SYNTAX

Syntax is a branch of linguistics which is concerned with how words combine together to create accepted structures. Syntax is not concerned with meaning (semantics), but rather just grammatical (accepted) structures. For example, English syntax would allow for such a sentence: 'The table smiled angrily, while the carpet frowned happily'. While this sentence may not be true in our world, syntax allows it to exist since it satisfies all **grammatical rules and constraints**, i.e. the structure of the sentence is grammatical. '*boy the mother his with speaks.', on the other hand, is **ungrammatical**, since it does not observe any of the rules of syntax.

We had discussed in the previous weeks the different parts of speech we may find in a language. As for morphology, its job is to assign morphological realizations on the word, that is, if the plural of a certain noun is realized by '-s', then morphology assigns this '-s' to a noun when it is plural. Syntax, on the other hand, plays a role in determining the relations between words and their structure. Therefore, it is the syntax that 'orders' morphology to assign '-s' as a realization of the feature [plural]. For example, morphology provides us with the word 'man' and the verb 'eat', but it is the syntax that triggers questions such as: 'is this man known? Is it a specific man?' and if the answer is 'yes', then the syntax prompts morphology to insert the article which corresponds to the feature [specific], and we end up with 'the man'. The syntax, then, asks about the time during which the event of the verb 'eat' happens; is it in the future? If yes, then the syntax orders morphology to assign whatever the language uses in order to show '3rd sg. future', in which case the **auxiliary** 'will' is inserted, yielding 'the man will eat'. Not only does syntax trigger the insertion of these morphological elements, but it also ensures that each element will occupy the place it is supposed to occupy. The syntax is the reason we have **well-formed** sentences such as 'the man eats' and **ill-formed** sentences such as '*eats man the' or '*man s-eat the' etc.

Question: Does the guy want the bartender to call him by the name 'a taxi', or does he want him to call a taxi for him?

Since syntax deals with the structure of sentences, then it is up to it to resolve **syntactic ambiguities**. These ambiguities arise whenever there is more than one way to interpret a sentence. To this end, we will be discussing the specificities of syntactic interpretation.

What is a **subject**? **The subject** is a noun, pronoun, or noun phrase that canonically appears before the verb. If the verb is an active verb, i.e. not passive, then the subject is typically an agent 'the do-er' of the verb or the cause of it. In 'the man will eat', the noun phrase 'the man' is the subject.

This is, indeed, the first type of sentences that we encounter, i.e**. SV sentences** (subject + verb).

Examples of SV sentences: 'Children jump.' 'A woman slept.' 'The guests are eating.'

Verbs of such sentences are called '**intransitive verbs**'. They are called **intransitive** because they do not need an object. Consider the verb 'to kill', you cannot just say '*John killed.' This sentence is incomplete, and it is so because the verb 'to kill' is a **transitive verb**, and therefore it needs an object. Interestingly, **some verbs can be either**. 'The man is eating' is okay and 'eating' here is considered an intransitive verb. 'The man is eating pizza' is also okay and here the verb is transitive.

Objects are nouns, pronouns or noun phrases that canonically appear after the verb. They often experience some kind of effect brought about by the verb unto them. In other words, the object has something being done to it, rather than it doing something on someone or something else (cf. subjects).

Now we have another type of sentences that we usually encounter in English, i.e. **SVO sentences** (subject + verb + object).

Examples include: 'John watched TV' 'Mary sang a song' 'Our company created a mess'.

Word order in English is **typically fixed**, i.e. one may not change the order in which words appear in a sentence. 'John watched TV' cannot be '*TV watched John' or '*John TV watched', for example. This is so because English lacks **grammatical case**. Some languages assign **case** to their subjects or objects, distinguishing one from the other, and thereby allowing for more freedom as per word order. Consider a language like Hungarian, where the **accusative case** is realized with a '-t' attached to the grammatical object. The accusative case is the case in which objects appear. 'Bence pizzát csinál' 'Bence is preparing pizza' can also be 'pizzát csinál Bence' or 'Bence csinál pizzát' etc.

Since Hungarian marks its objects, then word order is relatively freer than English, for example. This does not mean that Hungarian word order is completely free!

In languages like English, word order must be observed, as otherwise sentences would not have concrete grammatical relations among the words. Some languages have SVO word order, some SOV, OVS, and others. There is no one order that is superior to any other, this is merely typologically interesting.

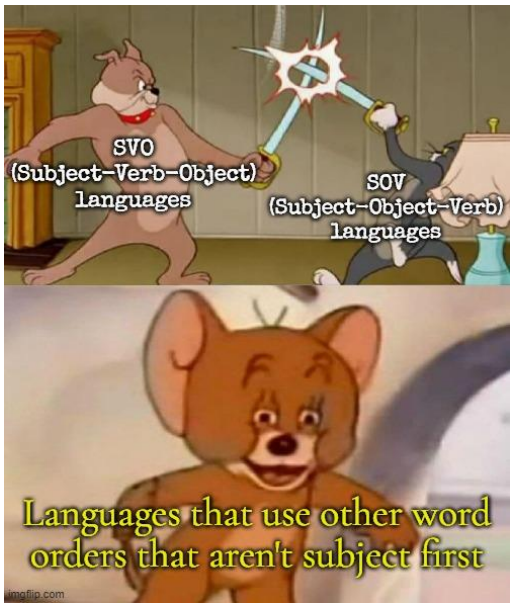
Question: Think of a language that has grammatical case. Is there a 'default' word order?

Word Order	No. of Languages	Percentage	No. of Families	Percentage[a]
SOV	2275	43.3%	239	56.6%
SVO	2117	40.3%	55	13.0%
VSO	503	9.5%	27	6.3%
VOS	174	3.3%	15	3.5%
OVS	40	0.7%	3	0.7%
OSV	19	0.3%	1	0.2%
Unfixed	124	2.3%	26	6.1%

Word order	English equivalent	Proportion of languages	Example languages
SOV	"She him loves."	45%	Japanese, Latin, Tamil
SVO	"She loves him."	42%	English, Mandarin, Russian
VSO	"Loves she him."	9%	Hebrew, Irish, Zapotec
VOS	"Loves him she."	3%	Malagasy, Baure
OVS	"Him loves she."	1%	Apalaí?, Hixkaryana?
OSV	"Him she loves."	0%	Warao

These charts show the distribution of word order among the languages of the world. The most common type is 'Subject-Object-Verb' followed by 'Subject-Verb-Object'. The rarest type is 'Object-Subject-Verb'.

Question: Why is it that in most languages the subject appears before the object?



Let us now talk about the **types of phrases** that make up a sentence:

1. **Noun phrase**: Is a phrase which contains a noun and/or a determiner/adjective. Examples of noun phrases include:
   NP → Det N a man
   NP → Det A N a good man
   NP → N men
   NP → A N good men

2. **Prepositional phrase**: Is a phrase which contains a **preposition** and a noun phrase. Examples of prepositional phrases include *PP → P NP* in the car

These phrase structures are rudimentary. There are many more phrase types, but we will not be getting into it right now.

How do we represent a sentence, then?

S: The man ate the food in the car

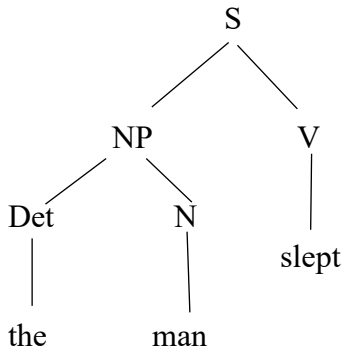
S → NP V NP PP

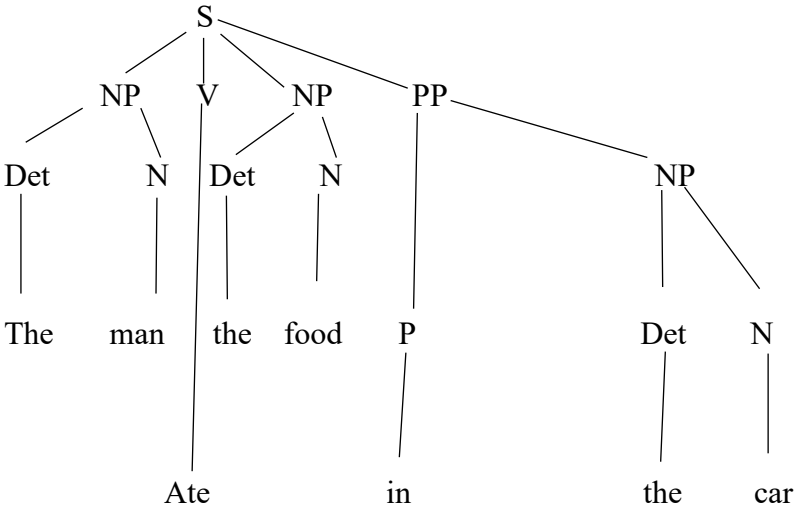
S: The man slept

S → NP V

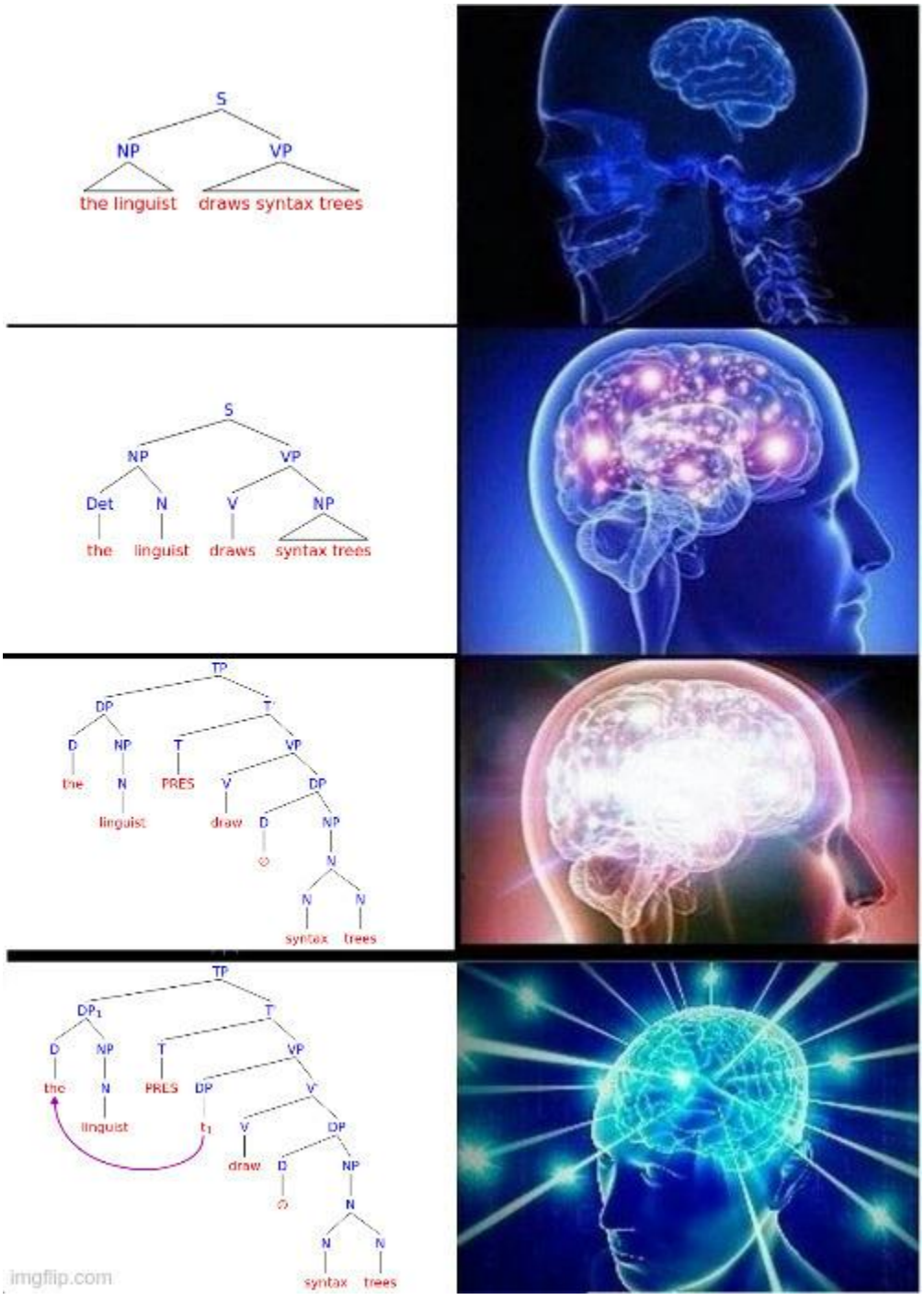
And so on.

Let us now represent these sentences using tree diagrams.





These are rough representations of the possible tree diagram schemes. You will see later on that tree diagrams are only **binary branching**.



As our class is not concerned with advanced syntax, our tree diagrams will suffice for now.

What is the difference between **complements** and **adjuncts**?

A **complement** is a necessary piece of information that immediately follows the head (in an NP, the head is a noun, in a VP, the head is a verb etc.). **Complements** cannot be omitted.

Adjuncts, on the other hand, do not have to follow such a rule. Moreover, **adjuncts** may be stacked, in that you can add as many adjuncts as you want to a certain sentence. **Adjuncts** are omissible.

Consider the sentence 'The man eats the food in the car'.

'the food' is the complement of 'eats', first because it is a necessary piece of information (the object), and secondly because it immediately follows the head of the VP, i.e. 'eats'. On the other hand, 'in the car' is an adjunct, since we can easily omit it 'The man eats the food'. Moreover, we can stack some more adjuncts on top of it: 'The man eats the food slowly in the car with a fork…'

Chomsky's Universal Grammar

Noam Chomsky is one of the most prominent and influential linguists of our time. He kickstarted and developed syntax and linguistics as we know it today. His theory, Universal Grammar, maintains that all human languages share the same fundamental **principles** despite seeming different on the surface. That is, there are sets of **principles and parameters** that can be found in all languages, and languages only differ by which parameters they apply.

UG argues that all human languages share properties that are hard wired in our brains, i.e. the ability to learn language evolved in our brains and is genetic. Chomsky also says that language is innate, that we are born equipped to learn language. He says that children acquire language through their inborn language-acquisition faculty. This faculty is also known as the Language Acquisition Device (LAD).

Other theories of language acquisition include behaviorism, for example, which states that language is learnt through a process of interaction with one's environment.

Chomsky makes a fundamental distinction between linguistic competence, which is the knowledge of one's language, and performance, which is the actual use of language in a concrete situation. He also says that children attain great linguistic competence and are able to generate an infinite number of sentences using only some restrictions.

Generative grammar considers grammar a set of rules and restrictions that generates exactly those combinations of words that form grammatical sentences in a language. It is a system of explicit rules that may apply over and over to generate an infinite number of sentences with an indefinite length.

Design features of language

Displacement: Is the notion that humans can talk about things that are not physically present or that do not even exist. Speakers can talk about the past and the future and can express hopes and dreams. A human's speech is not limited to the here and now. For example, animal communication is restricted to immediate danger, or something that is going on at the moment of communication, while humans can talk about something that has happened in the past or is yet to happen in the future.

Productivity or Creativity: Is the fact that humans can generate an infinite number of grammatical sentences using a limited number of grammatical rules. There will always be new utterances that have never been said before, yet we will be able to understand them!

But what allows us to be this creative? Chomsky claims it's all because of a feature called '**recursion**'. **Recursion** is, roughly, the inclusion of a sentence within a sentence. Consider the following example 'The man that hunted the bear that chased the fish that ate the plankton that…' As you can see, there is no limit to how many clauses can be **embedded** in a single sentence. This **recursiveness** allows human language to be infinitely productive.

This is not a comprehensive list of the design features, but it serves our purposes for this course.

Notes:

In addition to transitive and intransitive verbs, we have **ditransitive** verbs. Ditransitive verbs may have more than one object. The object that is necessary (cannot be omitted) is called the direct object, while that which is not necessary (can be omitted) is called the indirect object. **Double-object** constructions include sentences like 'I sent Mary an email', wherein 'Mary' is the indirect object and 'an email' is the direct object. Such sentences can also be formulated with a dative object: 'I sent an email to Mary'.

Question: In dative constructions, is the verb still considered ditransitive?

When we construct tree diagrams, syntactic ambiguities can be resolved by showing us the **constituents** of a certain sentence. These constituents are grammatical elements that are grouped together. Consider this sentence: 'I hit the boy with a stick'. Does this mean that I used a stick to hit the boy? Or that I hit the boy who had a stick with him? In such cases, we can see the importance of organizing the constituents. Tree diagrams can also be written using square brackets, which we will do for the sentence 'I hit the boy with a stick'.

[I [hit [the boy]] [with [a stick]]] = I used a stick to hit the boy.

[I [hit [the boy [with [a stick]]]]] = I hit a boy who had a stick.

Question: 'The father scolded his son because he was drunk.' Who does 'he' refer to in this sentence?