

Morphology

- Ling 105-

Spring 2023

Giuseppina Silvestri
(she/her)

Week 7, Class 1

Roadmap for today's class

1. Inflectional classes
2. Compounds vs phrases
3. Free forms vs bound forms
4. Clitics vs affixes
5. Lexical integrity

Inflectional classes

(Main reference: Chapter 8 of textbook)

Syntagmatic vs paradigmatic relations

two broad kinds of relations between linguistic units:

-syntagmatic

-paradigmatic

-syntagmatic: relations between units that (potentially) follow each other in speech; => relative order

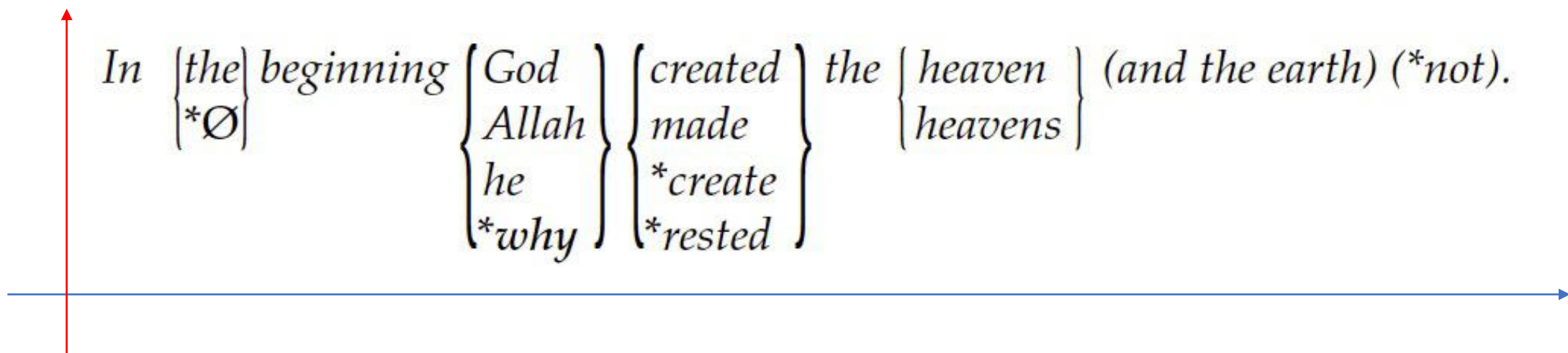
-paradigmatic: relations between units that (potentially) occur in the same slot; => items stand in contrast to one another

(1)

In $\left\{ \begin{array}{c} the \\ * \emptyset \end{array} \right\}$ *beginning* $\left\{ \begin{array}{c} God \\ Allah \\ he \\ *why \end{array} \right\}$ $\left\{ \begin{array}{c} created \\ made \\ *create \\ *rested \end{array} \right\}$ *the* $\left\{ \begin{array}{c} heaven \\ heavens \end{array} \right\}$ *(and the earth) (*not).*

Syntagmatic vs paradigmatic relations

(2)



The diagram illustrates syntagmatic and paradigmatic relations in the sentence: "In $\begin{Bmatrix} the \\ * \emptyset \end{Bmatrix}$ beginning $\begin{Bmatrix} God \\ Allah \\ he \\ *why \end{Bmatrix}$ $\begin{Bmatrix} created \\ made \\ *create \\ *rested \end{Bmatrix}$ the $\begin{Bmatrix} heaven \\ heavens \end{Bmatrix}$ (and the earth) (*not).". A vertical red arrow on the left points upwards, indicating the paradigmatic relation (vertical axis). A horizontal blue arrow at the bottom points to the right, indicating the syntagmatic relation (horizontal axis).

- **bases** are **syntagmatically** related to affixes that attach to them
- **word-forms** belonging to the same lexeme are **paradigmatically** related because they form a set of contrasting instantiations (*forms*) of the lexeme

Linear combination vs Paradigmatic dimension

Let's comment together on these two different formalisms

(3)

$$\begin{array}{c} bag \\ \left\{ \begin{array}{l} /bæg/ \\ N \\ 'bag' \end{array} \right\} \end{array} + \begin{array}{c} -s \\ \left\{ \begin{array}{l} /z/ \\ N - \\ 'plural' \end{array} \right\} \end{array} \rightarrow bags$$

(4)

$$\begin{array}{c} \left\{ \begin{array}{l} /X/N \\ 'x' \\ \text{NUMBER: SING} \end{array} \right\} \\ \updownarrow \\ \left\{ \begin{array}{l} /X_Z/N \\ 'x' \\ \text{NUMBER: PLUR} \end{array} \right\} \end{array}$$

Syntagmatic and Paradigmatic both necessary

- morphological rules need to capture the **syntagmatic dimension**
 - affixes occur in particular positions relative to their bases
- do we need to also incorporate **paradigmatic rules** into our formal description of language structure?
- some inflectional patterns seem to require a paradigmatic approach
 - paradigmatic relations are part of the architecture of the (inflectional) morphological system
- but first we must introduce the idea of the **inflection class**

Inflection class: intro

- allomorphy is a challenge for inflection
- let's focus on suppletive allomorphy

(5) Irish

NOM.SG.	GEN.PL	
<i>focal</i>	<i>focail</i>	'word'
<i>muc</i>	<i>muic-e</i>	'pig'
<i>corón</i>	<i>corón-ach</i>	'crown'

-different lexemes show different
suppletive inflectional allomorphs
=> those lexemes belong to different
inflection(al) classes

(6) Old English

INFINITIVE		3RD SG PRESENT		3RD SG PAST	
<i>dēm-an</i>	‘to deem’	<i>dēm-ð</i>	‘deemeth’	<i>dēm-de</i>	‘deemed’
<i>luf-ian</i>	‘to love’	<i>luf-að</i>	‘loveth’	<i>luf-ode</i>	‘loved’

Inflection class: definition

- Inflection class: set of paradigms that exhibit the same inflectional pattern.
- Inflection classes' size varies
 - if an inflection class has just a single lexeme, we can say that the inflection of that lexeme is irregular
- nominal inflection classes or **declensions** (Irish example)
- verbal inflection classes or **conjugations** (Old English example)

Examples of languages with multiple inflection classes

- Latin
- Ancient Greek
- Romanian

ETC.

Inflection class assignment

- Words are assigned to inflection classes based on phonological, semantic, or morphological criteria

STANDARD ARABIC plural formation

- If the singular has the phonological shape CVCCVC, then the plural has the form CaCaaCiC
- If the singular is CVCCVVC, the plural is CaCaaCiiC

(7)

SG	<i>qayṣar</i>	<i>daftar</i>	<i>dirham</i>	<i>dustuur</i>	<i>quṣṭaan</i>
PL	<i>qayaaṣir</i>	<i>dafaatir</i>	<i>daraahim</i>	<i>dasaatiir</i>	<i>qafaaṭiin</i>
	'emperor'	'notebook'	'drachma'	'statute'	'caftan'

Inflection classes and paradigms

- it can be useful to look at inflection classes from a paradigmatic perspective
- In a **word-based description**, the relation between the inflected forms of a lexeme can be seen as parallel to the relation between two derivationally related lexemes

(8) Latin 'garden'

$$\text{a. } \left[\begin{array}{l} /X\bar{i}/_N \\ 'x' \\ \text{CASE: NOMINATIVE} \\ \text{NUMBER: PLURAL} \end{array} \right] \leftrightarrow \left[\begin{array}{l} /X\bar{o}rum/_N \\ 'x' \\ \text{CASE: GENITIVE} \\ \text{NUMBER: PLURAL} \end{array} \right]$$

$$\text{b. } [/X\bar{i}/_{\text{NOM.PL}}] \leftrightarrow [/X\bar{o}rum/_{\text{GEN.PL}}]$$

Inflection classes and paradigms

- In a **word-based description**, the relation between the inflected forms of a lexeme can be seen as parallel to the relation between two derivationally related lexemes
- even in derivational morphology, we can have rules that involve more than two word-schemas

(9) English 'do'

$$\left[\begin{array}{l} /X/v \\ \text{'do}x' \end{array} \right] \leftrightarrow \left[\begin{array}{l} /Xion/N \\ \text{'action of do}ingx' \end{array} \right]$$

$$\left[\begin{array}{l} /X/v \\ \text{'do}x' \end{array} \right] \leftrightarrow \left[\begin{array}{l} /Xive/A \\ \text{'prone to do}ingx' \end{array} \right]$$

$$\left[\begin{array}{l} /Xion/N \\ \text{'action of do}ingx' \end{array} \right] \leftrightarrow \left[\begin{array}{l} /Xive/A \\ \text{'prone to do}ingx' \end{array} \right]$$

$$\left\{ \left[\begin{array}{l} /X/v \\ \text{'do}x' \end{array} \right] , \left[\begin{array}{l} /Xion/N \\ \text{'action of do}ingx' \end{array} \right] , \left[\begin{array}{l} /Xive/A \\ \text{'prone to do}ingx' \end{array} \right] \right\}$$

Inflection classes and paradigms

- In a **word-based description**, the relation between the inflected forms of a lexeme can be seen as parallel to the relation between two derivationally related lexemes
- Even in derivational morphology, we can have rules that involve more than two word-schemas
- If we adopt this formalism, we can formulate the rule in (10), which contains 10 corresponding word-schemas to describe the Latin paradigm

(10) Latin 'garden' = **PARADIGM RULE**

{[/Xus/NOM.SG], [/Xī/GEN.SG], [/Xō/DAT.SG], [/Xum/ACC.SG],
[/Xō/ABL.SG], [/Xī/NOM.PL], [/Xōrum/GEN.PL], [/Xīs/DAT.PL],
[/Xōs/ACC.PL], [/Xīs/ABL.PL]}

Stems and *Priscian* formation

- **stems** too can be related along the **paradigmatic dimension**
- lexemes can be associated with multiple inflectional stems, i.e. there is **weak** or **strong stem suppletion**

(11) Persian

INFINITIVE		PAST TENSE	PRESENT TENSE
<i>mund-æn</i>	1SG	<i>mund-æm</i>	<i>mi-mun-æm</i>
'to stay'	2SG	<i>mund-i</i>	<i>mi-mun-i</i>
	3SG	<i>mund</i>	<i>mi-mun-e</i>
	1PL	<i>mund-im</i>	<i>mi-mun-im</i>
	2PL	<i>mund-id</i>	<i>mi-mun-id</i>
	3PL	<i>mund-ænd</i>	<i>mi-mun-ænd</i>

(Mahootian 1997: 28, 236)

- All past-tense forms and the infinitive share a stem (*mund-*), and all present tense forms share another (*mun-*)

Stems and *Priscian* formation

- **stems** too can be related along the **paradigmatic dimension**
- lexemes can be associated with multiple inflectional stems, i.e. there is **weak** or **strong stem suppletion**
- All past-tense forms and the infinitive share a stem (*mund-*), and all present tense forms share another (*mun-*)
- All Persian verbs behave like **mundæen** in this respect

(12) Persian

INFINITIVE	1ST SG PAST	1ST SG PRESENT	
<i>mund-æn</i>	<i>mund-æm</i>	<i>mi-mun-æm</i>	'stay'
<i>xærid-æn</i>	<i>xærid-æm</i>	<i>mi-xær-æm</i>	'buy'
<i>mord-æn</i>	<i>mord-æm</i>	<i>mi-mir-æm</i>	'die'
<i>šekaft-æn</i>	<i>šekaft-æm</i>	<i>mi-šekaf-æm</i>	'split'
<i>šetaft-æn</i>	<i>šetaft-æm</i>	<i>mi-šetab-æm</i>	'hurry'
<i>did-æn</i>	<i>did-æm</i>	<i>mi-bin-æm</i>	'see'

(Mahootian 1997: 231–7)

Stems and *Priscian* formation

(13) Latin

INFINITIVE	PAST PASS. PART.	FUTURE ACT. PART.	
<i>laudāre</i>	<i>laudātus</i>	<i>laudātūrus</i>	'praise'
<i>monēre</i>	<i>monitus</i>	<i>monitūrus</i>	'warn'
<i>dūcere</i>	<i>ductus</i>	<i>ductūrus</i>	'lead'
<i>vehere</i>	<i>vectus</i>	<i>vectūrus</i>	'carry'
<i>mittere</i>	<i>missus</i>	<i>missūrus</i>	'send'
<i>haerēre</i>	<i>haesus</i>	<i>haesūrus</i>	'stick'
<i>premere</i>	<i>pressus</i>	<i>pressūrus</i>	'press'
<i>ferre</i>	<i>lātus</i>	<i>lātūrus</i>	'bear'

(Aronoff 1994: ch. 2)

- **Priscianic formation**: a member of an inflectional paradigm is formed from another member of the paradigm to which it need not be closely related semantically.
- Latin example (13): the form of the future-active participle is dependent upon the form of the past-passive participle.

Stems and *Priscian* formation

- **Priscianic formation**: a member of an inflectional paradigm is formed from another member of the paradigm to which it need not be closely related semantically.
- Latin example (13): the form of the future-active participle is dependent upon the form of the past-passive participle.

(14) Rule of Priscianic Formation in Latin past passive participle and future active participle

$$[/XY/_{\text{PST.PASS.PART}}] \leftrightarrow [/X\bar{u}rY/_{\text{FUT.ACT.PART}}]$$

Periphrases

- Some forms of a paradigm may be filled by multi-word phrases that express the needed concepts in a conventional way.

(15) English comparative adjectives

a. *beautifuller, *interestinger, *activer.

b. more beautiful, more interesting, more active

- comparatives in (b) are called **periphrastic**, and the phenomenon is **periphrasis**

(16) Romanian oblique

- nouns inflect for an oblique case
 - e.g. *prietenul* 'the friend (nom)', *prietenului* 'the friend (obl)', *Ana* 'Ana (nom)', *Anei* 'Ana (obl)'
- however, masculine personal names such as Petre lack an ordinary oblique case.
 - a periphrasis involving the pronoun *lui* 'him' is used = *lui Petre* 'Petre (obl)'

Words vs Phrases

- differences between words and phrases not easy to identify
- defining what a word is becomes a strenuous task
- we can apply what we know in order to identify the different properties that words and phrases exhibit
- these same differences can be used to identify word boundaries

Compounds vs Phrases

Compounds vs Phrases

- compounds may consist of two (or more) lexeme stems that are juxtaposed in a single word-form
- some languages do not allow phrases consisting of two juxtaposed lexemes of those same word-classes, the combination must be a compound

(17) segnalibri (Italian)

[indicate-books]

‘bookmark’

(17) is a compound: structurally not similar to a phrase with a similar meaning

Occasionally compounds even have a special segmental marker.

-in German interfixes *-s-* and *-en-* are used to form compounds

(18) Liebe-s-brief ‘love letter’; Schwan-en-gesang ‘swansong’

Compounds vs Phrases

- how can we distinguish a compound from a syntactic phrase when ambiguity arises?

I. semantic criterion

- in almost all compounds a dependent noun does not denote a particular referent but the entire class;

- a dependent noun in a compound is not referential but generic.

(18) piano-tuner

=> the element 'piano' refers to pianos in general.

(19) Ponapean

a. *I pahn kang wini-o.*
1SG FUT eat medicine-DEM
'I will take that medicine.'

b. *I pahn keng-wini.*
1SG FUT eat-medicine
'I will take medicine.' (Lit.: 'I will do medicine-taking.')

(Rehg 1981: 209–14)

Compounds vs Phrases

- how can we distinguish a compound from a syntactic phrase when ambiguity arises?

I. semantic criterion

- in almost all compounds a dependent noun does not denote a particular referent but the entire class;
- a dependent noun in a compound is not referential but generic
- *however*, generic interpretation is not a sufficient criterion by itself.
- a dependent noun in a noun phrase need not necessarily be referential!

(20) German Haus aus Holz (phrase)

‘house from wood’

=> Holz ‘wood’ can be just as generic as in Holzhaus ‘wood house’ (compound)

- we cannot conclude that the expression is a compound just because a dependent noun is generic.
- **But**, conversely, if a dependent noun is referential, we can be fairly certain that the expression is a phrase and not a compound.

Compounds vs Phrases

II. **Phonological criterion:** stress

- In English, each word has one main stress
- main stress on only one member of a compound-like expression suggests that it is a word

(21) a. *góldfish*
báckdròp
Whíte Hòuse

b. *góld médal*
báckstáirs
whíte kníght

III. **Morphological criterion**

- English: *brother-in-law* vs *brother-in-laws*

Compounds vs Phrases

IV: **Syntactic criterion**: separability

-phrases are often separable, whereas compounds are inseparable

- Hausa N–N compounds

- adjective insertion: compound is inseparable, whereas phrase is separable

- (22) a. *gida-n-sauroo* *bàbba* (**gidaa bàbba na sauroo*)
house-REL.M-mosquito big
'big mosquito net'
- b. *gidaa* *bàbba* *na* *Muusaa*
house big REL.M Musa
'Musa's big house'

(Newman 2000: 109)

Compounds vs Phrases

V: **Syntactic criterion**: **expandability** of the dependent element

-dependents in compounds cannot generally be expanded by modifiers such as adjectives or adverbs

- (23) a. *kingmaker* vs **illegitimate kingmaker*
(?)‘someone who makes an illegitimate king’

- In compounds, the head noun cannot be replaced by an anaphoric pronoun

- (24) a. *My aunt has one gold watch and three silver ones*
(i.e. three silver watches).
- b. **My aunt knows one goldsmith and three silver ones*
(i.e. three silversmiths).

Compounds vs Phrases

VI: **Syntactic** criterion: ellipsis

- one of two identical elements in coordinated phrases can be optionally left out
- the same cannot happen in compounds

- (25)
- a. *Large fish and small fish were mistakenly placed in the same tank.*
 - b. *Large Ø and small fish were mistakenly placed in the same tank.*
-
- a. *Flying fish and small fish were mistakenly placed in the same tank.*
 - b. **Flying Ø and small fish were mistakenly placed in the same tank.*

Free forms vs bound forms

Free forms vs Bound forms

(26) French pronouns

a. *lui* 'he' (free form)

b. *il* 'he' (bound form)

- bound forms used in normal subject + verb constructions

(27) je=joue 'I play' / tu=joues 'you play' / il=joue 'he plays'

- when the pronoun is topicalized, the free form is used

(28) moi, je=joue 'as for me / I play', not *je, je=joue

- in coordination, the free form is used

(29) moi et toi jouons 'you and I play', not *je et tu jouons

- bound form cannot be used when the pronoun is separated from a viable host and/or in a position that requires sentential stress
- cross-linguistically, free forms thus exhibit more syntactic freedom of movement, and movement tests like clefting and topicalization can be useful to distinguishing free forms from bound forms.

Free forms vs Bound forms

cross-linguistically, free forms thus exhibit more syntactic freedom of movement, and movement tests like clefting and topicalization can be useful for distinguishing free forms from bound forms

(28) Italian demonstrative ‘quel / quello’

- a. quel tavolo è rotto
that.MSG table.MSG is broken.MSG
‘that table is broken’

- b. il tavolo rotto è quello / *quel
the.MSG table.MSG broken.MSG is that.MSG
‘the broken table is that one’

Morphology Lab 13

- after consulting WALs, answer the following questions

<https://wals.info>

- 1) how are the causative constructions expressed in the world's languages?
- 2) can you give an example of each type you find?
- 3) what is, in your own word, a causative construction?

Clitics vs affixes (next time)

Lexical integrity
(next time)

I will see you Thursday 5/18:
what can we do in the meanwhile?

- review the lecture slides
- do reading from the textbook
 - chapters 8 and 9

STAY SAFE