Mustansiriyah University

College of Arts

Department of English Language and Literature

4th Year Linguistics

Main Textbook: The Study of Language, 6th Edition (George Yule, 2017)

Lecture Title: The study of Grammar

Aim: this series of lectures has two main aims: it explores how sentences can be analyzed into its component parts, and how this type of analysis can be represented.

The Theory of Syntax:
- Any theory of syntax should adhere to the "all and only" criterion. This means that syntactic analysis must generate all the grammatically correct phrases and sentences and only those grammatically correct phrases and sentences in whatever language we are analyzing. In other words, if we write rules for the creation of well-formed structures, we have to check that those rules, when applied logically, won't also lead to ill-formed structures.

- Additionally, any theory of syntax should have a small and finite (i.e. limited) set of rules that will be capable of producing a large and potentially infinite (i.e. unlimited) number of well-formed structures.

Generative Grammar and Syntactic Analysis:
- Generative Grammar is a theory that includes a small set of rules which enables us to producing an infinite number of well-formed structures. Generative Grammar also enables us to reveal basis of two other phenomena: first, how some superficially different sentences are closely related and, second, how some superficially similar sentences are in fact different.

- In Generative Grammar, we distinguish between two levels of analysis: surface structure and deep structure. Surface structure is the actually produced sentence. Deep structure, on the other hand, is the abstract structure that communicates the content of the sentence and highlights the logical relations between its different parts.

- The distinction between surface and deep structure has two analytical advantages. It first enables us to explain how some superficially different sentences are closely related in terms of meaning. Therefore, the difference between an active voice sentence and its passive voice equivalent can be nicely captured by the distinction between surface and deep structures:

i.   Charlie broke the window.
ii.   The window was broken by Charlie.

These two sentences have different surface structures, that is, the different syntactic forms they have as individual English sentences. However, this superficial difference in form disguises the fact that the two sentences are very closely related in terms of meaning, even identical, at a deeper level.

- Secondly, the distinction between surface and deep structure also allows us to work out structural ambiguities in certain sentences. Structurally ambiguous sentences are sentences with different deep structures but similar surface structures. Thus, a sentence like "Annie bumped into a man with an umbrella" can have two potential interpretations- that is, different deep structures, as shown below:
  i.   Annie had an umbrella and she bumped into a man with it.
  ii.   Annie bumped into a man and the man happened to be carrying an umbrella.

- As pointed out earlier, any theory of syntax should have a small and finite (i.e. limited) set of rules that will be capable of producing a large and potentially infinite (i.e. unlimited) number of well-formed structures. On the face of it, this sounds paradoxical. The question now is: how is that possible?

- One answer for this is the process that we call recursion is the possibility of repeatedly reusing the same construction, so that there is no fixed limit to the length or number of structural sequences. Therefore, when we produce a sentence such as "Cathy knew that Mary helped George", we do so with the sentence "Mary helped George inside it". And those two sentences can be generated inside another sentence such as "John believed that Cathy knew that Mary helped George". In principle, there is no end to the recursion that would produce ever longer versions of complex sentences with this structure.

Representing Syntactic Analysis:

- One of the most common ways to create a visual representation of syntactic analysis is through tree diagrams. A **tree diagram** is an annotation technique used to represents how sentences can be analyzed into its constituents. It is called as such because its branches resemble the branches of an upside-down tree where successive layers of constituents are shown. A family metaphor is used to refer to the intersections (nodes) on a tree diagram: mothers, daughters and sisters.

- The symbols used in tree diagram analysis are as follows:

$$NP \rightarrow Art\ N$$
$$NP \rightarrow Pro \qquad NP \rightarrow \begin{Bmatrix} Art\ N \\ Pro \\ PN \end{Bmatrix} \qquad NP \rightarrow \{Art\ N,\ Pro,\ PN\}$$
$$NP \rightarrow PN$$

It is important to remember that, although there are three constituents inside these curly brackets, only one of them can be selected on any occasion.

The list of common symbols and abbreviations is summarized here.

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

*	ungrammatical sentence
→	consists of / rewrites as
( )	optional constituent
{ }	one and only one of these constituents must be selected

- To generate an infinite number of structures in generative grammar, we use needs three different types of rules:

    i. **Phrase Structure Rules**: The rules stating that the structure of a phrase of a specific type consists of one or more constituents in a particular order. We can use phrase structure rules to present the information of the tree diagram in another format.

    ii. **Lexical Rules**: the rules that specify which words can be used for constituents generated by phrase structure rules, in order to turn phrase structure into recognizable English.

    iii. **Movement Rules**: the rules that govern movement of one part of the structure to a different position to generate different structures with different functions. Movement rules can for instance generate a passive voice sentence out of an active voice sentence, or a question out of a declarative sentence. NP Aux VP ⇒ Aux NP VP is an example of a movement rule which explains how a question out of a declarative sentence.

    iv. **Complement phrase rule**: a structure such as a sentence introduced by a complementizer (that) to complete another structure . Thus, a structure such as "Mary helped George" can be used to complete a construction beginning with a structure such as "Cathy knew".