatical relations	Tallerman (2014) Chapter 6	
15.11.23	Syntax IV: tba	tba	Syntax assignment due

Morphology

„Morphology is the study of systematic covariation in the form and meaning of words.“

(Haspelmath & Sims 2010: 2)

Morphology

„*Morphology is the study of systematic covariation in the form and meaning of words.*“

OK, then what is a word?

Is *back seat* a word?

What about *backboard*?

(Haspelmath & Sims 2010: 2;
Haspelmath & Sims 2010: Chap. 9)

Morphology

„Morphology is the study of systematic covariation in the form and meaning of words.“

Morpheme: the smallest meaningful constituent of a word that can be identified.

*walk-s, elephant-feet; happi-ness; sub-sequent-ly; in-comprehens-ibili-ty
industrialize?*

uncharacteristically?

unlockable?

amplitude?

Cross-linguistic differences: Analytic vs. synthetic

Analytic/isolating: Jeli (Mande, Côte d'Ivoire)

ni i sa beli jan do ma...

KONJ 3SG KOND vorbeigeh[SIM] Blatt IDF PP

,Wenn sie (die Schildkröte) an einem Blatt vorbeigeht...‘(Tröbs 1998: 129)

Synthetic: Nepali (Indo-European, Nepal)

bazār lag-eko thulo cok-mā tini-haru pug-e...

market begin-PFV.PTCP big center-LOC 3-PL reach-PST.3PL

‘they reached the big center where the market was held...’ (from *The Alchemist*)

Cross-linguistic differences: Polysynthetic

Polysynthetic: Kanien'keha:ka (Mohawk, Iroquoian , Canada/US)

tetsyonkyathahahkwahno'nhne
te-ts-yonky-at-hahahkw-hno'n-hne
both-again-it.to.you.and.I-each.other-walk-purposive-have.gone
DUAL-REP-3SG.N/1.DU.INCL-SREFL-walk-PURP-PPFV

‘the two of us went for a walk’ Kazantseva et al. (2018: 54)

Cross-linguistic differences

Karihwanon: Precious Things (with Kanien'keha:ka/Mohawk subtitles)

<https://www.youtube.com/watch?v=vqldHZUaF-c>



Karihwanonon Tsi lonterihwaienstákhkwa'
ionterihwaiénstha' ne Yagorihwanirats,
aóhskon onkwehonwehnéha thonteweiénstha'.

Basic concepts in morphology

Lexeme: ‘dictionary word’, abstract sense of a word, e.g. HATE.

Word-form: ‘concrete word’, e.g. *hate, hates, hated, hating*.

Word token: An instance/occurrence of a word-form in a particular text of speech segment.

Harry Potter war in vielerlei Hinsicht ein höchst ungewöhnlicher Junge. So hasste er zum Beispiel die Sommerferien mehr als jede andere Zeit des Jahres. Zudem wollte er in den Ferien eigentlich gern für die Schule lernen, doch er war gezwungen, dies heimlich und in tiefster Nacht zu tun. Und außerdem war er ein Zauberer.

Basic concepts in morphology

Table 3.3 *Noun paradigms in Russian*

Paradigm:

the set of word-forms
that belong to a lexeme

noun declensions

	I	II	III	IV
Singular				
Nominative	zakon	škola	kost'	vino
Accusative	zakon	školu	kost'	vino
Genitive	zakona	školy	kosti	vina
Dative	zakonu	škole	kosti	vinu
Instrumental	zakonom	školoj	kost'ju	vinom
Locative	zakone	škole	kosti	vine
Plural				
Nominative	zakony	školy	kosti	vina
Accusative	zakony	školy	kosti	vina
Genitive	zakonov	škol	kostej	vin
Dative	zakonam	školam	kostjam	vinam
Instrumental	zakonami	školami	kostjami	vinami
Locative	zakonax	školax	kostjax	vinax
	'law'	'school'	'bone'	'wine'

Basic concepts in morphology

Paradigm:

the set of word-forms
that belong to a lexeme

Ancient Greek

(Indicative mood, present tense,
Active voice)

SG

δείκνυ-μι

I show

δείκνυ-ς

you show

δείκνυ-σι

(s)he, it shows

PL

δείκνυ-μεν

we show

δείκνυ-τε

you all show

δεικνύ-ασι

they show

verb conjugations

Basic concepts in morphology

Word family: A set of lexemes that denote different but related core concepts

LIKE, LIKENESS, LIKEABILITY, UNLIKE, UNLIKABLE

HUNT, HUNTER, HUNTABLE, UNHUNTABLE, HUNTABILITY

? What is the difference between a word family and a paradigm ?

Basic concepts in morphology

Inflection: the relationship between the word-forms of a lexeme

love, loves, loved, loving

symbol, symbols

Derivation: the relationship between lexemes of a word family

LOVE, LOVEABLE, UNLOVEABLE, LOVER, LOVEABILITY

SYMBOL, SYMBOLIC, SYMBOLIST, UNCYMBOLIC, SYMBOLICALLY

Basic concepts in morphology

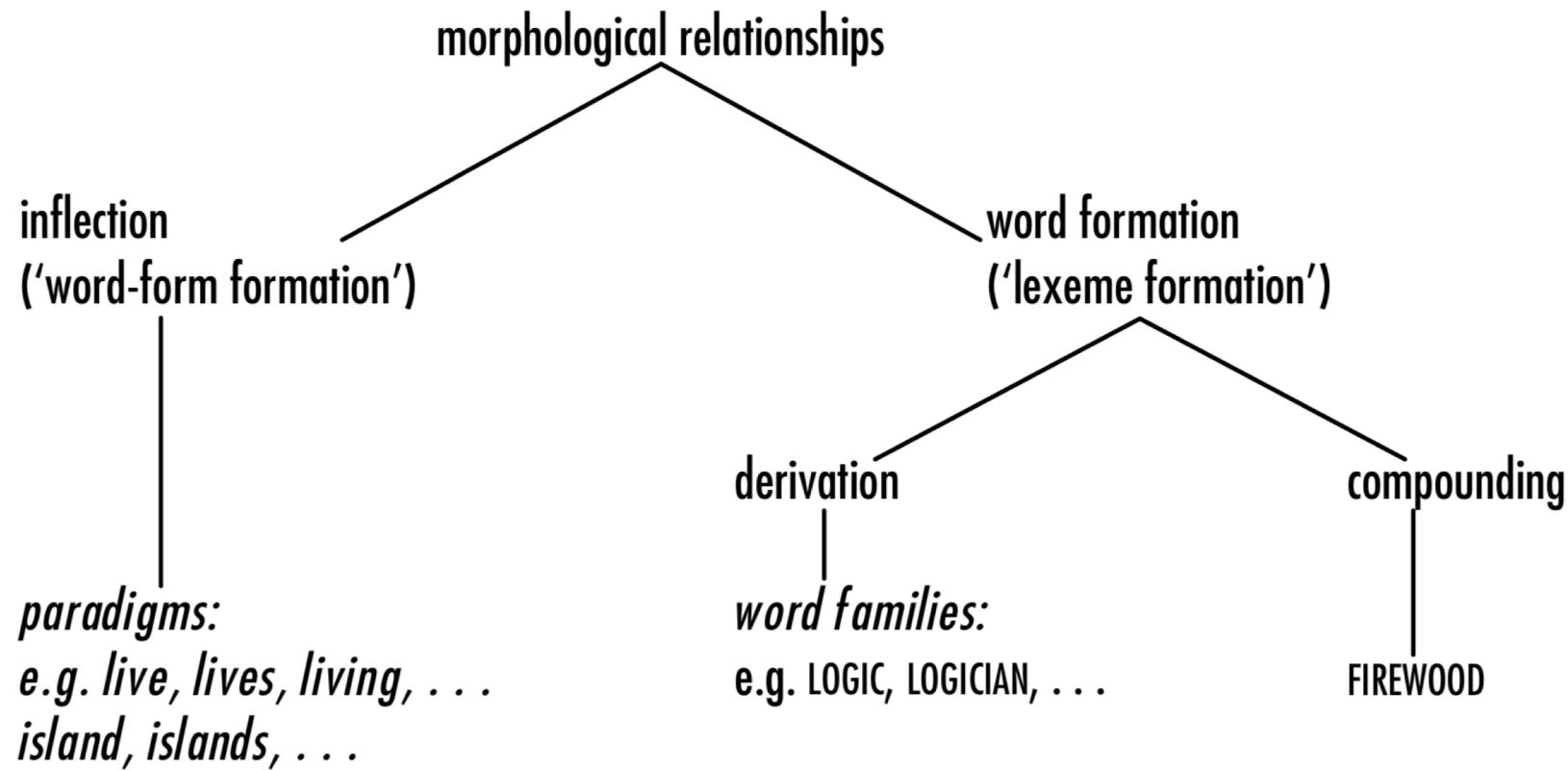


Figure 2.1 Subdivisions of morphology

(Haspelmath & Sims 2010: p. 19)

Basic concepts in morphology

Morpheme: the smallest meaningful constituent of a word that can be identified.

<i>true</i>	<i>tru-th</i>	<i>tru-est</i>
<i>tru-ly</i>	<i>tru-th-ful</i>	<i>tru-th-ful-ly</i>
<i>un-true</i>	<i>un-tru-th-ful-ly</i>	<i>un-tru-th-ful-ness</i>

Root: a form that cannot be further analysed and which expresses the basic lexical content of a word;

Affix: attaches to a root or a stem;

Stem: a root+affix to which another affixed can be added (*truthful, truly*).

Basic concepts in morphology

Types of affixes	Examples
suffix: follows the base	Russian <i>-a</i> in <i>ruk-a</i> 'hand' English <i>-ful</i> in <i>event-ful</i>
prefix: precedes the base	Classical Nahuatl <i>no-</i> in <i>no-cal</i> 'my house' English <i>un-</i> in <i>unhappy</i>
infix: occurs inside the base	Arabic <i>-t-</i> in (<i>i</i>) <i>š-t-agala</i> 'be occupied' (base: <i>šagala</i>) Tagalog <i>-um-</i> in <i>s-um-ulat</i> 'write' (base: <i>sulat</i>)
circumfix: occurs on both sides of the base	German <i>ge-...-en</i> , e.g. <i>ge-fahr-en</i> 'driven' (base: <i>fahr</i>)

Table 2.1 Types of affixes

(Haspelmath & Sims 2010: p. 20)

Basic concepts in morphology

? What is the root of the following words?

read, readable, unreadable, readability

receive, perceive, conceive, deceive

arbeiten, gearbeitet, bearbeitst, Arbeiter

Fahrrad, abfahren, Fahrt, Hinfahrt, Fahrzeug, fahrlässig

Basic concepts in morphology

Base: The part of the word that an affix is attached to;

Base = word-form; English nouns like *dog*, *work*, *teach*

Base ≠ word-form; Italian nouns, *gatto* ,cat' vs *gatti* ,cats



bound stems

Basic concepts in morphology

Allomorph: if an morpheme has different forms depending on different phonological circumstances, we call them allomorphs

Dutch diminutives:

<i>grap-je</i>	joke-DIM	[jə]	(after stem-final obstruents)
<i>snor-etje</i>	moustache-DIM	[ətjə]	(complicated ;))
<i>arm-pje</i>	arm-DIM	[pjə]	(after /m/)
<i>koning-kje</i>	king-DIM	[kjə]	(after /ŋ/)
<i>ei-tje</i>	egg-DIM	[tjə]	(everywhere else)

Basic concepts in morphology

Suppletion:
allomorphs which
are not similar
in pronunciation

Type of allomorphy	Description	Example
Phonological allomorphy	Alternation could be described by a rule of pronunciation	English plural [-z], [-s], [-əz]; Russian <i>zamok/zamk-</i>
Weak suppletive allomorphy	Allomorphs exhibit some similarity, but this cannot be described by phonological rules	English <i>buy/bough-, catch/caught-, etc.</i>
Strong suppletive allomorphy	Allomorphs exhibit no similarity at all	English <i>good/better-, well/better-, etc.</i>

Table 2.2 Types of allomorphy: summary

Basic concepts in morphology

Conditioning:
the conditions
under which
different allomorphs
are selected

Type of conditioning	Description	Example
Phonological conditioning	Choice of allomorphs depends on phonological context	English plural depends on final sound in stem
Morphological conditioning	Choice of allomorphs depends on the morphological context	Spanish <i>ir</i> , <i>va-</i> or <i>fu-</i> , depending on tense
Lexical conditioning	Choice of allomorphs depends on the individual lexical item	English past participle <i>-en</i> / <i>-ed</i> is unpredictable and depends on individual verbs

Table 2.3 Types of conditioning: summary

Morpheme-by-morpheme glosses

Lezgian (Haspelmath 1993:207)

<i>Gila</i>	<i>abur-u-n</i>	<i>ferma</i>	<i>hamišaluğ</i>	<i>gügüna</i>	<i>amuq'-da-č.</i>
now	they-OBL-GEN	farm	forever	behind	stay-FUT-NEG

‘Now their farm will not stay behind forever.’

- Three lines:
 - top: sentence in usual, everyday writing system, *in italics*
 - middle: word-by-word and morpheme-by-morpheme analysis using hyphens; use periods when inflectional meaning is expressed in a way that cannot be segmented
 - bottom: natural-sounding English translation
- Root morphemes are translated with an English word, while inflection or function words are described rather than translated. These abbreviated grammatical category labels are printed in upper case letters or small capitals.

Review

? How many morphemes in the following word?

baker

- a. 1
- b. 2
- c. 3
- d. 4

What is the root?

What are bound morphemes?

Review

? How many morphemes in the following word?

unsuccessful

- a. 1
- b. 2
- c. 3
- d. 4

What is the root?

What are bound morphemes?

Review

? How many morphemes in the following word?

wonder

- a. 1
- b. 2
- c. 3
- d. 4

What is the root?

What are bound morphemes?

Lexicon

Lexicon: A language user's mental dictionary

– Every speaker knows tens of thousands of words

Child of six ~ 13,000

Average high school graduate ~ 60,000

Unabridged English dictionary ~ 500,000

– We continually learn new words

Science

Profession / trade

Hobbies / sports

Social groups / slang



Lexicon

What is **stored** in the lexicon? Words? Morphemes?

- Linguists agree that the lexicon contains at least all information that is not predictable from general rules
 - All mono-morphemic words (e.g., *salamander*, *arrive*, *the*) along with their meaning and phonological representation (and orthographic representation)
 - Linguists disagree whether it also contains predictable information (or just the rules to create them)



(Haspelmath & Sims 2010: Chap. 4)

<https://www.scientificamerican.com/article/where-words-are-stored-the-brain-s-meaning-map/>

Morphological patterns

Morpheme: the smallest meaningful constituent of a word that can be identified (i.e., which cannot be further analysed);

Root: a morpheme that expresses the basic lexical content of a word;

Affix: a morpheme that attaches to a root or a stem;

prefix: precedes the base

suffix: follows the base

infix: occurs inside the base

circumfix: occurs on both sides of the base

Stem: a root+affix combination to which another affixed can be added;

Morphological patterns

Concatenative: when morphemes in a word are linearly ordered such that they are ordered one after the other;

Non-concatenative: everything else!

Base modification: A morphological operation that alters the shape of the base without adding segmentable material

SG: *man woman foot tooth mouse goose*

PL: *men women feet teeth mice geese*

Morphological patterns

Reduplication: part of the base (or the complete base) is copied and attached to the base (either preceding or following it)

Indonesian:

rumah ‘house’ *rumahrumah* ‘houses’

ibu ‘mother’ *ibuibu* ‘mothers’

lalat ‘fly’ *lalatlalat* ‘flies’

Morphological patterns

Conversion: when a new base (word) is derived, but the form of the base remains unaltered

(1) Dutch:

olie	'oil'	olie-en	'to oil'
domino	'domino'	domino-en	'to play domino'
feest	'party'	feest-en	'to party'
oogst	'harvest'	oogst-en	'to harvest'

German:

Bagger	'excavator'	bagger-n	'to excavate'
Haus	'house'	haus-en	'to live'
Öl	'oil'	öl-en	'to oil'
spaß	'fun'	spaß-en	'to make fun'

Morphological patterns

Back-formation: Process whereby a new word is derived through subtracting an affix from a base rather than adding one.

self-destruction > self-destruct

editor > edit

baby-sitter > baby-sit

sleepwalking > sleepwalk

Morphological patterns

alphabet-based abbreviations: **acronyms, alphabetisms, initialisms:**
NATO, US, CD, BBC, LSA, UN, URL, JPEG, etc.

clipping (also removes part of a base):

delicatessen – deli; microphone – mike; telephone – phone; professor – prof, influenza – flu; etc.

blending: comparable to compounding, except that part of one (or both) of the source bases is dropped at the boundary between them

parachute troops > paratroops; motor hotel > motel

Review

Identify the morphological operations and the bases and affixes involved in the formation of the underlined words below:

- a. I got it from a CNN newscast.
- b. It was formed by a process of adjectivalisation.
- c. She works for UNESCO.
- d. We didn't have lead-free fuel in those days.
- e. They are involved in some illegal operation.
- f. They have decided to euthanize the whale.
- g. Calm down.
- h. He 's always mouthing off about his boss.
- i. I'll meet you in the lab.
- j. I was working as a window-cleaner.

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Review: Michoacán Nahuatl morphology

Perform a morphological analysis on these sentences of Michoacán Nahuatl (ncl). For each morpheme, say whether it is a root, prefix, or suffix, and identify its function. (This exercise is Problem 179 in Merrifield et al. 1987. Used with permission.) (source: Lyovin, Anatole V., Brett Kessler, and William R. Leben. 2017. *An Introduction to the Languages of the World*. Oxford: Oxford University Press.)

- | | |
|--|------------------------|
| 1. nikot <small>f</small> ik | I slept. |
| 2. kot <small>f</small> ik i <small>ʃ</small> olul | His child slept. |
| 3. tijuli | You live. |
| 4. juli mosiwal | Your wife lives. |
| 5. net <small>ʃ</small> lamat <small>f</small> iltia | He informs me. |
| 6. kilamat <small>f</small> iltik nosiwal | He informed my wife. |
| 7. tiwehkawa | You endure. |
| 8. wehkawa not <small>ʃ</small> kawalisli | My strength holds out. |

see next slide

- | | | |
|-----|------------------------------------|--------------------------|
| 9. | nilamik | I finished. |
| 10. | lami molamat ^f tilisli | Your news ends. |
| 11. | lamik it ^f ikawalisli | His strength gave out. |
| 12. | miht ^f ikawak | He strengthened you. |
| 13. | kit ^f ikawa | He strengthens him. |
| 14. | kit ^f ikawa noʃolul | He strengthens my child. |
| 15. | kipolua | He loses it. |
| 16. | kipolua kot ^f ilisli | He loses sleep. |
| 17. | kipoluk it ^f ikawalisli | He lost his strength. |
| 18. | net ^f wililtia | He empowers me. |
| 19. | mit ^f wililtik | He empowered you. |
| 20. | kiwililtia moʃolul | He empowers your child. |
| 21. | net ^f neki | He loves me. |
| 22. | kineki julilisli | He wants life. |
| 23. | kineki isiwal | He loves his wife. |
| 24. | kinekik nowililtisli | He wanted my power. |