**CHAPTER EIGHT SYNTAX**

**Syntax** is concerned with the structure and ordering of components within a sentence. The word “syntax” comes originally from Greek and literally means “a putting together” or “arrangement.”

**Syntax**

In the analysis of the syntax of a language, we adhere to the “all and only” criterion. This means that the syntactic analysis must account for all the grammatically correct phrases and sentences and only those grammatically correct phrases and sentences in whatever language we are analyzing. For example, in English a preposition (*near*) is placed before a noun (*London*) to form a prepositional phrase (*near London*) which is a well-formed structure.

Generative Grammar affirms that with a small finite (i.e. limited) set of rules we are capable of producing a large and potentially infinite (i.e. unlimited) number of well-formed structures. That is, the aim of generative grammar is to “generate” or produce unlimited sentence structures including the novel ones.

**Deep and Surface Structure**

The two different sentences, (a.) *active* focusing on the agent of the action **Charlie** and *passive* focusing on **the window** and what happened to it:

1. **Charlie broke the window.**
2. **The window was broken by Charlie.**

The distinction between them is a difference in their surface structure, i.e. the different syntactic forms they have as individual English sentences. Yet, in their underlying level, the two sentences are very closely related, even identical. They both nearly carry the same meaning.

The ***deep structure*** is an abstract level of structural organization in which all the elements determining structural interpretation are represented.

**Structural Ambiguity**

In addition, a grammar must be capable of showing how a single underlying abstract representation can become different surface structures. Consider

* **Annie bumped into a man with an umbrella**

This sentence expresses more than one interpretation. One expresses the idea that “*Annie had an umbrella and she bumped into a man with it*.” The other expresses the idea that “*Annie bumped into a man and the man happened to be carrying an umbrella*.” These two different versions of events can actually be expressed in the same surface structure form. This sentence provides an example of **structural ambiguity**. It has two distinct underlying interpretations that have to be represented differently in deep structure.

*Phrases* can also be structurally ambiguous, as in expressions like *small boys and girls*. The underlying interpretation can be either *“small boys and (small) girls” or “small boys and (all) girls*.” The syntactic analysis has to be capable of showing the structural distinction between these underlying representations.

**Recursion**

**Recursive rules** have the capacity to be applied more thanonce in generating a structure. For example, one prepositional phrase describing location (*on the table*) is used in the sentence *The gun was on the table*. We can also repeat this type of phrase, using different words (*near the window*), and (*in the bedroom*). So, in order to generate a sentence such as *The gun was on the table near the window in the bedroom*, we must repeat the rule that creates a prepositional phrase over and over again.

We can also put sentences inside other sentences. For example, 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.

**Tree diagrams**

One of the most common ways to create a visual representation of syntactic structure is through **tree diagrams**. A tree diagram is used to capture the hierarchical organization of those parts in the underlying structure of phrases and sentences. Consider the tree diagram for the sentence: ***The girl saw a dog****.*

**Phrase Structure Rules**

This second approach is **phrase structure rules** which enable us to generate a very large number of sentences with what look like a very small number of rules.

**S → NP VP**

**NP → {Art (Adj) N, Pro, PN}**

**VP → V NP (PP) (Adv)**

**PP → Prep NP**

**Lexical rules**

Phrase structure rules generate structures. In order to turn those structures into recognizable English, we also need lexical rules that specify which words can beused when we rewrite constituents such as:

***PN → {Mary, George} Pro → {it, you}***

***N → {girl, dog, boy} V → {followed, helped, saw}***

***Art → {a, the}***

Relying on these rules, we generate the grammatical sentences shown below as (1-4), but not the ungrammatical sentences shown as (5-8).

***(1) A dog followed the boy. (5) \*Dog followed boy.***

***(2) Mary helped George. (6) \*The helped you boy.***

***(3) George saw the dog. (7) \*George Mary dog.***

***(4) The boy helped you. (8) \*Helped George the dog.***

**Movement rules**

One essential rule of transformational grammar is movement. For example, in making the question, we move one part of the structure to a different position.

***You will help Mary → Will you help Mary?***

This movement can be represented as:

***NP Aux VP ⇒ Aux NP VP***

Using this simple rule, we can also generate these other questions:

***Can you see the dog? Should George follow you?***

***Could the boy see it? Would Mary help George?***

**Complementizer**

The word *that* in *John believed that Cathy knew that Mary helped George*, is used as a complementizer (C). The role of *that* as a complementizer is to introduce a complement phrase (CP).