

# Lecture 1: Introduction to Syntax

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# Infinite systems are unlearnable

Also, sentences can be infinitely long

- The cat chased the mouse
- The cat chased the mouse that ate the cheese.
- The cat chased the mouse that ate the cheese that came from the cow.
- The cat chased the mouse that ate the cheese that came from the cow that grazed in the field.

In principle, this can go on forever.

- The space in the brain is finite, so it cannot be that we store infinitely long sentences in our brains in a dictionary format. Rather, sentences are composed of discrete units that are combined by rules. This system of rules is finite.



# Sentences are rule-based

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- In the previous Module *Morphology*, you would have studied that **words are the building blocks of sentences.**

1) ate a pot of soup yesterday spicy Meena

2) fire saw the the roof man on

3) the well tall was tree beside planted the by my mother

**There is more to sentences than just words. In any language, when words are put together to build sentences, there are rules that are automatically followed.**

The part of grammar that represents a speaker's knowledge of sentences and their structures is called syntax



Let's unjumble the words here to make a sentence:  
**ate a pot yesterday spicy of soup Meena**

- [soup]

- [[spicy [soup]]

[ate]

- [pot [of [spicy [soup]]]]

[ate [a pot of spicy soup]]

- [a [pot [of [spicy [soup]]]]]

[Meena [ate a pot of spicy soup]]

- [ate]

[Yesterday [Meena [ate a pot of spicy soup]]]

- [yesterday]

or

- [Meena]

[[Meena [ate [a pot of spicy soup]]] yesterday]

What we just did is **systematically** group the words into larger meaningful units, called "**constituents**", and put these constituents together to build **larger constituents**, and finally put these constituents together to get the final unit – **the sentence**. **What is this system?**



# We used an operation called “Merge”

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- Merge is a simple operation. It basically says, take two units A and B and put them together to give you a larger unit C. Now take C (which, of course is made up of A and B), and put it together with another element D and so on.

**Fun fact! Merge is also the operation you use to add numbers**



Let's unjumble the words here to make a sentence:  
the read poem meeting at Sophia the

- [poem]  
[the [poem]]
- [meeting]  
[the [meeting]]  
[at [the [meeting]]]
- [Sophia]
- [read]

[read]

[read [the poem]]

[read [the poem] [at the meeting]]

[Sophia [read [the poem][at the meeting]]]



# Is Merge enough?

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- Let's say we have the group of words [Meena], [a pot of soup], [ate]
- We know that Meena is the person who did the eating and what was eaten was soup. We want to build the appropriate sentence.
- We take [ate] and [a pot of soup] and use Merge to give us the bigger unit. **What are the possible combinations we can get?**



# Word Order

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- [ate] [a pot of soup]
- [a pot of soup] [ate]
- Merge generates both these options!
- But because we are merging groups of words of the **English language**, the rule system of English will tell us that (1) is the correct way of building the sentence, not (2).
- The rule system of English will again tell us that [Meena] [ate a pot of soup] is the correct order after merging [Meena] and [ate a pot of soup] and NOT [ate a pot of soup] [Meena]
- What we just did is fix the order of the units after merging the two units. **Word Order of sentences matters.** And **languages differ in the Word Orders they have.** What order of words for the above sentence does your language have



- Let us look at the word order of English

(1) \* The dog the cat chased

(2) The dog chased the cat

Now look at the following sentence pair. They have the same set of words, but mean different things

(3) He says what he means (Everything he says is something that he means)

(4) He means what he says (If he means something he says it, but he also says things he doesn't mean)

Also see

(5) My dog chased your cat

(6) Your cat chased my dog

The rules of syntax specify grammatical relations of sentences, like subject (S) and object (O). These relations help the speaker convey important information to the listener: **who is doing what to whom. This information is important if we want to know the meaning of a sentence.**



- English and Mandarin are Subject—Verb—Object (SVO) languages

(1) Seema bought flowers

S      V      O

(2) Zhāngsān	shōudǎole	[yīfēng	xìn]
Zhangsan	receive	one	letter
S	V	[O	]

‘Zhongsan received a letter’

(3) Japanese is a SOV language

Johnga	tegamio	yonda
John	letter	read
S	O	V

‘John read the letter.’

**Irish** is a **VSO** language, **Nias** is **VOS** and **Hixkaryana** is **OVS**

**Can you figure out  
the word-order of  
your language?**



The verb decides

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# (1) Transitive verbs

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- Look at the following sentences

1) \*The boy found.

2) \*The boy found quickly.

3) \*The boy found in the house.

4) The boy found the ball.

A native speaker of English will predict that sentence 1) to 4) are ungrammatical. This is because the rules of syntax specify that when you have a verb like found you need to follow this word with 'what was found', something like 'the ball'

Verbs like found, that **necessarily/obligatorily need** an object like 'the ball' to complete their meaning are called transitive verbs.



# More transitive verbs

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want

\* Sarah wants

\* Sarah wants tomorrow

\* Sarah wants badly

Sarah wants a new pen

Sarah wants to go to the market

see

\* Meena saw

\* Meena saw yesterday

\* Meena saw closely

Meena saw an owl

Meena saw that I was chopping carrots

*Sarah wants a new dress badly, Sarah wants a new dress tomorrow, Meena saw an owl yesterday and Meena saw an owl closely* are also possible sentences. **What does this tell you about the obligatoriness of words like *tomorrow, badly, yesterday and closely*?**



## (4) Intransitive verbs

1) \*Disa slept the baby.

2) Disa slept soundly

3) Disa slept

*sleep* is different from *found*, *see* and *want*. It cannot have an object like *the baby*, *a new pen* or *an owl*. Other verbs like *sleep* are *go*, *run*, *cry* etc.

While transitive verbs obligatorily need an object to complete their meaning, intransitive verbs can never need for an object to complete their meaning.

An easy test to identify transitive verbs and separate them from intransitive verbs is to ask a 'What'-question.

What does Sarah want?

What did Meena see?

\*What did Disa sleep



### (3) Ditransitive verbs

- Some verbs obligatorily need two objects to complete their meaning. These are called ditransitives.

- 1) Nitin gave **a sack of rice** to **Sidhra**
- 2) Sidhra sent **a letter** to **her mother**

**If a sentence is a play or film the verb is its director. It is the one that decides whether it needs objects and if so what kinds of objects and how many. This is called “verb subcategorization”**

**The minimum ingredient needed to make a sentence is a verb.**

**Go!**

**Fire! (as in shoot)**



# Before the next class

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Read p. 75-77 of Fromkin (2018)

Also check out:

*World Atlas of Language Structures* (Chapter on Word Order):

<https://wals.info/chapter/81>