A Quick Introduction to ...SYNTAX!

<u>Syntax</u> – the level of the grammar that represents a person's knowledge of the structure of phrases and sentences.

Here is a syntactically-correct English sentence: *"The boy the girl kissed sat down"*
Note this sentence has complicated <u>word-order information</u> that helps us determine who did what to whom.

Here is another sentence: *"Colorless green ideas sleep furiously"*
(Note: this sentence makes no semantic sense, but it is syntactically well-formed)

In English, <u>word order</u> is an important cue to grammatical relations; in other languages <u>case marking</u> plays a bigger role. "Case marking" refers to word endings or morphemes which denote <u>grammatical relations</u>.   In Japanese, "John gave Bill the book" can be expressed:

John ga Bill ni hon o agemashita.   "John [as for] Bill [to] book [object] give [past]"
or *Bill ni John ga hon o agemashita*   "Bill [to] John [as for] book [object] give [past]"

or *Hon o Bill ni John ga agemashita* … and so forth!

In Japanese, word order doesn't matter as long as the verb appears at the end of the sentence.

How does syntax build up? We first start with units known as "syntactic constituents" (or "categories"). For example, the constituent "noun phrase" (NP) could be:

dog
the dog
the big dog
the big hairy dog   etc.

Note, such word combinations do not yet constitute a sentence. To form a "sentence" there must also be a "verb phrase (VP)," e.g.:

eats
happily eats

Sentences then build up in a hierarchical fashion. According to the early theory of <u>Tranformational Generative Grammar</u> (Chomsky and followers, 1960s) simple constituents are built up (or "<u>generated</u>") by <u>phrase structure rules</u>. For instance,

NP à (determiner) (adj.) Noun

..which reads " a noun phrase consists of an optional determiner, optional adjectives, and a Noun"

Constituents can also be represented in a <u>phrase structure tree</u>. For example, a noun phrase could look like:
                    NP

det.   adj.   noun
 | | |
the   *big*   *dog*

Phrases are linked to form a simple sentence (known as the <u>deep structure)</u>. The deep structure is presumed to be close to the semantic level of processing. According to early TG theory, deep structures are then mapped to
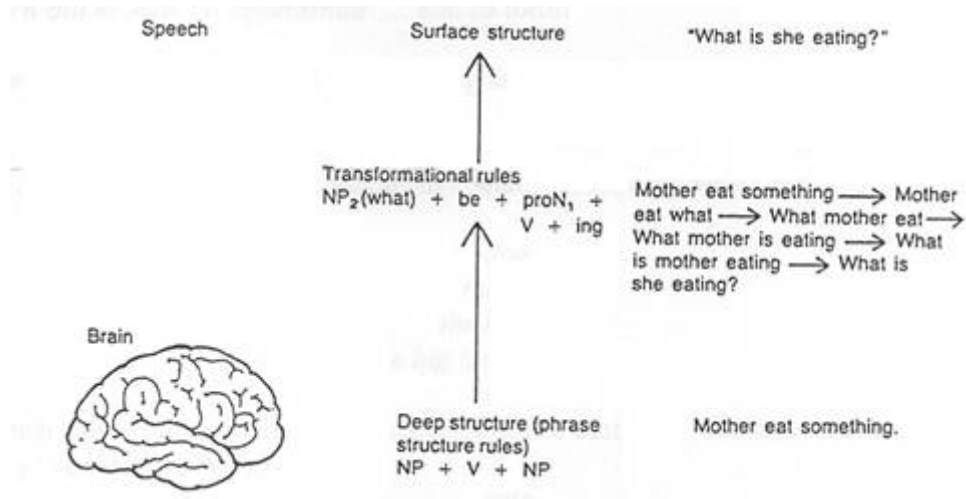
surface structure (i.e., closer to actual speech output) after undergoing a series of possible transformations. Transformations add syntactic information. Two examples:

	DS		SS
"passive:"	*The lion chased the tiger*	à	*The tiger was chased by the lion*
"negation"	*The tiger was harmed*	à	*The tiger was not harmed*

The proposed process can be summarized as follows…

Speech   Surface structure   "What is she eating?"

Transformational rules
NP$_2$(what) + be + proN$_1$ + V + ing

Mother eat something ⟶ Mother eat what ⟶ What mother eat ⟶ What mother is eating ⟶ What is mother eating ⟶ What is she eating?

Brain

Deep structure (phrase structure rules)
NP + V + NP

Mother eat something.

Why should we care about syntax? First, this aspect of language organization has been claimed to be the unique difference between humans and animals. Although animals can imitate human sounds, manipulate meaning, and even display "dialects" in their calls, it is not certain they can combine lexical items in a truly "syntactic" manner. Also, by studying the universal patterns of syntax found in the world's languages we can learn something about the mathematical and combinatorial properties of human language.

Here's another important distinction stressed by Chomsky :

Competence -- what an idealized speaker/hearer knows about his or her language (= language knowledge)

Performance -- language as it is produced or heard in the real world (= actual language use)

Katz, Aphasiology