

X-bar Node Flavors

Introduction to syntax

Adam Szczegielniak

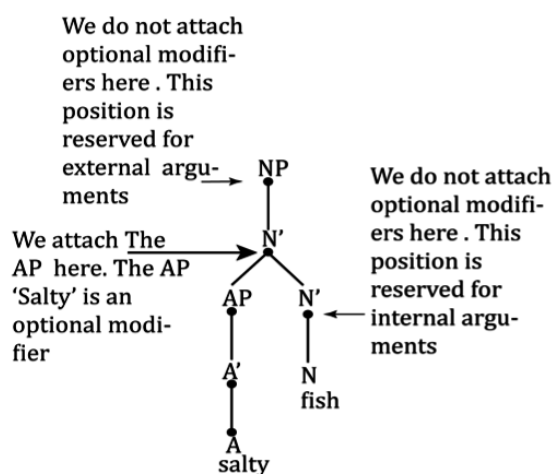
Noun Phrase

- It can be replaced by a Pronoun:
 - I think the cat likes [salty fish]_k, and I think she eats [them]_k often.
- It can be coordinated with another Noun:
 - The cat likes salty fish and chicken.
- Other properties include Topicalization, a process where the word order is changed in order to emphasize one string over another:
 - Salty fish, the cat likes (it's chicken that she hates).
- Another way of emphasizing is called focus cleft formation:
 - It is salty fish what the cat likes.

Noun Phrase cd

- The first observation is that if we drop 'salty' the sentence is fine, if we drop 'fish' it is not.
 - The cat likes fish.
 - * The cat likes salty.
- Why? The suspicion is on the properties of the verb 'like'. There is some requirement that can only be satisfied when a noun is present.
- The idea that 'salty fish' is a Noun Phrase is supported but the fact that it does not behave like an adjective. You cannot use it to modify other nouns:
 - * salty fish dog
 - There is also the intuition that a 'salty fish' is still a fish and not a type of salt.

Noun Phrase diagram



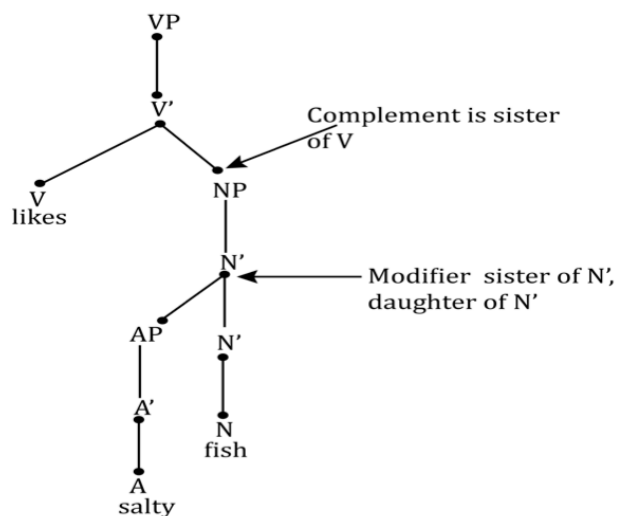
Verb Phrase

- The cat likes salty fish.
- we have argued that [salty fish] is a Noun Phrase, but what about [likes salty fish]? Is it also a Noun Phrase?
- Unlikely, since it does not behave like one. For one, there is no pronominal replacement:
 - *. The cat likes salty fish and the dog it.
- Again we look at the Lexical Items in the string: [salty fish] is a Noun Phrase, 'like' is a verb.
- A plausible assumption is that [likes salty fish] is a Verb phrase whose head is 'likes'.
- The question that remains is where do we attach the Noun Phrase: [salty fish]?

Complements

- The cat likes salty fish on Tuesdays.
- Let us assume that [on Tuesdays] is a constituent. This will be argued to be the case later on. Furthermore, we can assume that it is a modifier since we can add more modifiers and interchange their order:
 - The cat likes salty fish [on Tuesdays] [in the afternoon]
 - The cat likes salty fish [in the afternoon] [on Tuesdays]
- However, we cannot do the same with [salty fish]:
 - *The cat likes [on Tuesdays] [salty fish] [in the afternoon]
 - *The cat likes [on Tuesdays] [in the afternoon] [salty fish]
 - *The cat likes [on Tuesdays] [salty fish]
- The above data strongly suggests that the NP [salty fish] is a complement of the verb 'like'.

Verb phrase



Prepositional Phrase

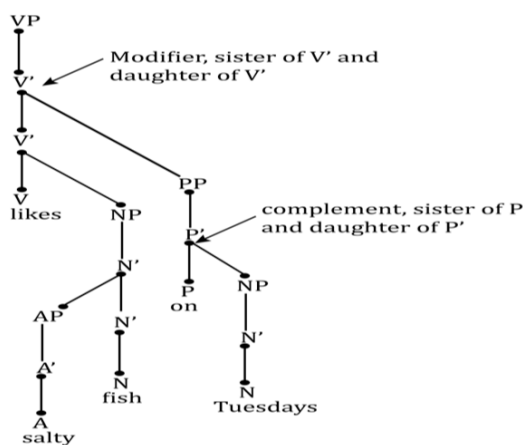
- strings like [on Tuesdays]. The obvious question to ask what is the status of that string.
- There is evidence that it is a constituent. For one it can be coordinated:
 - The cat likes salty fish on Tuesdays and on Fridays.
- Moreover it does appear to be able to change position within a clause:
 - On Tuesdays the cat likes salty fish.
- The question that remains is what is the status of the constituent.
- Again, we have two possibilities: the proposition [on] and the noun [Tuesdays]. If the phrase is headed by a noun then it should behave like a Noun Phrase.
 - *The cat like salty fish [on Tuesdays] and the dog likes beef [it]
- We cannot replace it with a pronoun, so that seems to suggest that it is not a noun phrase.

PP coordination

- How about coordination:
 - The cat likes salty fish on Tuesdays and Mondays.
 - ?? The cat like salty fish Mondays and on Tuesdays.
- The first example above seems to indicate that [on Tuesdays] can be coordinated with [Mondays] which would suggest that [on Tuesdays] is a noun phrase.
- But we need to be careful and control for what we are coordinating. The string [on Tuesdays] definitely contains a noun phrase [Tuesdays], the question is whether the NP contains the prepositional phrase PP, or is it the PP that contains the NP.
- When we coordinate strings such as [on Tuesday] with [Monday] we might actually be just coordinating two NP's [Tuesdays] and [Mondays]. The way to establish that is to flip the order of the strings and see if coordination is symmetrical. It should be. But it is not. Why? Because when we put [Mondays] first then we cannot coordinate it with [Tuesdays] in the expression: [Mondays] and [on Tuesdays] the proposition is in the way.
- The above data suggests that strings like [on Tuesdays] are PP not NP. The second question is whether the NP [Tuesdays] is a modifier or complement (inner argument) of the Preposition. The giveaway is that we cannot drop the Noun.
 - * The cat likes salty fish on

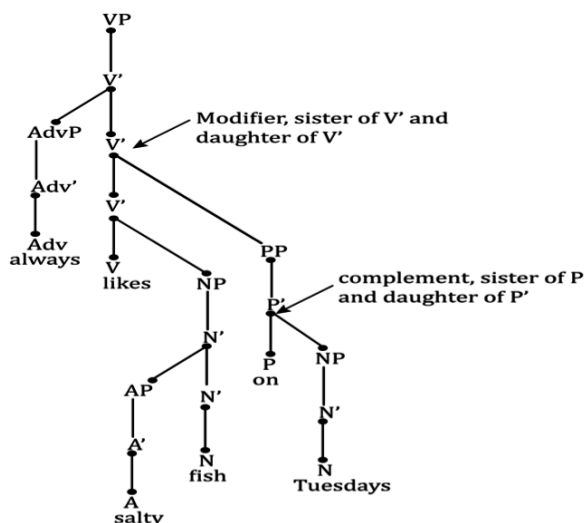
PP

- Complements of verbs and prepositions are obligatory. We are ready now to draw the VP:
- [[likes [salty fish]] [on Tuesdays]]



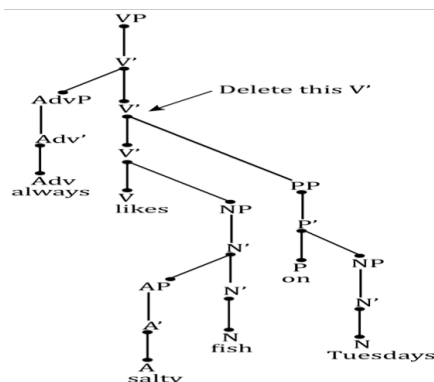
VP modifiers

- We can also have adverbial modifiers on the VP. For example the structure for
 - Always likes salty fish on Tuesdays.
- Note, that now we have three iterations of V' to accommodate two modifiers and one complement.



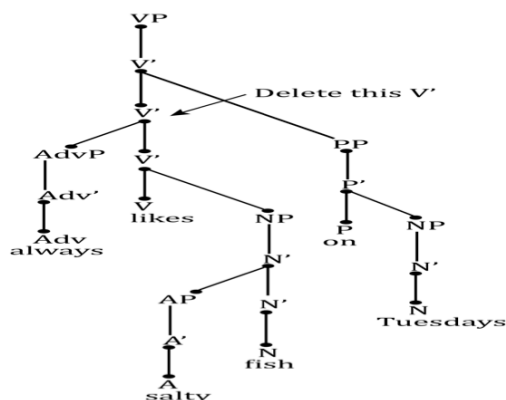
V-bar ellipsis

- Such a structure predicts that each V' is a constituent. We can test this by looking at ellipsis, an operation which deletes constituents under the right identity conditions.
- A The dog never **likes salty fish on Tuesdays** but the cat always does so.
 -> deletion of [likes salty fish on Tuesdays]



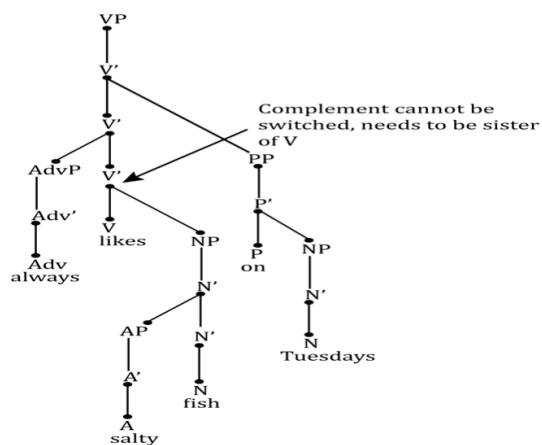
V' ellipsis cd.

- The dog *always likes salty* fish on Wednesdays but the cat does so on Tuesdays. -> deletion of [always likes salty fish]



V-bar ellipsis cd

- *C The dog *always likes* spicy beef *on Tuesdays* but the cat does so salty fish. -> cannot delete [always likes on Tuesdays]



V'

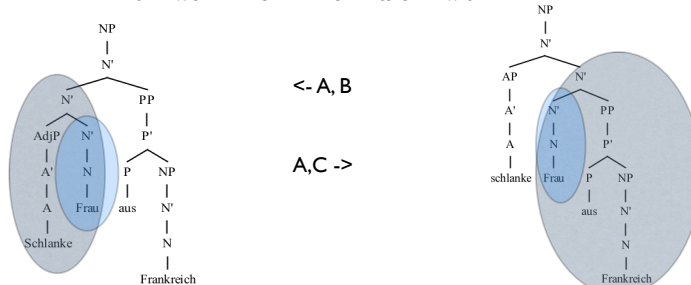
- The presence of V' suggests that intermediate categories are necessary
- If there is a V' we assume that there is X-bar.
- So there are X-bar categories cross-linguistically

German

- A. Die schlanke Frau aus Frankreich isst Kuchen mit Sahne.
the thin woman from France eats cake with cream
"The thin woman from France eats cake with cream."
- The following sentences are grammatical if they refer to the question who eats cake with cream:
 - B. Die Schlanke aus Frankreich (isst Kuchen mit Sahne.
"The thin one from France (eats cake with cream)."
 - C. Die aus Frankreich (isst Kuchen mit Sahne.
"The one from France (eats cake with cream)."
 - D. Die Schlanke (isst Kuchen mit Sahne).
"The thin one (eats cake with cream)."
 - E. Die isst Kuchen mit Sahne.
"She eats cake with cream."

Two X-bars

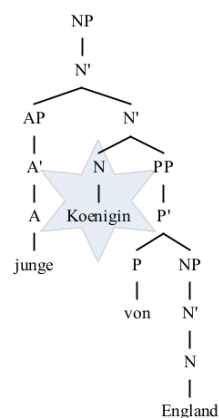
- A. Die schlanke **Frau** aus Frankreich isst Kuchen mit Sahne.
the thin woman from France eats cake with cream
"The thin woman from France eats cake with cream."
- B. Die **schlanke Frau** aus Frankreich isst Kuchen mit Sahne.
the thin woman from France eats cake with cream
"The thin woman from France eats cake with cream."
- C. Die schlanke **Frau** **aus Frankreich** isst Kuchen mit Sahne.
the thin woman from France eats cake with cream
"The thin woman from France eats cake with cream."



Complement

- Die junge **Koenigin von England** liebte die Prinzessin.
The young queen of England loved the princess
"The young queen of England loved the princess."
- *Die junge **Koenigin** von England liebte die Prinzessin.
The young queen of England loved the princess
"The young queen of England loved the princess."
- Die liebte die Prinzessin.
"She loved the princess."

- The rule is delete N-bar



Theta roles

- The mechanism responsible for verbs needing a complement is called thematic role marking.
- Theta roles are that part of the meaning of a verb that can only be expressed by combining it with another Lexical Item. Let me give you some examples:
- Theta Role Agent - initiator of an action
 - John photographed Mary.
John is the Agent.
- Theta Role Theme/Patient - undergoing the action, moved, perceived
 - John photographed Mary.
Mary is the patient of the action of being photographed.
- Theta Role Experiencer - only as part of verbs denoting experience, emotion, cognition.
 - John loves Syntax.
John is the experiencer.
- **Theta role criterion**
 - A. P and V must assign theta roles to their nominal arguments if they have one.
 - B. Every nominal (NP, later it will be DP) has to have one and only one theta role.

C-selection

- Theta roles are not enough to differentiate the two examples below, both verbs 'inhabit' and 'live' require same theta role: Location
 - I live in New York.
 - I inhabit New York.
- In the first case, we need a PP as an argument, whereas in the second case we need an NP. However, those roles are the same.
- It appears that verbs, on top of having theta roles, also have what we will call category-selection properties, c-selection for short.
- **C-selection**
 - A given head X selects the category of its complement.