

Online Lecture N° 4

Level: Master II

Specialty: Language Sciences

Module: Analysis of Linguistic Levels

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Part Two

II. Morphological Level

2.1. Free Morphemes

2.2. Bound Morphemes

2.3. Morphological description

III. Grammatical Level

3.1. Properties of Generative Grammar

3.2. Syntactic Description

3.3. Phrase Structure Rules

3.4. Transformational Rules

IV. Semantic Level

4.1. Conceptual Meaning

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(Practice & Testing)

II. Morphological Level

2.1. Morphology and morphemes.

2.2. Free morphemes and Bound morphemes

2.2.1. Free Morphemes

2.2.2. Bound Morphemes

2.3. Morphological description.

2.1. Morphology and phonemes

Both concepts deal with form and the elements constituting the whole, language. Clear and concise literary and conceptual definitions are provided to define the scope and manifestations of the terms as follows:

Morphology: literally, means the *study of forms* → an investigation type that analyse all the basic elements which are used in Language. In other terms, a way of looking at linguistic forms in different Language or investing the elements of a message, is generally known as ***morphology***. And yet, what we have described as “elements” in the form of a linguistic message is more technically known as **morphemes**.

Morphemes: word-forms consist of a number of elements. For example, English word-forms such as (talks-talker-talked-talking) must consist of one element “talk” and a number of other elements such as (s-er-ed-ing). All these elements are described as morphemes.

*definition: So, a morpheme is a minimal unit of meaning or grammatical function

*exemplification: e.g., 1-“reopened” consists of 3 morphemes

1) - minimal unit of meaning is (open)

2) - minimal unit of meaning is (re) → meaning “again”

3) - minimal unit of grammatical function (ed) → indicating (past tense)

e.g., 2-“tourists” 3 morphemes

1) - minimal unit of meaning (tour)

2) - minimal unit of meaning (ist) → a person who does s. thing

3) - minimal unit of gram. Function(s) → indicating “plural”

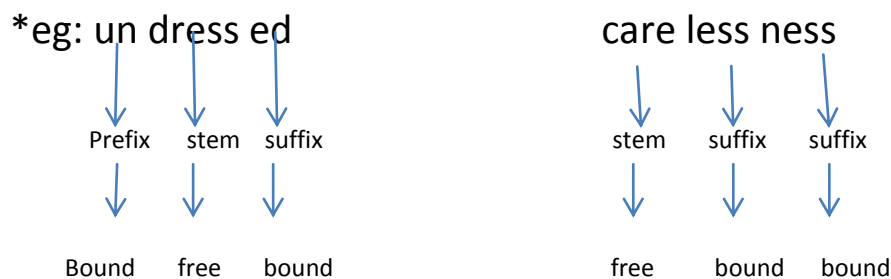
2.2. Free and Bound Morphemes

The examples given (reopened-tourists) can give a broad distinction between two types of morphemes:

- a- Free morphemes: standing by themselves as single words. (open-tour)
- b- Bound morphemes: typically attached to another form (er-ist-affixes-ed-s)

So, all affixes in English are bound morphemes.

The free morphemes can be generally considered as the set of separate English word-forms, however, when used with bound morphemes, the basic word-form (root) is technically known as “stem”



*exceptions: receive reduce repeat

We may recognize “re” as bound morpheme but “ceive- duce- peat” not as free morphemes

So, there are other considerations ad yet, a variety of technical terms:

Bound stems&free stems



2.2.1. Free Morphemes: There are two categories

- a- **Lexical morphemes:** A set of ordinary nouns, adjectives, adverbs and verbs containing a meaning → Lexical morphemes
- b- **Functional morphemes:** A set of functional/grammatical words such as conjunctions, prepositions, articles, pronouns, etc., having a function in the sentence.

Note: The free-lexical morphemes are said to be open-class of words because we can easily add new lexis to the language. However, free-functional morphemes are rather treated as closed class of words.

2.2.2. Bound Morphemes

The set of affixes (all bound morphemes) can be divided into 2 types:

- a. Derivational morphemes:** These are used to make new words in the language and are often used to make words of a different grammatical category from the stem (root).

Eg: good (adj) +ness = goodness (noun)

Care (noun) +less/ful =careful (adj) or “careless”(adj.)

The list of derivational suffixes (morphemes) is exhibited below:

Suffixes: ish (foolish), ly(badly), ment (payment)

Prefixes: re (rewrite), pre (determine), ex(appropriate), dis(connect),co (operate), un (lock).....

b. inflectional morphemes: not used to produce new words they are used to indicate aspects of grammatical function of a word.

i.e. (singular vs. Plural) - (past tense/present)- (comparative/possessive).

There are 8 inflectional morphemes in English:

Noun+ **s** (possessive) **s** (plural)

Verb +**s** (present3rd person sing) **ing** (gerund), **ed** (past tense), **en** (verb (pp.))

Adj + **est** (superlative), **er** (comparative,*)

Derivational vs. Inflectional

It is very necessary to mention the difference, in that:

*An inflectional morpheme never changes the grammatical category of a word

Eg: old/older (ad) → both

*A derivational morpheme can change the grammatical category of a word.

Eg: teach (v) +er → teacher (noun)

Note1: er (comparative) → old English: ra

Er (a person/ an object that...) → old English: ere



Note2: When both attached to the same word:

Word+ derivation+ inflection

Eg: teach + er + s = teachers



Stem derive inflect

2.3. Morphological Description

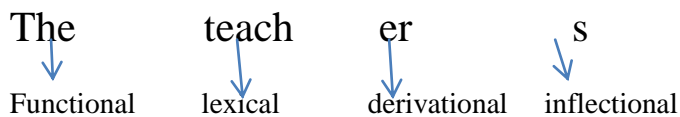
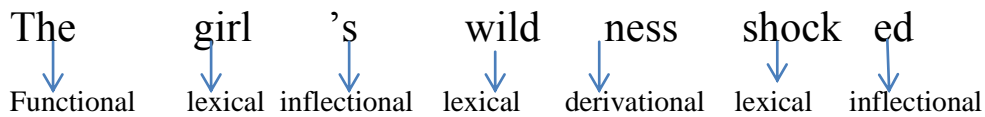
Remember morphemes categories

Morphemes	Free	Lexical
		Functional
	Bound	Derivational
		Inflectional

From the table above, the different categories of morphemes are explicitly exhibited to serve another time for a clear display of a sentence's components in terms of morphological description.

Look now:

The girl's wildness shocked the teachers.



***Problems in morphological description**

Exercise1: True or false

- 1) Discreteness refers only to the difference in the sounds of the language.
- 2) Arbitrariness means that the linguistic signs are distinct from their meaning.
- 3) The number of sentences produced by each person is finite.
- 4) Morphology is concerned with the correctness and meaning of sentences.
- 5) A word may comprise more than one morpheme.

Exercise2: Classify the morphemes according to their type. (Draw a table):

The director- payer- walking- slowly- she sings- at school- arrangements- Cleaning and washing- the largest.

Exercise3: Write the morphological description of the following sentences:

- 1) They waited impatiently.
- 2) She dislikes doing the housework
- 3) It is the cheapest car
- 4) It rains heavily
- 5) He will stay at home

III. Syntactic Level

3.1. Properties of Generative Grammar

3.2. Syntactic Description

3.3. Phrase Structure Rules

3.4. Transformational Rules

The word ‘syntax’ came originally from Greek and literally meant ‘setting out together’ or ‘arrangement’. This is to say that syntax is defined as the study of structure and ordering of components within a sentence or simply called: syntax of the language.

Generative Grammar

Attempt to produce a particular type of grammar have developed since the 1950’s from the work of the American Linguist Noam Chomsky.

It was mainly meant to provide a very explicit system of rules specifying what combinations of basic elements would result in ill-formed sentences. This explicit system of rules, proposed, has much in common with mathematics. This mathematical point of view helps to explain the meaning of the term generative.

Eg: Algebraic expression: $3x+2y$

}	\rightarrow	$=35$	\rightarrow	$x=5$	$y=10$
	\rightarrow	$=8$	\rightarrow	$x=2$	$y=1$
	\rightarrow	$=15$	\rightarrow	$x=3$	$y=3$

The above probable results of (35. 8. 15.....), are directly generated from applying the explicit rules and it will follow an endless set of results. So, if the sentences of a language can be seen as a comparable set, i.e. there may be a set of explicit rules called generative grammar which yield those sentences.

3.1. Properties of generative Grammar

In this case, the grammar will generate (“generative”) all the well-formed syntactic structures (e.g., sentences) of the language and fail to generate any ill-formed structures. This is the “all and only” criterion (i.e. all the grammatical sentences and only the grammatical sentences).

The grammar will have a finite (limited) number of rules, but will be capable of generating an infinite number of well-formed structures. In this way, the productivity of language (i.e. the creation of totally novel, yet grammatical sentences) would be captured within the grammar.

The rules of grammar will also need the crucial property of **recursion**, that is, the capacity to be applied more than once in generating a structure:

E.g.1: a- Relative connection (that chased the cat- that killed the rat)

E.g.2: b- Specifying Location (the book was on table, near window, in hallway)

Note: In these grammar facts:

- 1) - a sentence can have another sentence inside it or a phrase can have a phrase of the same type inside it (place)
- 2) - some superficially distinct sentences are closely related (place) and some superficially similar sentences are in fact distinct (relative connection: same structure but different meaning).

Deep & Surface structure

Two superficially distinct sentence structures

{	-Charlie broke the window	}	Traditional terminology
	-The window was broken by Charlie		active vs. passive

The distinction between them is a difference in their

a. **Surface structure** (syntactic form)

However, this difference in superficial form disguises the fact that the two sentences are very closely related, even identical; this level underlying similarity is called

b. **Deep Structure**

The deep structure is an abstract level of structural organization. So, grammar must be capable of showing how a single underlying abstract representation can become different surface structures

Eg: Direct vs. Indirect → active vs. Passive → Comparative vs. Superlative.

Nevertheless, some other times the meaning is rather confused within a common structure, be it deep or surface. This creates ambiguity

c. **Structural Ambiguity**

Two different deep structures:

{	a) - Annie had an umbrella and she whacked a man with it
	b) - Annie whacked a man and the man happened to be carrying an umbrella

At the same surface structure → a) or b)

Annie Whacked a man with an umbrella

However, this sentence is structurally ambiguous (2 underlying interpretations having two different representations in the deep structure.

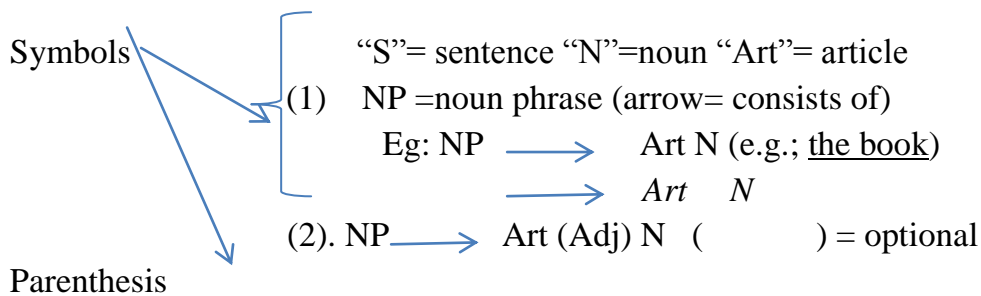
Eg: I shot an elephant in my pyjamas. (How he got in!!?)

Different Approaches

This area of linguistic investigation is notorious.

- a) Primacy of syntactic correctness
- b) Necessity of semantic coherence

3.2. Syntactic Description



description

The green book { round brackets }

i.e. NP consists of an obligation article, obligatory noun and an optional adjective

(3)braces

{ } Or
Curly brackets

Art N {
(NP) → pronoun
proper noun }

It shows that only one element enclosed is chosen.

Eg: the woman or Cathy or she

Art N proper noun pronoun

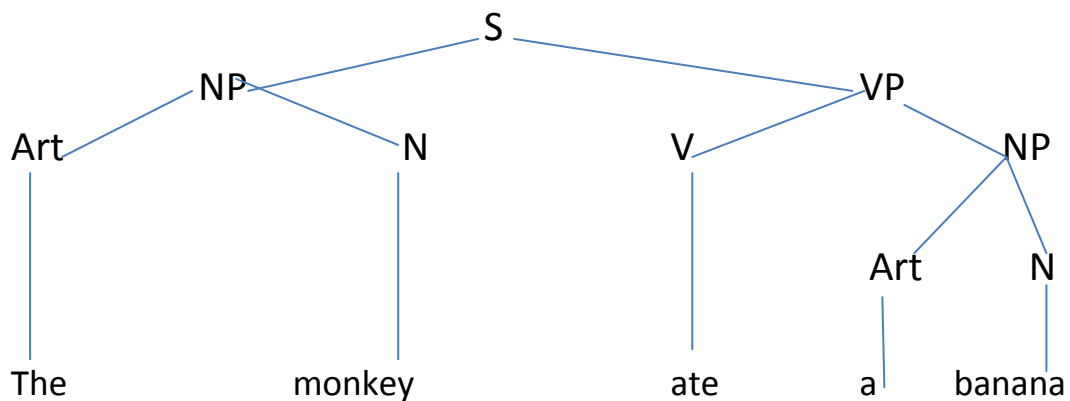
Symbols

S sentence	N noun	Pro pronoun
PN proper noun	V verb	Adj adjective
Art article	Adv. adverb	Prep preposition
NP Noun phrase	VP. verb phrase	PP prepositional phrase

- Un grammatical sequence consists of →
() optional constituent

- { } One and only one of these constituents must be selected.

Labelled Tree Diagrams



3.3. Phrase Structure Rules

The above tree-diagram can be viewed in two different ways:

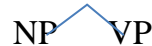
-1st view-a static representation as shown above.

-2nd view- a dynamic format as an alternative that can generate not only that one sentence, but a very large number of sentences with similar structures. This view is very appealing since it enables us to generate a large number of sentences.

Illustration

With only a small number of rules, called “Phrase Structure Rules”

*Instead of: $S \longrightarrow \text{we can use}$



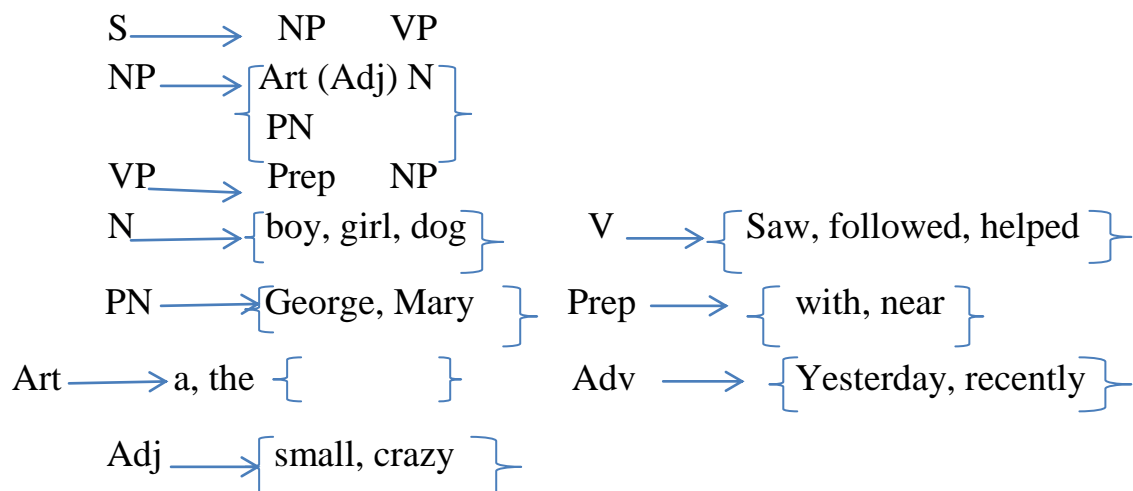
$S \longrightarrow \text{NP/VP}$

The rule is then read as: (a sentence consists of a noun phrase followed by a verb phrase)

In addition to generating structures, we can also have lexical rules

eg: $N \longrightarrow (\text{boy, girl, dog...})$

*Phrase structure rules which can be used to generate a large number of English sentences:



So, these rules will generate the grammatical sentences below

1. The girl followed the boy
2. A boy helped the dog
3. The dog saw a girl
4. Mary helped George recently
5. George saw a dog yesterday
6. A small dog followed Mary
7. The small boy saw George with a crazy dog recently

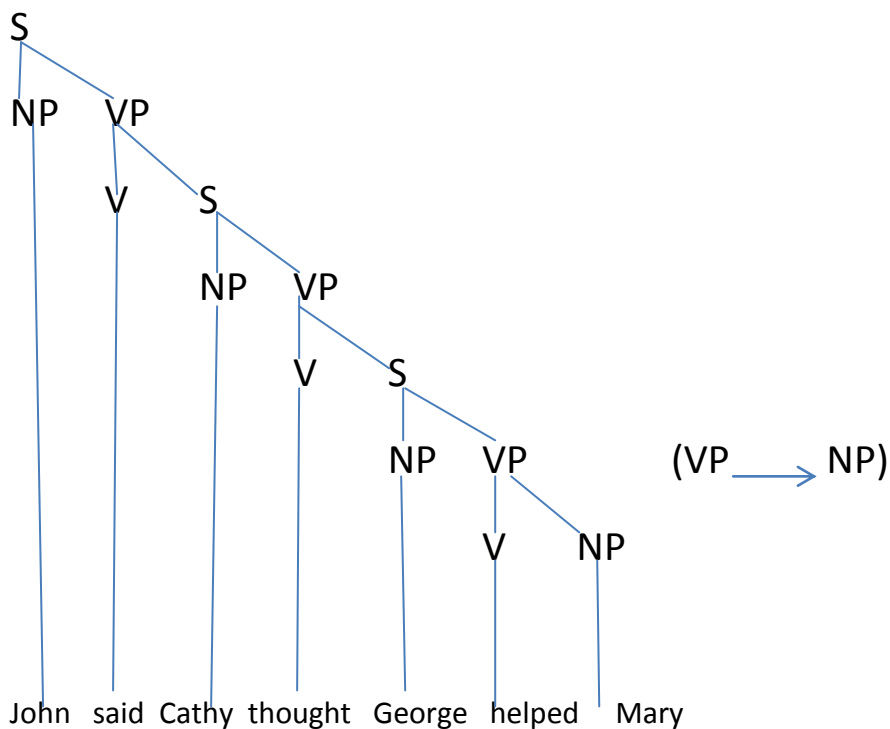
Phrase Structure of more Complex sentences

The essence of recursion is to be able to repeat some symbols on the right side of the arrow: example

- a- Mary helped George
- b- Cathy thought Mary helped George
- c- John said Cathy thought Mary helped George

*In here, to capture these structures in our rules we need to add:

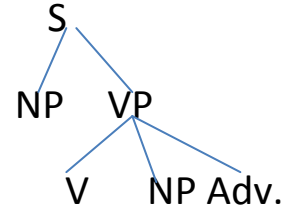
Additions V → said { thought } to rules
 PN → { Cathy, John } to lexical rules
 VP → VS to recursive rules (very crucial)



3.4. Transformational Rules

One other feature of our phrase structure rules, we will generate all sentences with fairly fixed word order of the constituent.

Case (A) eg: Adverbs: always come at the end



George helped Mary yesterday
↓
Adv.

But: Eg (2) Adverbs: at the beginning

Yesterday George helped Mary

→ We need: Transformational rules

Case (B) { i- Doobie picked up the magazine
ii- Doobie picked the magazine up

In this sentence, we have a verb-particle: V Vb → part

(Practice & Testing)

Practice n: 1(syntax & morphology)

Say if these statements are true or false. Correct the false one:

- a) Adverbs are composed of one free morpheme.
- b) Functional morphemes indicate aspects of the grammatical function.
- c) The verb “rescue” consists of only one morpheme.
- d) Some of the adverbs are composed of one free morpheme
- e) Generative grammar focuses on the correctness of the syntactic form of sentences.
- f) All inflectional morphemes are related to the identification of tenses
- g) Linguistics deals only with the study of grammar which is considered as a reflection on language.

Practice n: 2 (syntax) & morphology)

Give the morphological description of the following sentence

- ✓ A full description of English morphology will have to take account of both historical influences and the effect of borrowed elements.
- ✓ -Language plays an important role in the proceedings of the greatest international political gatherings
- ✓ - Some pupils gathered data from their daily interactions and analyzed them with the help of their teachers
- ✓ - The importance of poetry goes beyond the usual literary works of the ancient times

Practice n°03 (syntax)

Represent the following sentences in a tree diagram

- a. The thief broke the window down.
- b. John saw a star with a telescope.
- c. He said his brother supposed his friend said they bought a car
- d. He took a bus to reach the place of the appointment

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