

Syntactic Knowledge

1. **Word Order.** As a speaker of English, you know how the parts of a sentence should be arranged. For example, you know that, of the 6 logical possibilities in (1), only (a&f) are allowed in English:

- (1) a. John saw Bill. (SVO)
b. *John Bill saw. (SOV)
c. *Saw Bill John. (VOS)
d. *Saw John Bill. (VSO)
e. *Bill saw John. (OVS)
f. Bill, John saw. (OSV) (with comma after Bill)

If you speak Japanese, however, then you know that the orders corresponding to (2b), (2f), are possible, but the others are not. This is illustrated by the Japanese examples below:

- (2) a. *John-ga mit-a Bill-o. (SVO)
John-subj see-past Bill-obj
b. John-ga Bill-o mit-a. (SOV)
c. *mit-a John-ga Bill-o. (VSO)
d. *mit-a Bill-o John-ga. (VOS)
e. *Bill-o mit-a John-ga. (OVS)
f. Bill-o John-ga mit-a. (OSV)

Arabic, Harami, Chamorro, Irish and many other languages differ from English and Japanese and can allow the orders represented by (1a) (SVO order) and (2b) (SOV), and probably many other arrangements. However, in Latin and Sanskrit, we can have all the six logical possibilities:

- (3) a. amilcus caecilium salultat.
friend Caecilium greets
'The friend greets Caecilius.'

- b. caecilium amilcus salultat.
- c. amilcus salultat caecilium.
- d. caecilium salultat amilcus.
- e. salultat amilcus caecilium.
- f. salultat caecilium amilcus.

The constraint on word order that is part of your knowledge of English is further illustrated by the examples below:

- (4) a. a gray-haired student of physics
b. a physics student with gray hair
c. a gray-haired physics student
d. a student of physics with gray hair
e. *a physics gray-haired student
f. *a student with gray hair of physics

While English is fairly liberal in allowing 4 out of the 6 possibilities in (4), Japanese and Navajo allow only the form corresponding to (4c), rejecting all other word orders.

2. Grammaticality: Your knowledge about whether a given string is a grammatical utterance in your language or not- this idea is not limited to the word order of the language, but is manifested in many other ways.

For example, regardless of the fact that it "**does not make sense**", you know that (5a) is grammatical, but (5b)-(5c) are not:

- (5) a. Colourless green ideas sleep furiously.
- b. *Sleep colourless furiously ideas green.
- c. *Furiously sleep ideas green colourless.

You can make fairly subtle judgments concerning the grammaticality of sentences, regardless of whether they have ever been heard before:

- (6) a. ??What book did you wonder why John bought?
- b. *Who did you wonder why bought the books?
- c. ??This is the book which I wonder why John bought.
- d. *This is the person who I wonder why bought the books.

3. Structure and Categories: More importantly, in the area of syntax--the subject matter of this course, anyone having competence in a language can have intuitions about the structure and categories of grammatical sentences of his/her language.

They can identify the words in an utterance, but they also can see the sentence as more than merely a linear arrangement of words. Observe the following sentences

- (7) a. John slept.
- b. John left home.
- c. The boy left home.
- d. Colorless green ideas sleep furiously.
- e. The man who was mixing it fell into the cement he was mixing.
- f. The quick fox jumps over the brown lazy dog.
- g. The old men and women left early yesterday.
- h. John talked to the man in blue and the woman in red.

Regardless of the number of words within a grammatical sentence, speakers of English generally have no problem dividing it into two "natural" sub-parts, or immediate constituents (ICs).

This is a very trivial case in (7a). But speakers also have no problem cutting the sentences (b-h) into two ICs. For example:

(7a) John | left home.

(7b) The boy | left home.

(7c) Colorless | green | ideas | sleep | furiously.

(7d) The | man | who | was | mixing | it | fell | into | the | cement | he | was | mixing .

These IC charts provide a visual representation of the speakers' intuition.

It tells that certain subparts of a sentence form natural groups to the exclusion of others.

For example, in (7b), **the** and **boy** form a constituent to the exclusion of the other words, as do **left** and **home**.

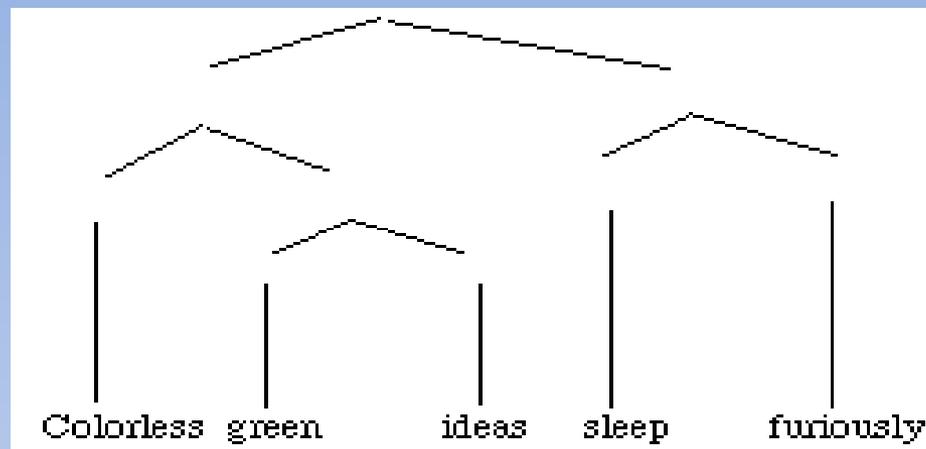
There is a closer relationship between **the** and **boy** than between **boy** and **left** at the level of lexicon and its psychological realities.

Similarly, (7c) captures the intuition that **green** is more closely related to **ideas**, than to **colourless**, than to **sleep**, etc.

These hierarchical relationships among elements are not directly represented by the linear strings in (7), but they are quite naturally expressed by these IC charts.

An equivalent which has same notational value to represent these intuitions is to use a branching tree diagram. Thus (7c) can be converted to the equivalent (7d) below:

(7d)



In addition to these intuitions about the constituency of elements within a sentence, speakers also know that the constituents of each string belong to one category (part of speech) or another.

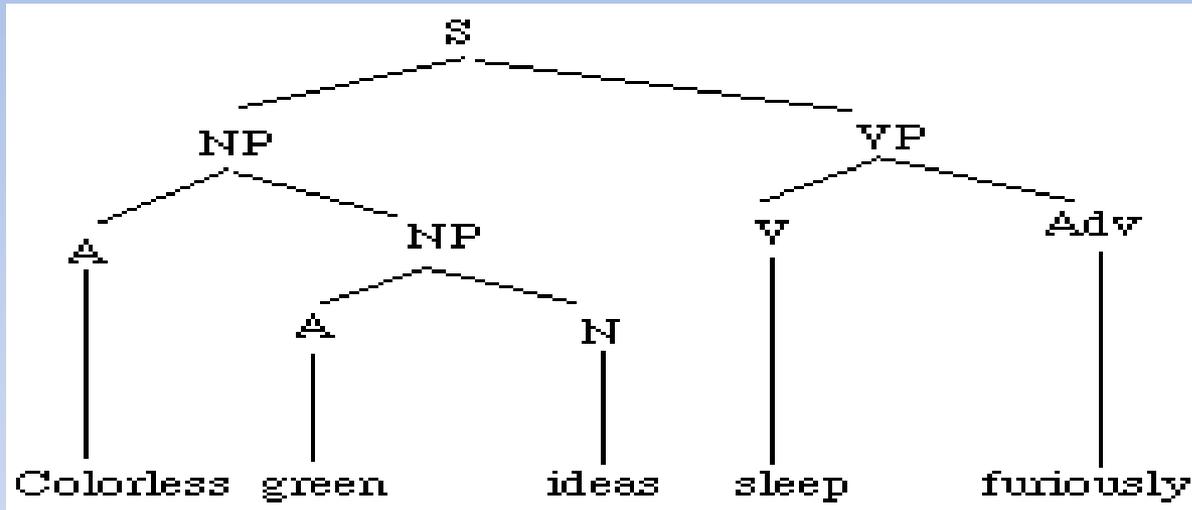
For example, the constituent in (7c) **colourless green ideas** seems to belong to the same category as the constituents **John** in (7a), **the boy** in (7b), and **the man who was mixing it** and **the cement he was mixing** in (7e), and the knowledge is that they are all Noun Phrases (NP).

On the other hand, **sleep furiously** belongs to the same category as **left home**, **fell into the cement he was mixing**, **left early yesterday**, **jumps over the brown lazy dog**, etc. and this time the knowledge that the natives have is that they are Verb Phrases (VP).

Furthermore, **colourless, green, lazy**, etc. belong to the category of an adjective (A), **sleeps, fell, mixing, left** are verbs (V), and **ideas, home, boy, man** are nouns (N).

We can encode the intuitions about both structure and category in a labelled branching tree-diagram:

(7e)



Another way to represent speakers' intuition about structures and categories is by means of labelled bracketing. The tree in (7e) can be converted to the set of labelled brackets in (7f):

(7d) [S [NP [A colourless] [NP [A green] [N ideas]]] [VP [V sleep] [Adv furiously]]].