Open Learning
Translation Department

Third Year Second Term

Semantics & Syntax

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GOOD MORNING EVERYONE!

Let's have just a quick revision of phrase structure rules. We talked about 8 rules:

- 1. $S \rightarrow NP VP$
- 2. $NP \rightarrow (Det) N$
- 3. $VP \rightarrow V$
- 4. $VP \rightarrow V NP$
- 5. $VP \rightarrow VPP$
- 6. PP \rightarrow P NP
- 7. $VP \rightarrow VCP$
- 8. $CP \rightarrow CS$

Today, we'll deal with noun phrases, and I will give you 5 new rules.

I want you to start studying from now because syntax is a bit complicated. So, you need to study step by step.

The man with the telescope in a box.

This is a noun phrase, not a sentence because there is no yerb.

We see that it includes the noun phrase "The man" and two prepositional phrases: "with the telescope" and "in a box."

So, we have a new rule:

9. NP \rightarrow NP PP

Because we have TWO prepositional phrases, we need to reapply this rule recursively.

The first prepositional phrase modifies "The man" whereas the second prepositional phrase modifies "the telescope."





The analysis:

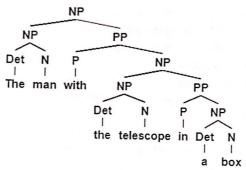
- This noun phrase consists of the noun phrase "The man" and the prepositional phrase "with the telescope in a box." (Rule 9)

First part:

- The noun phrase consists of the determiner "The" and the noun "man." (Rule 2)

Second part:

- The prepositional phrase consists of the preposition "with" and the noun phrase "the telescope in a box." (Rule 6)
- The noun phrase consists of the noun phrase "the telescope" and the prepositional phrase "in a box." (Rule 9)
- The noun phrase consists of the determiner "the" and the noun "telescope." (Rule 2)
- The prepositional phrase consists of the preposition "in" and the noun phrase "a box." (Rule 6)
- The noun phrase consists of the determiner "a" and the noun "box." (Rule 2)



Student: cannot we separate the prepositional phrase "in a box" and put it alone?

Professor: NO, and that's because it is related to the noun phrase "the telescope." They are semantically related.





Noun phrases that include adjectives

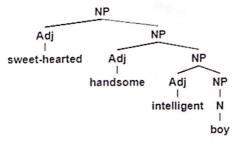
The rule for this is:

10. NP \rightarrow Adj NP

The sweet-hearted, handsome, intelligent boy.

Here, we have three adjectives.

If I want to analyze this noun phrase according to rule 10, it will be like this:



What about the determiner "the"?

We cannot put it in the last noun phrase with "boy" because the determiner comes before the adjectives. <u>So, rule 10</u> does not work with the previous phrase.

What we need to do is to forget about all of this and to revise rule 2: $NP \rightarrow (Det) N$.

We have in syntax something called **X-bar syntax** (abbreviated as X'). According to it, we revise rules, and we make new versions of them.

Now, the three adjectives modify the noun "boy," and the determiner "the" modifies all of the adjectives and the noun. So, we say that "sweet-hearted," "handsome" and "intelligent" are sisters of the word "boy," but the determiner "the" is the sister of the whole complex.

Because we have sisters here, we have to use noun-bar (N'). So, we have to follow X-bar syntax, which is related to sisterhood.

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The new version of rule 2: $NP \rightarrow Det N'$

This noun-bar (N') means that the noun has sisters, such as adjectives.

Now, we have a new rule:

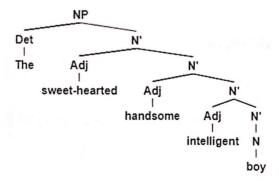
11. $N' \rightarrow Adj N'$

Also, there is another rule from noun-bar:

12. $N' \rightarrow N$

Let's analyze the previous phrase according to noun-bar:

- This noun phrase consists of the determiner "The" and the noun-bar "sweet-hearted, handsome, intelligent boy." (New version of rule 2)
- The noun-bar consists of the adjective "sweet-hearted" and the noun bar "handsome, intelligent boy." (Rule 11)
- The noun-bar consists of the adjective "handsome" and the noun bar "intelligent boy." (Rule 11)
- The noun-bar consists of the adjective "sweet-hearted" and the noun-bar "boy." (Rule 11)
 - The noun-bar consists of the noun "boy." (Rule 12)







Possessives

It is when we use an apostrophe with 's'.

🖎 Sarah's garden.

We have another rule:

13. NP
$$\rightarrow$$
 NP's N'

Student: why do we have a noun-bar (N') here, not a noun (N)?

Professor: we have a noun-bar because the noun "garden" has a sister that modifies it, which is "Sarah's."

The analysis:

- The noun phrase consists of the noun phrase's "Sarah's" and the noun-bar "garden." (Rule 13)
 - The noun-bar consists of a noun "garden." (Rule 12)



The girl's shoes

We have a determiner here, so we need a new rule:

14. NP's
$$\rightarrow$$
 Det N'

Note: whenever you see "s' in a noun phrase, you should think first about the rule 13.

The analysis:

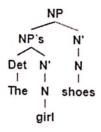
- This noun phrase consists of the noun phrase's "The girl's" and the noun-bar "shoes." (Rule 13)





First part:

- The noun phrase's consists of the determiner "The" and the noun-bar "girl." (Rule 14)
 - The noun-bar consists of the noun "girl." (Rule 12)
 - Second part:
 - The noun-bar consists of the noun "shoes." (Rule 12)



In the EXAM, I may draw a tree with some blanks, and you need to choose the right words. Also, I may bring you a sentence and ask you to name its constituents or its head. Of course, the exam is automated. □

The man with the telescope's hat.

There is a prepositional phrase here, so we have a new rule:

15. NP's \rightarrow NP PP

The analysis:

- This noun phrase consists of the noun phrase's "The man with the telescope's" and the noun-bar "hat." (Rule 13)

First part:

- The noun phrase's consists of the noun phrase "The man" and the prepositional phrase "with the telescope." (Rule 15)
- The noun phrase consists of the determiner "The" and the noun-bar "man." (New version of rule 2)
 - The noun-bar consists of a noun "man." (Rule 12)





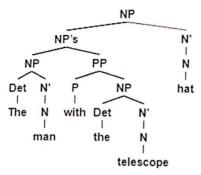
-The prepositional phrase consists of the preposition "with" and the noun phrase "the telescope." (Rule 6)

- The noun phrase consists of the determiner "the" and the noun-bar "telescope." (New version of rule 2)

- The noun-bar consists of the noun "telescope." (Rule 12)

Second part:

- The noun-bar consists of the noun "hat." (Rule 12)



Student: why didn't we write the possessive 's' with "telescope"?

Professor: there is no need to write it.

Student: why did we use the noun-bar here? Why didn't we use the old version of rule 2 instead of the new version?

Professor: it is because we have possessive here. When we have possessives, we have to deal with the noun-bar.

You should memorize these rules and apply them. It is like mathematics.

That is all for today See you next week





