

Week 1: Introducing... On Syntax and the meaning of life

1. Introduction

1.1 What do we study when we study syntax?

A simplified definition of syntax would say: syntax is a level of linguistic structure that mediates between meanings and sounds

At a more detailed, deep level, we would say:

- The syntax of a language tells us how to generate an infinite number of new sentences from a finite set of words (lexical items)
- Syntax – the study of the hierarchical structure of sentences in the human language – aims to answer the question what do we know when we know that a particular sentence is grammatical or ill-formed in our language? How are we able to understand and generate an infinite number of new sentences
- Syntax studies the rules that underlie sentence formation and structure; we ask which rules are universal and which are language specific?
- Syntactic theory – investigating the structure of language via **the scientific method**, that is, looking at **data**, coming up with **generalizations** about it, and explaining the generalizations by **making falsifiable hypotheses** about it; **testing the hypotheses** with more data
- Syntacticians aim to explain grammatical phenomena; they want to go above and beyond merely describing them; they NEVER tell native speakers what is the ‘right way’ to speak their language. We shall return to the distinction between **prescriptive, descriptive, and explanatory** grammar below.
- In this class, we will not be dealing with the THEORY part of syntax, but only with the DESCRIPTIVE ASPECT, which is the first and vital step in syntactic analysis. That is, to analyze language properly and arrive at an explanatory theory we first must have a good grasp on the **description of the facts**

A brief aside on what the theory of syntax deals with

- Syntax is concerned with discovering and explaining the hierarchical structure of sentences in the human language;
- Syntax is thus the study of the internal architecture of language

- In this regard, we can say that the grammar we aim to achieve is *generative and explanatory*. We want to deduce the mechanism by which we can generate new grammatical sentences in a language. [*But, as I mentioned above, this is not going to be the topic of our class. For more details visit Ling 322*]
- In this class, we aim at a *descriptive* grammar which describes the rules of a given language or languages, without aiming to explain what makes the grammatical sentences grammatical in the language X.
- Crucially, both explanatory and descriptive grammar is also distinct from a *prescriptive* grammar, which tells native speakers what is possible or not possible in their language from the stand point of a higher grammatical authority. Ex. “Don’t end your sentences with a preposition!” This is the kind of grammar we check at the door and forget about the existence of when we enter this classroom
- The knowledge of syntax and syntactic wellformedness of sentences (i.e. whether they are possible or not in our language) is independent of the knowledge of meaning
- Consider the following: *Colorless green ideas sleep furiously*
- Conversely, often we may know the meaning someone is trying to convey, but the sentence is not possible syntactically:

**I go to store yesterday. Cat hate dog. [we use ‘*’ to mean that the sentence is ungrammatical]*

1.2 But how can we talk about Language when languages are so different?

- True, languages do differ from one another, a speaker of Chinese would have trouble understanding a speaker of Warlpiri
- BUT! language variation, though extensive, is not infinite. There are certain principles that are common to all languages, i.e. are violated by (virtually) none
- We call them language Universals. Example: *no language forms a question from a declarative sentence by fully reversing the order of words in the declarative sentence*
- It is believed that language universals are part of Universal Grammar (UG)
- **Universal Grammar** - a set of principles that underlie our knowledge of language, are common to all languages (constrain crosslinguistic variation) and aid language acquisition in children by constraining the number of hypotheses children make when acquiring a language. These principles are claimed to be innate (*this claim may be a bit controversial*)
- A major goal of the study of syntax is to uncover and explain the principles of UG

1.3 Parts of syntax.

- Very roughly speaking, (Chomsky 1967) the syntax of a language consists of
- A lexicon – set of words;
- a set of phrase structure rules that tell us how to put lexical items together;
- a set transformation operations – movement rules – that tell us how to arrive from a declarative sentence to the corresponding question

→ (john arrive → who arrived?; john is here → is john here?); movement rules also tells us to get a passive sentence from an active one – (john hit bill → bill was hit by john)

→ much of the above has changed over the year as syntactic theory progresses. However, the three broad parts of syntax – the lexicon, operations for putting words together, and movement – have remained

2. The lexicon

- simply put, the lexicon is a bunch of words which are the building blocks of sentences
- the lexicon is divided into two broad categories: lexical words and function words.
- Lexical words are an open class – nouns, verbs, and adjectives. We can always add new ones to this set of words simply by making them up. *John blicked the ball.*
- in contrast, function words are a closed set – no new ones can be created, no matter how imaginative or poetic you may be. Try making up a new article like “tha” or a new complementizer like “dthat” instead of “that” or a new preposition like *John took the book frunder the bed* meaning “from under”. It is just not possible – i.e. native speakers won’t take to it. Their reaction would be like “wha....?”

2.1 Lexical vs. functional categories

→ What is a lexical category (lexical word/ item) and how do we know what category a word belongs to?

→ what is a noun, verb, or an adjective?

Consider: “*the frump gromed the dron from out of the croled krune*”

Now consider “*the grome frumped*”

“*the krune grome frumped the dron out of the crole*”

... you get the idea...

What are the categories of the novel words? How do you know them if you don’t know the meaning of each individual word? How do you know that “frump” is a noun if you don’t know whether it is a thing or a person or a concept?

Does the category of 'grome' and 'frump' change in the above sentences? Why is this happening?

→ while there is no unanimous agreement in the field as to what defines a category of a word, but here we can see that the functional words/elements surrounding it such as inflectional endings and articles/determiners play a crucial role in letting us know what category a word is.

→ consider a more radical example:

The blah blah blahes and blahas

OR:

Buffalo buffalo buffalo buffalo buffalo (S. Pinker 1994). Yes, this is a grammatical sentence of English

2.2 Other things we know when we know a word

→ In addition to knowing the category of a word we also know what other words it can combine with syntactically. This is especially relevant to verbs: **John devoured vs. John ate.*

→ The word 'devour' (combines with) or subcategorizes for a noun object, while the word 'eat' does not.

→ we also know the word's semantic selection: we know which words can combine with other words given their meaning. For example we can say "John sleeps" but not "#this idea sleeps" even though the structure is grammatical syntactically

3. Phrase structure rules

→ phrase structure rules combine words into groupings / units called **constituents**. Words in a sentence are not strung together in a linear fashion like beads on a string. They are hierarchically grouped together with some words belonging closer together than others.

→ Hierarchical structure pervades language: it exists at the phonological (syllable), morphological (word), and sentence level. Hierarchy plays a crucial role in sentence processing because the representation we assign to the sentence we hear is also non-linear

→ While the crucial evidence for non-linearity of syntactic structures at the sentence level will come in the next lecture, for now consider smaller units that comprise a sentence - phrases

3.1 From words to phrases

John runs

The cat runs

The fat white cat runs

The fat white silly cat runs

The fat white silly cat with a spotted tail and funny feet runs

The fat white cat and a small thin cat run

- In the above sentences, what is the subject?
- In order to represent the idea that more than one word than be the subject of a sentence we say that the subject is a Noun Phrase – NP – which is a constituent.
- Importantly, every NP has a head – the noun. It may or may not also have a complement. For example: *The man with the telescope*. The noun “man” is the head of the phrase that determines its category. “with the telescope” is a complement. It is optional.
- The same can be done with the verb:

[The man [with the telescope]]

John runs

John runs and screams

John sees a fat white cat

John put the fat white cat on the floor

→ the Verb Phrase constituent can consist of only a single verb, but it may also have one or more *complements*, *ie*. An object, an indirect object.

→ A noun phrase as well as a verb phrase are constituents. That an NP is a constituent is seen from our ability to replace a very long NP with a single pronoun “it”/”she”. This means that for syntactic purposes even though the NP is very long, it occupies only one – a single – syntactic position.

Ex. The big fat white cat with a spotted tail and a funny pink nose runs = She runs

→ verb phrases (VPs) are constituents as well. Interestingly verbs that take direct objects (transitive verbs) form a constituent with the object, but not with the subject:

Ex. John sees the big fat white cat that runs around and Bill does too. / so does Bill
Does too/ so does = sees the big fat cat that runs around

→ we can replace the entire VP with a VP-“pronoun” such as “Does too” which replaces not just the verb but V+Object. There is no such pronoun that would replace V+Subject even though it is conceivable in theory: * *John sees the fat cat and so does the dog* =/= *John sees the dog as well*

→ In addition, constituents don’t like to be broken up. Consider the following:

John saw the fat cat and the skinny cat

Who did John see?

**Who did John see and?*

John saw the fat cat with the skinny cat

Who did John see the fat cat with?

→ now to see that constituents are hierarchically structured, consider the following NPs

Fat cats and dogs

→ what are the two possible readings?

→ knowing what we know from morphology and ambiguous words, how do we represent the above ambiguity via tree diagrams?

[[Fat cats] and dogs] vs. [fat [cats and dogs]

Fat cats and dogs

→ more will be said about constituents and the tests we have to determine them. For now we can explain the above effect as follows: the verb and the object belong structurally “closer” together than the verb and the subject

4. Some (very) brief remarks on the evolution of syntactic theory

- **the science of linguistics as we know it today developed in the late fifties. Its development was crucially instigated by Chomsky’s groundbreaking review of B.F. Skinner’s *Verbal Behavior* in 1957. Skinner was a behaviorist psychologist in the 50’s who was very influential in psychology. However, after Chomsky’s devastating review of his book, behaviorism became falling into disfavor. Namely, Chomsky argued that the behaviorist model of language and language acquisition which is essentially based on habit-formation and stimulus-response mechanisms is untenable. Language is a computational, abstract, combinatorial system that relies on generalization and rule formation and extends far beyond what mere analogy formation could ever capture.**

5. Overview of this course

- **Introduction – learning ways to describe and talk about languages other than English; All languages have structure! Hierarchical vs. linear structure of language**
- **Phrases and heads**
- **Simple sentences**
- **Constituents**
- **Complex sentences**
- **Transformations**
- **Language universals**
- **Advanced topics**