Properties of X-bar

Complements,
Adjuncts
(& Specifiers.)

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X-bar theory

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X-bar theory

- Specifier Rule: XP → (YP) X'

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X-bar theory

- Specifier Rule: XP → (YP) X'
- Adjunct Rule: X' → (ZP) X' or X' → X' (ZP)

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X-bar theory

- Specifier Rule: XP → (YP) X'
- Adjunct Rule: X' → (ZP) X' or X' → X' (ZP)
- Complement Rule: X' → X (WP)

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Predictions?

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Predictions?

- Propose three different kinds of modifiers:
  - specifiers
  - complements
  - adjuncts

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Predictions?

- Propose three different kinds of modifiers:
  - specifiers
  - complements
  - adjuncts
- Is this valid? Are there really three different kinds? Do they have different properties

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Formal Definitions

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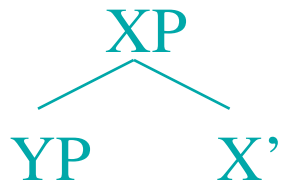
Formal Definitions

Specifier: Daughter of XP, sister to X'

XP → (YP) X'



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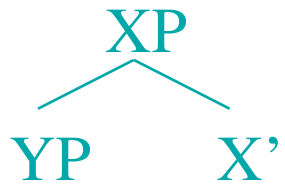
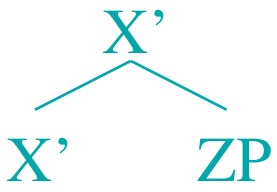


Adjunct: Daughter of X’, sister to X’

X’ → (ZP) X’ or X’ → X’ (ZP)



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Formal Definitions

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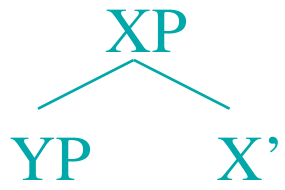

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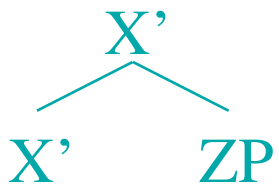
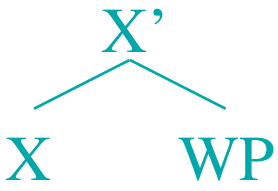


Complement: Daughter of X', sister to X

X' → X (WP)



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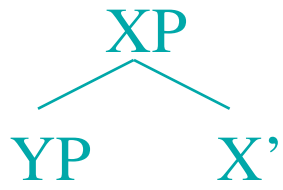
You should know this for the exam ☺

Formal Definitions

Specifier: Daughter of XP, sister to X'

XP → (YP) X'



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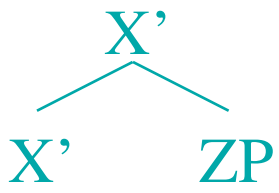

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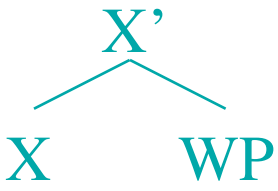

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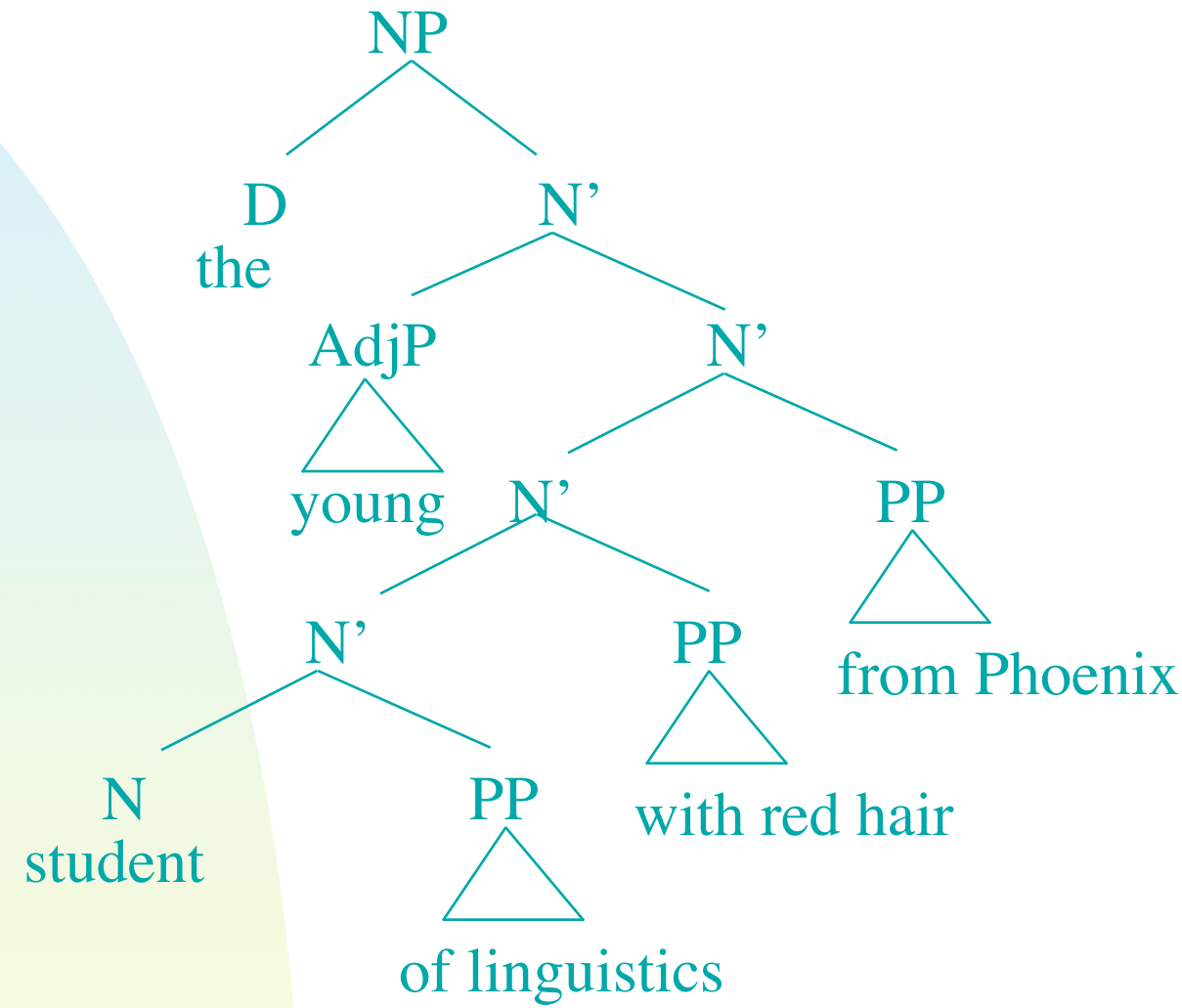

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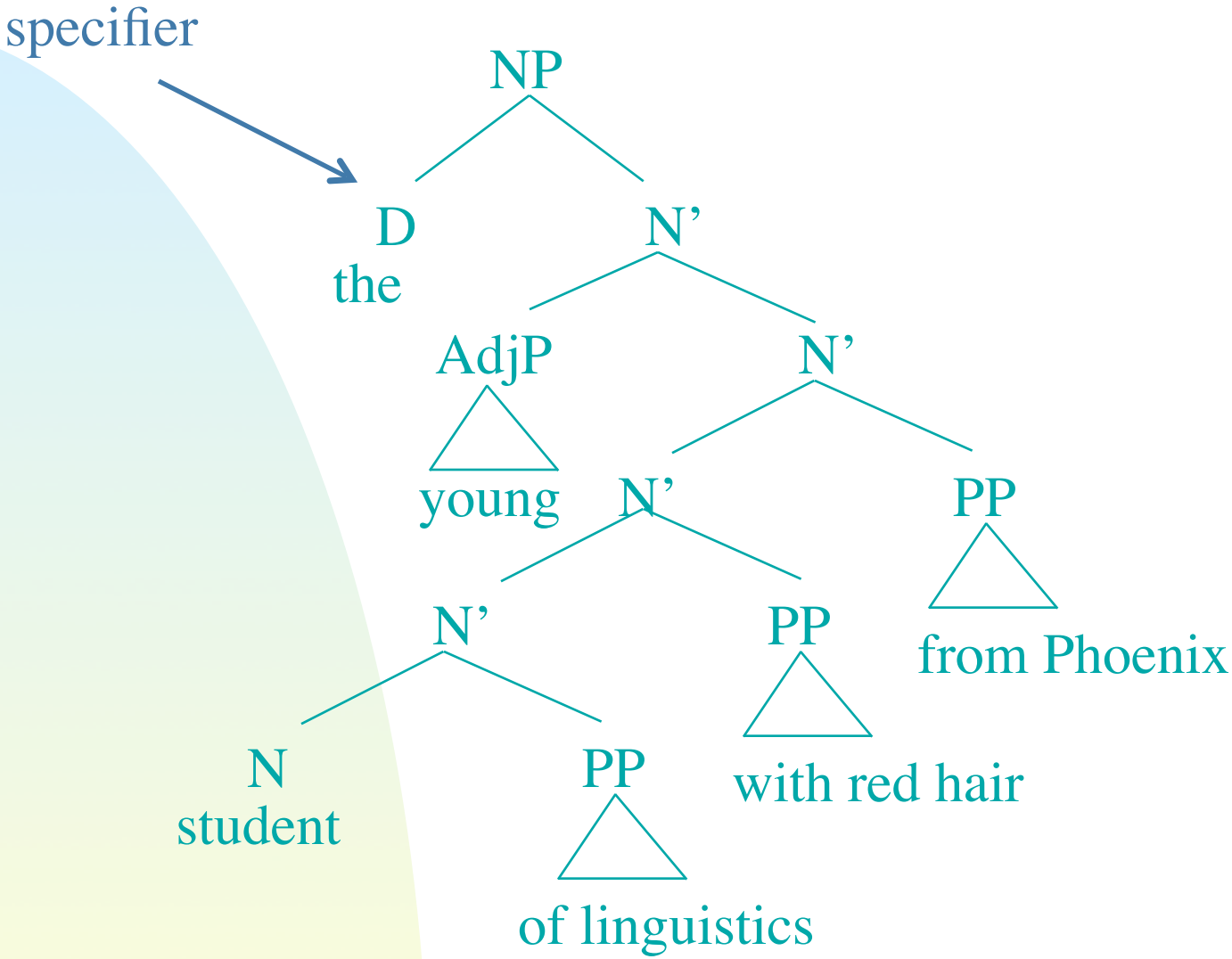

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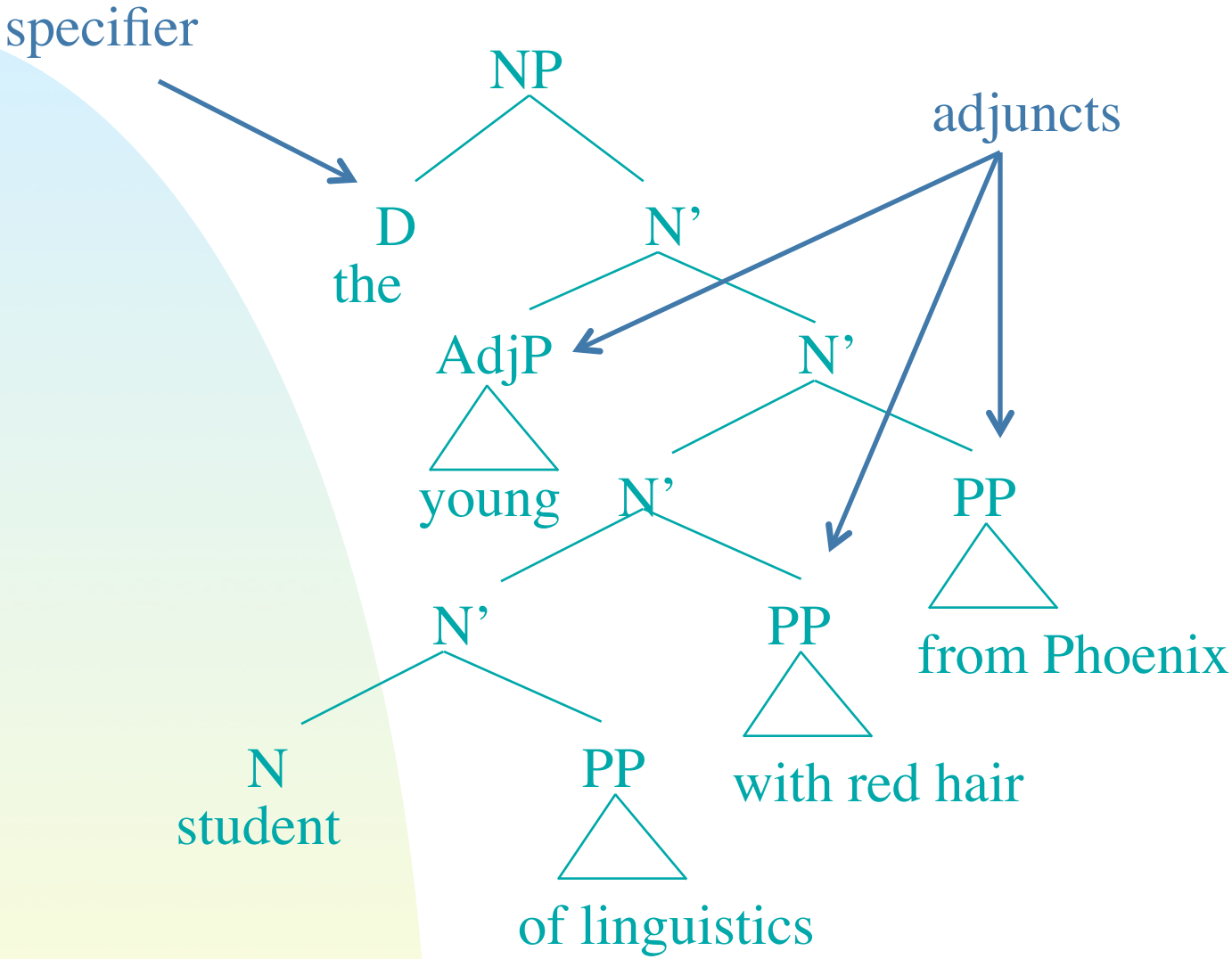

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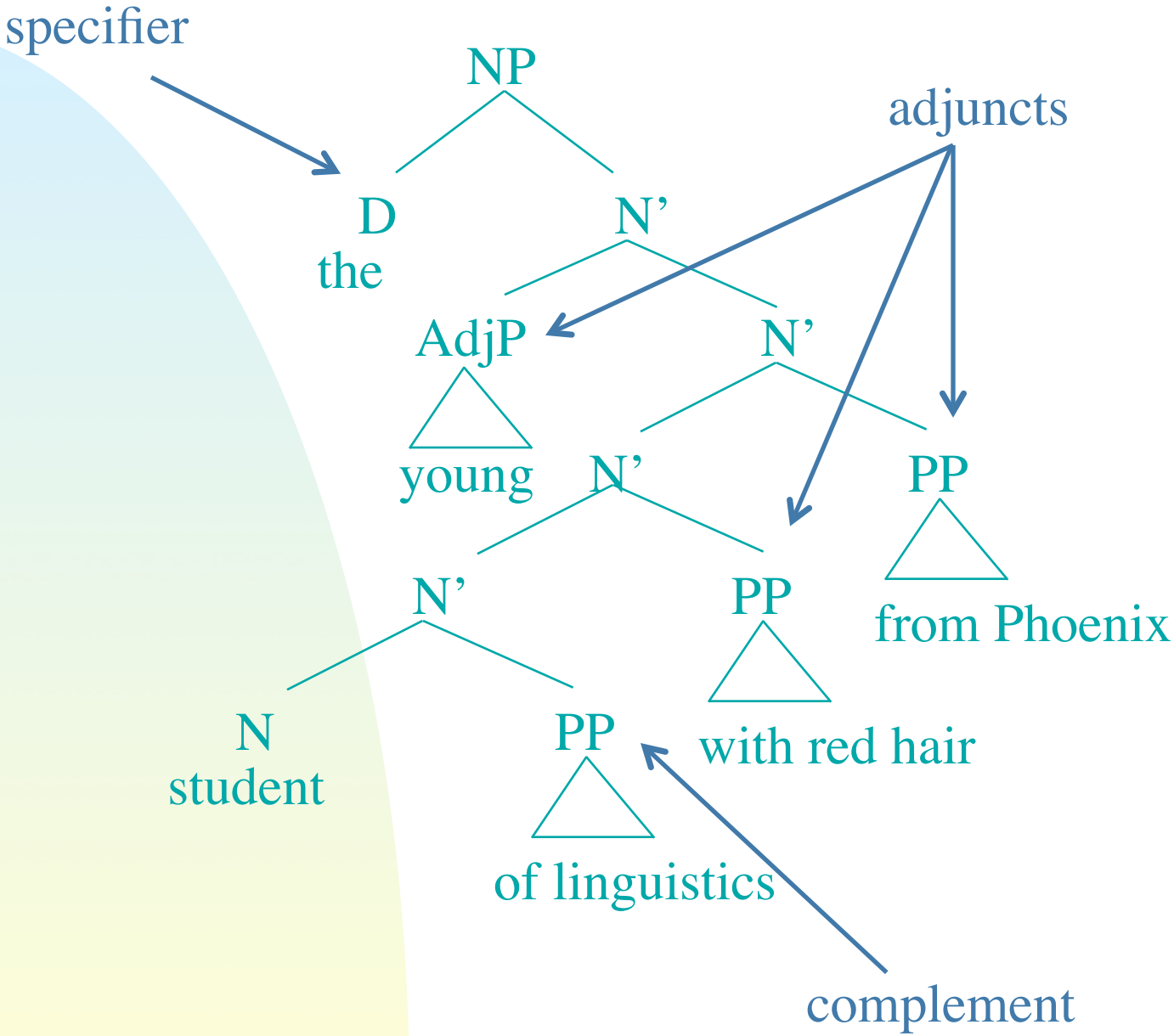

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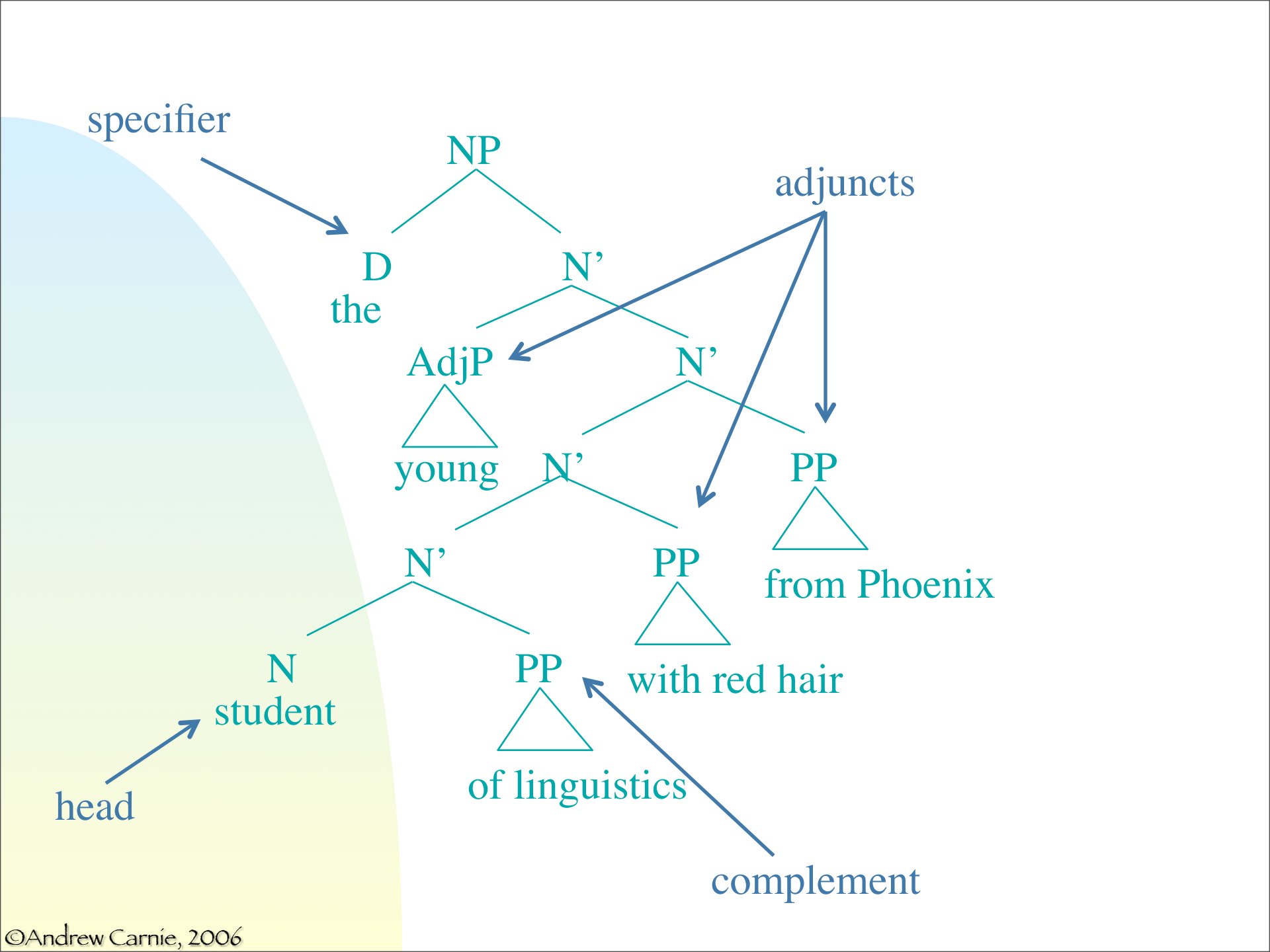

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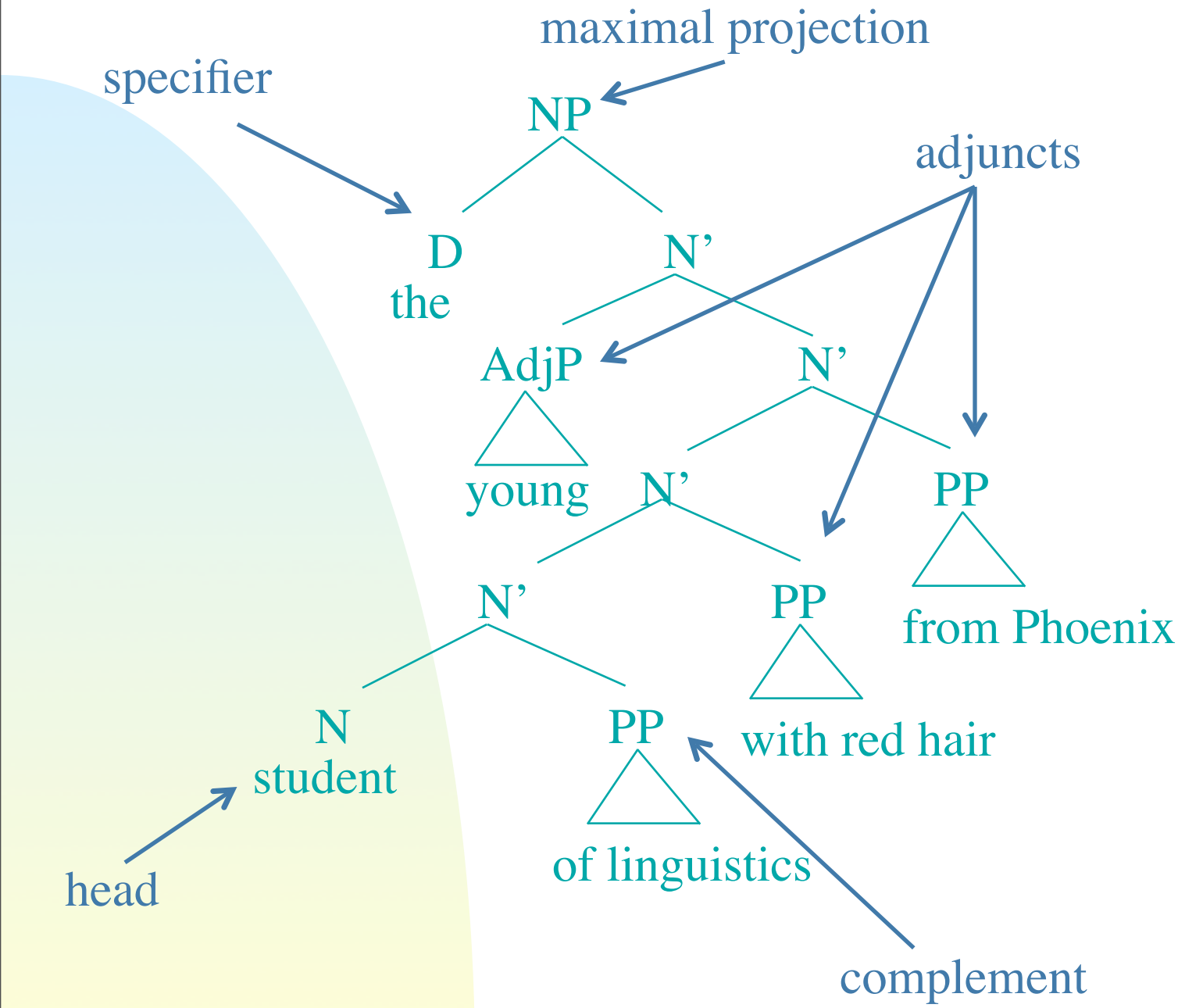

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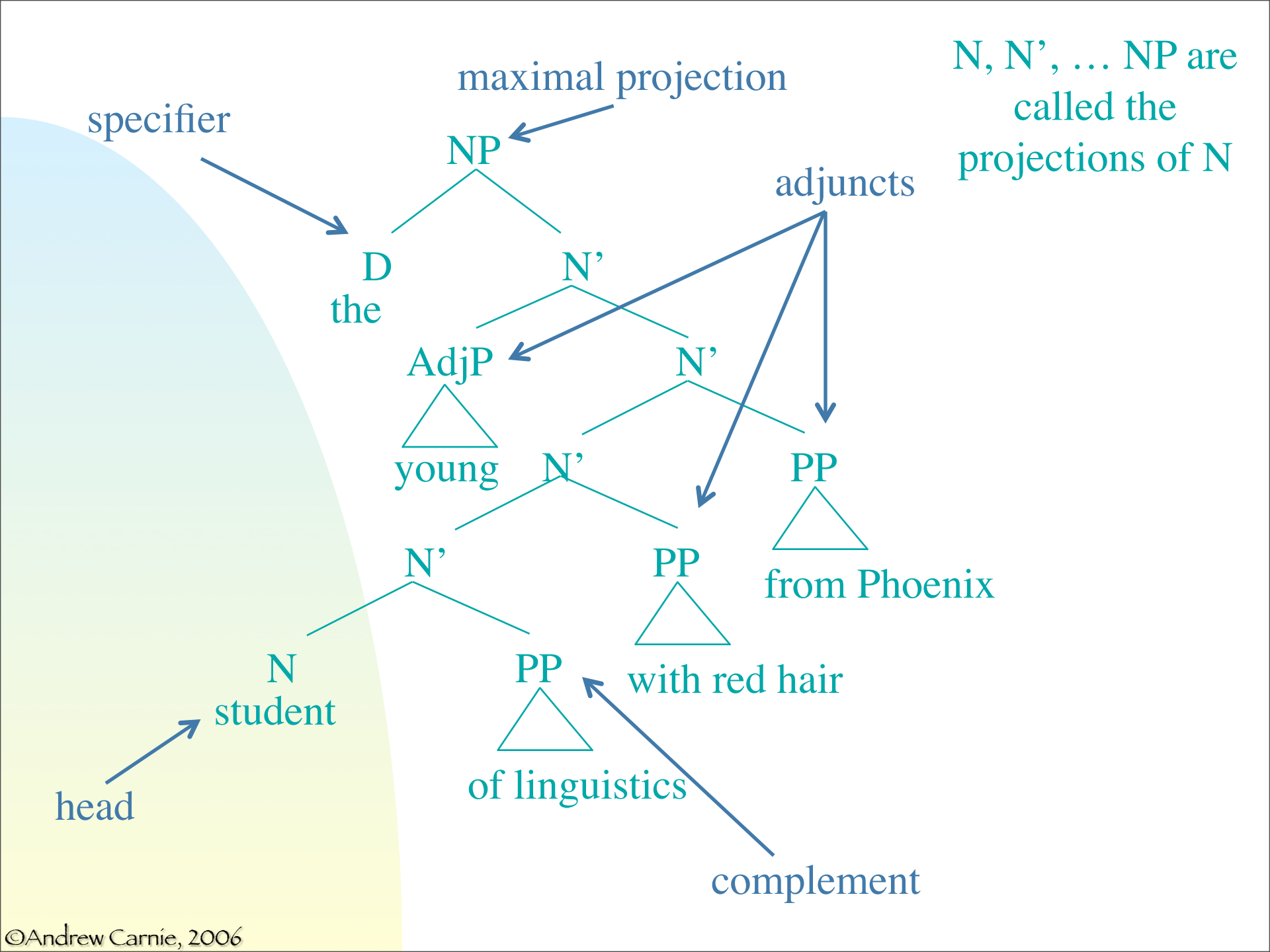

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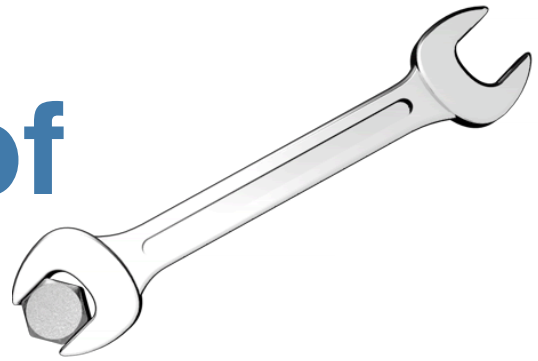
Revised Principle of Modification



- If an XP modifies some head Y, then it must be dominated by some projection of Y (i.e., it must be dominated by Y, Y', ..., Y', YP)

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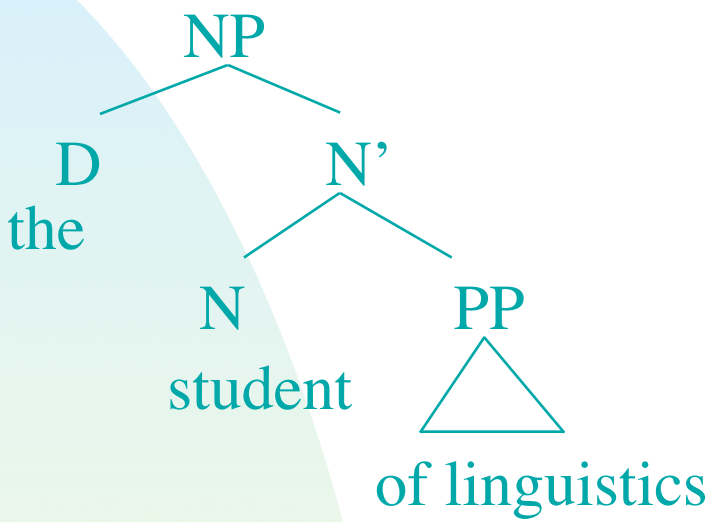
The student of linguistics



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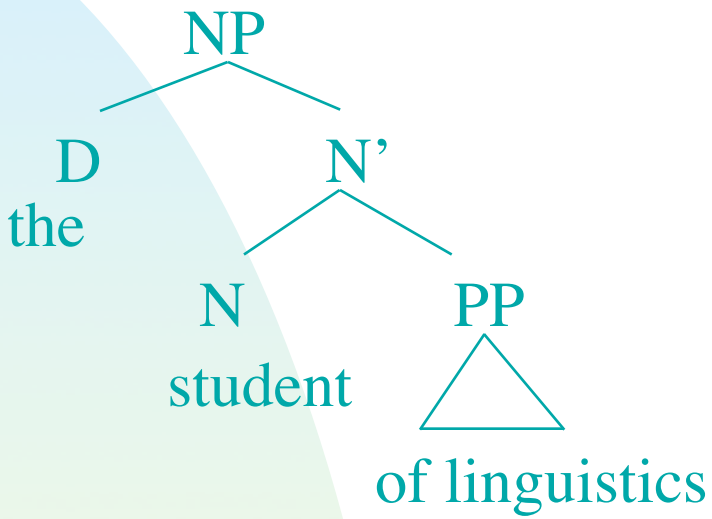
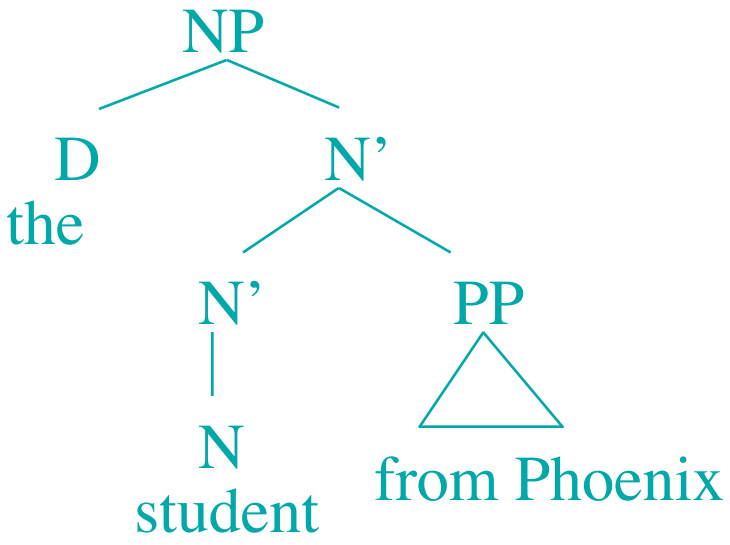
The student of linguistics



The student from Phoenix



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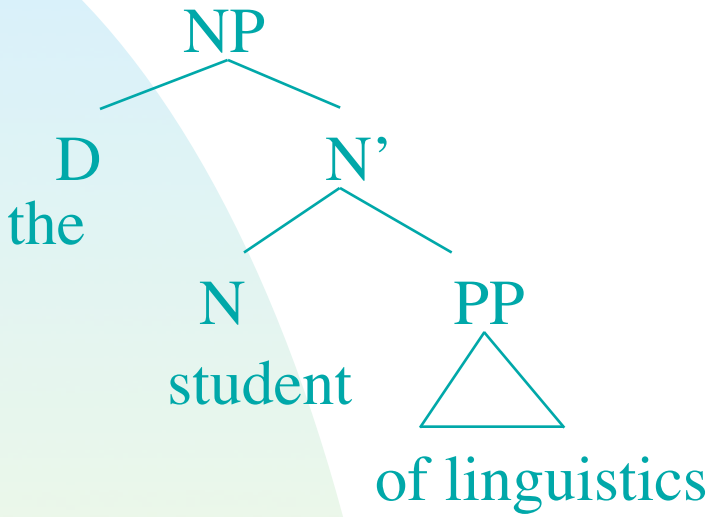
The student of linguistics



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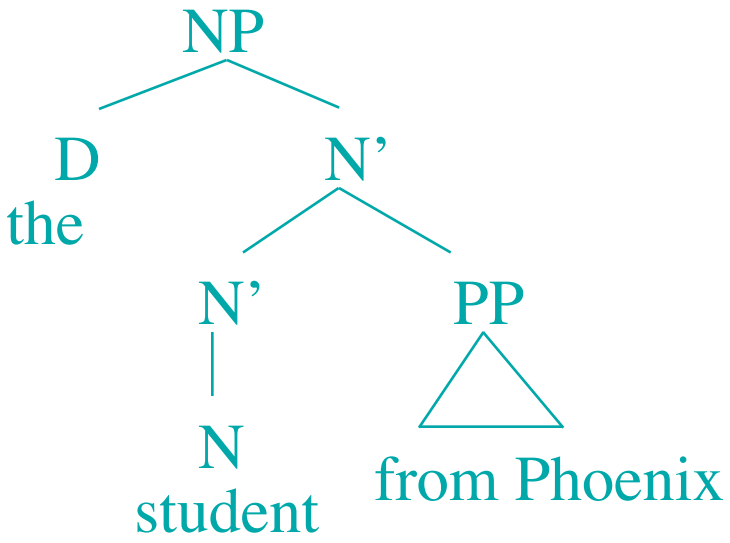

Quick way to distinguish complements and adjuncts in NPs (doesn't work for other categories). Complements of N are marked with the preposition 'of'. All other prepositions mark adjuncts. (This is not fool proof!)

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Complements always closest to head

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Complements always closest to head

The student [of linguistics] [from Phoenix]

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Complements always closest to head

The student [of linguistics] [from Phoenix]

head complement adjunct

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Complements always closest to head

The student [of linguistics] [from Phoenix]

head complement adjunct

*The student [from Phoenix] [of linguistics]

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Complements always closest to head

The student [of linguistics] [from Phoenix]

head complement adjunct

*The student [from Phoenix] [of linguistics]

head adjunct complement

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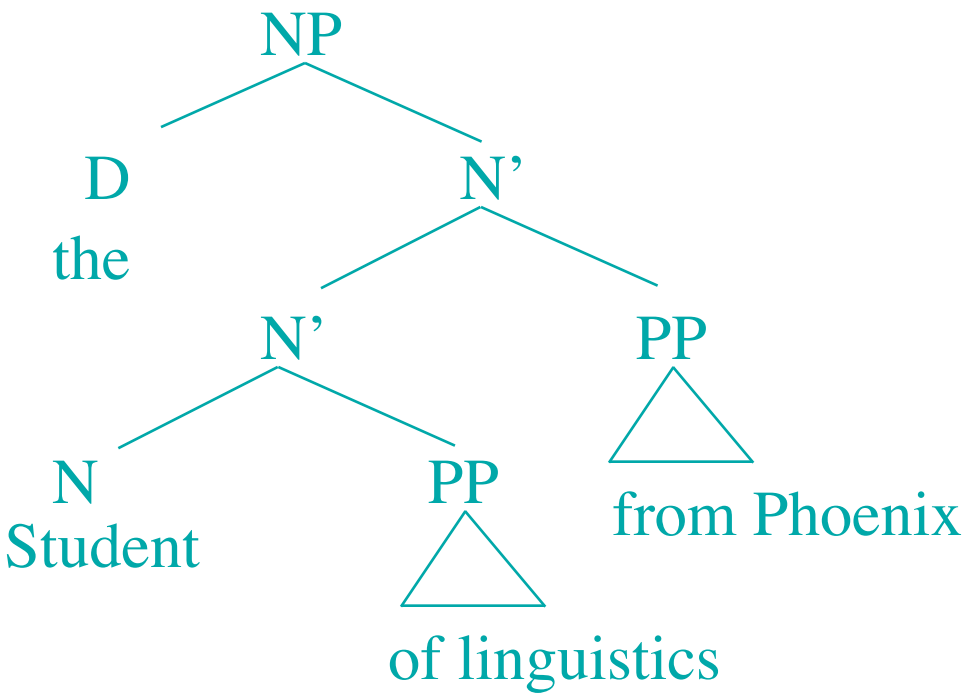

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Complements always closest to head

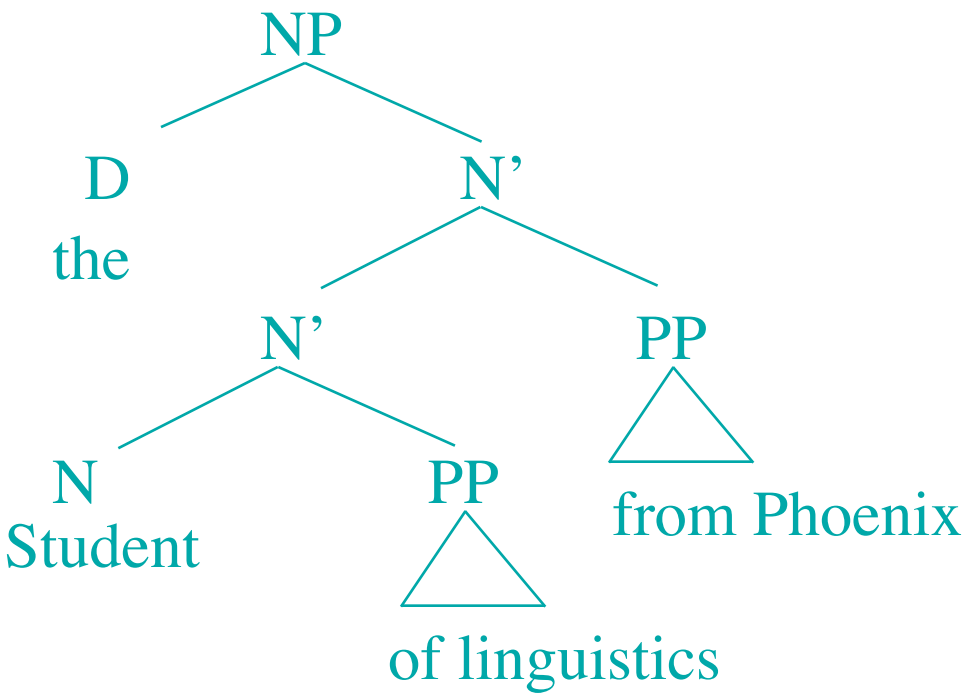
The student [of linguistics] [from Phoenix]

head complement adjunct

*The student [from Phoenix] [of linguistics]

head adjunct complement

since complements are sister to head



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Only one complement, multiple adjuncts

- X' →(ZP) X' or X' → X' (ZP) Iterative
- X' → X (WP) not iterative

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Only one complement, multiple adjuncts

- X' →(ZP) X' or X' → X' (ZP) Iterative
- X' → X (WP) not iterative

the student of linguistics with the red hair from Phoenix in the bath

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Only one complement, multiple adjuncts

- X' →(ZP) X' or X' → X' (ZP) Iterative
- X' → X (WP) not iterative

the student of linguistics with the red hair from Phoenix in the bath

*the student of linguistics of chemistry from Phoenix

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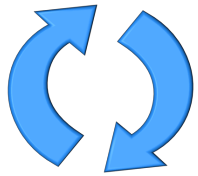
Adjuncts can be reordered



The student of linguistics from Phoenix with red hair on the bus.
The student of linguistics with red hair from Phoenix on the bus.
The student of linguistics with red hair on the bus from Phoenix.
The student of linguistics on the bus with red hair from Phoenix.
The student of linguistics on the bus from Phoenix with red hair.
The student of linguistics from Phoenix on the bus with red hair.
*The student from Phoenix of linguistics with red hair on the bus
*The student from Phoenix with red hair of linguistics on the bus
*The student from Phoenix with red hair on the bus of linguistics
(etc.)

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Conjunction

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Conjunction

- The conjunction rule: $X^n \rightarrow X^n$ Conj X^n
  - The red and blue house *The red and cat

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Conjunction

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  - The student of linguistics and of philosophy

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  - The student with red hair and with a tattoo
- Complements cannot be conjoined with adjuncts
  - *The student of linguistics and with red hair

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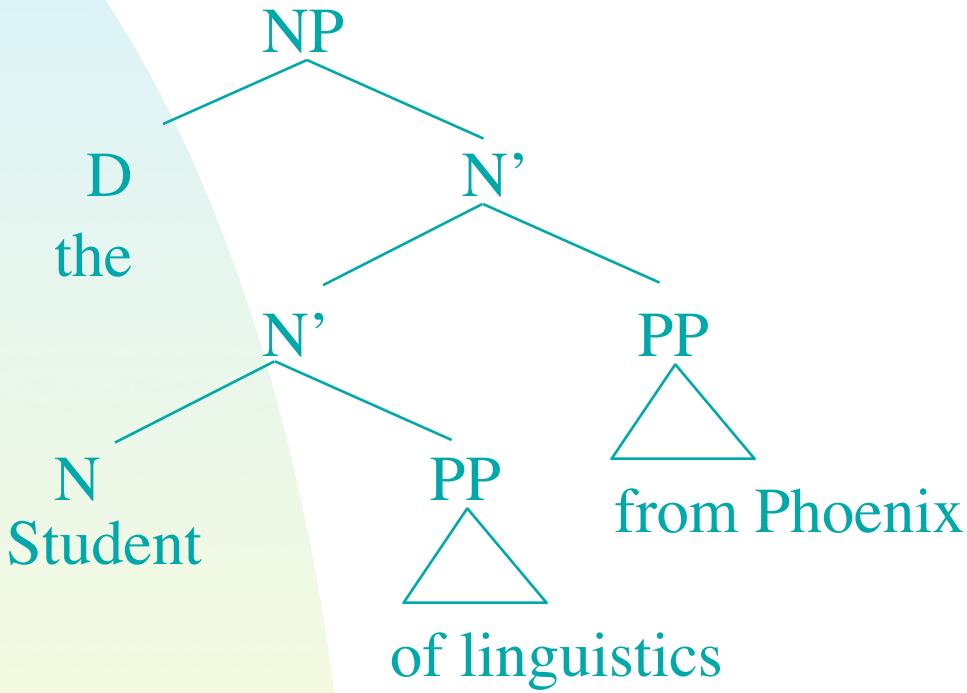
One replacement

- One Replacement: replace N’ with one.



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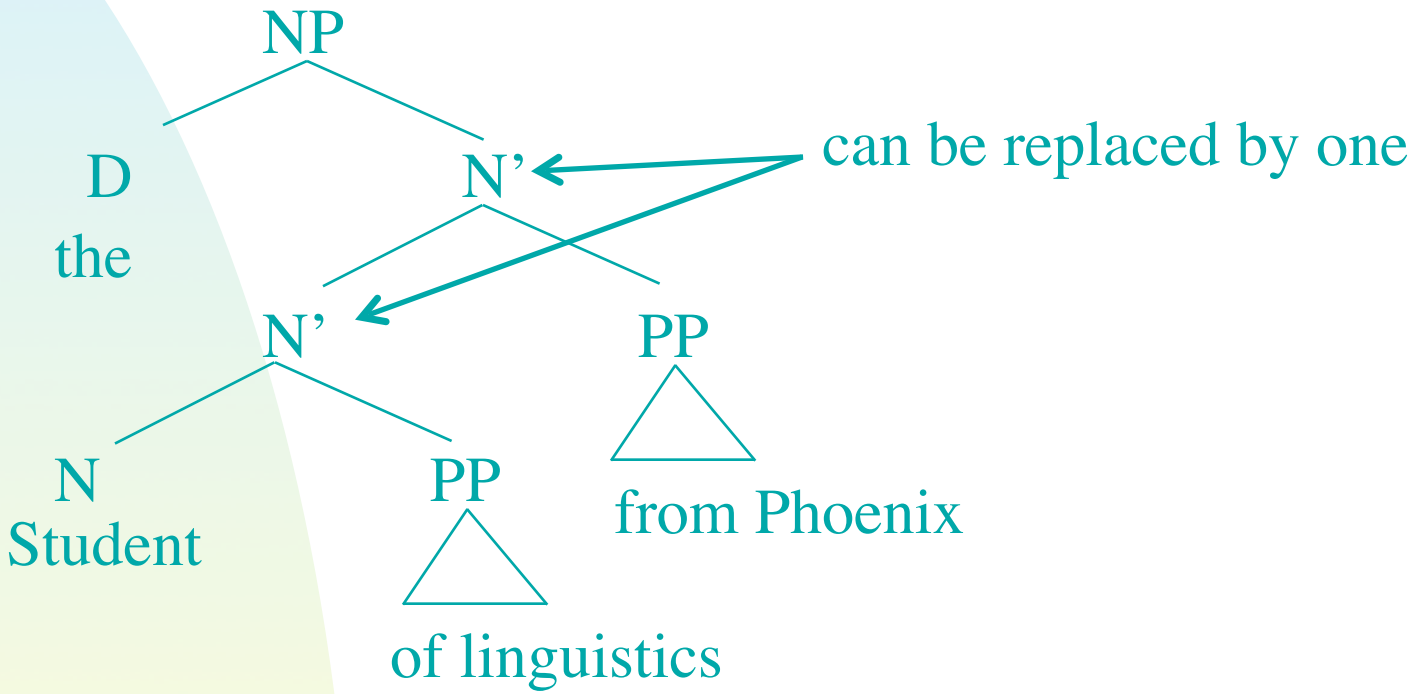

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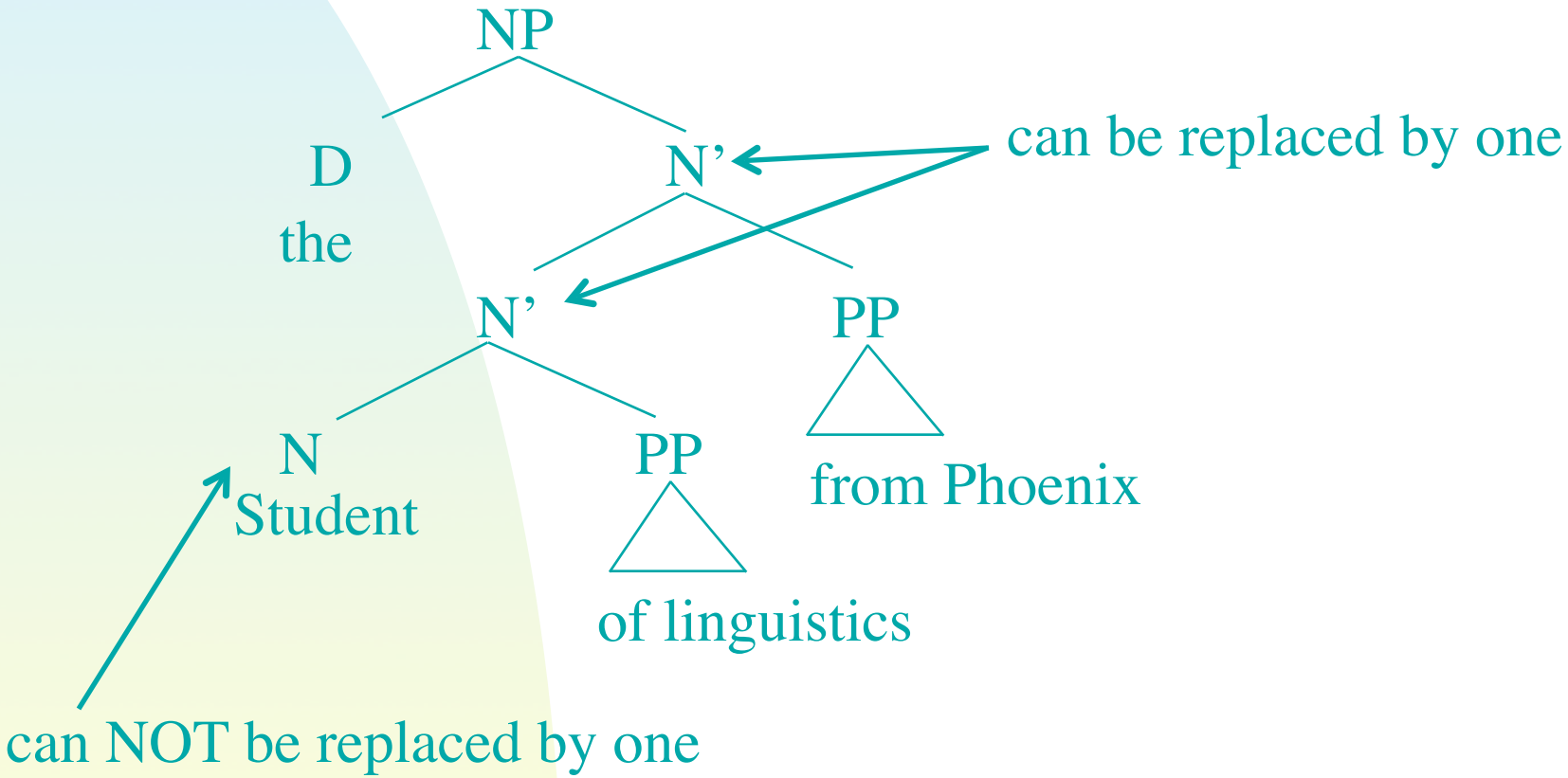

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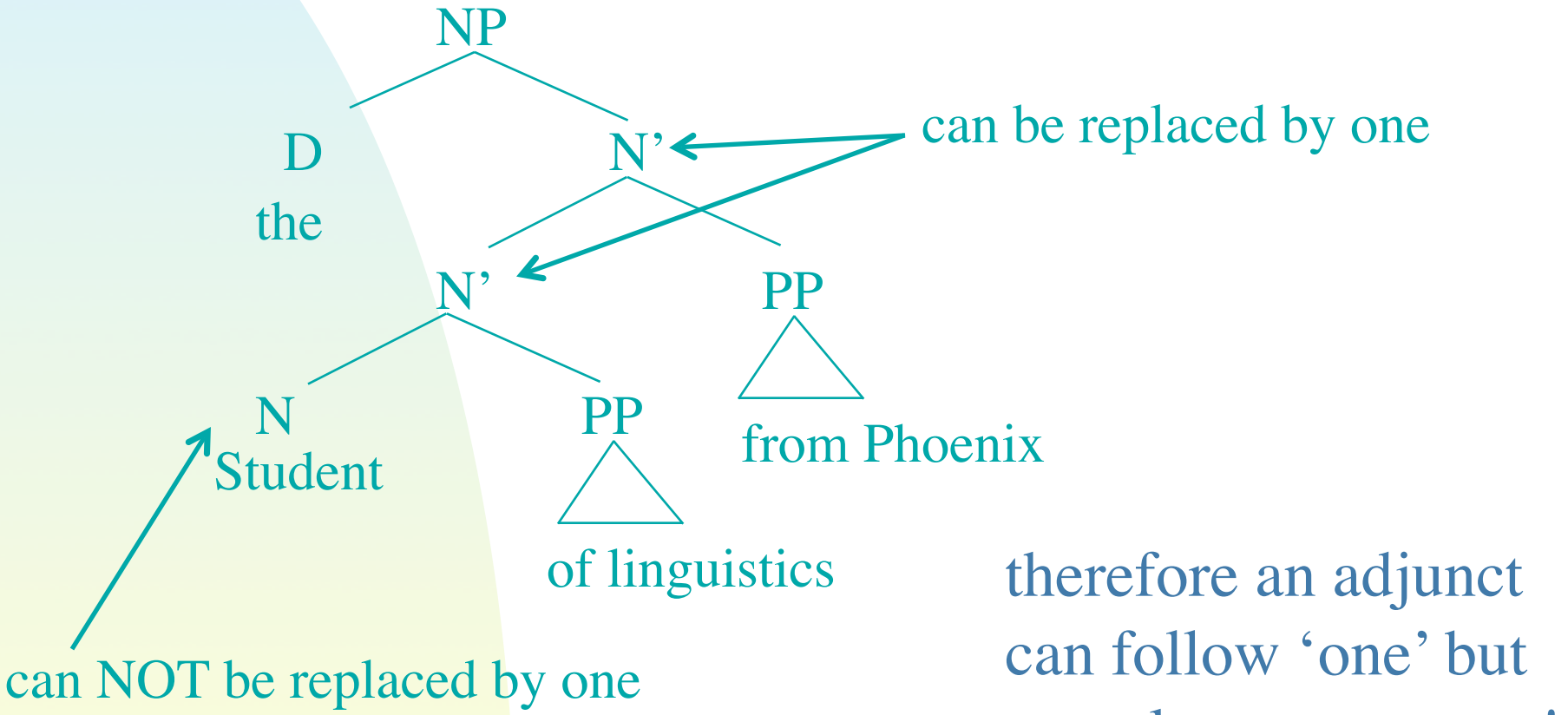

therefore an adjunct can follow 'one' but complements cannot!

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One replacement

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One replacement

- The student from Phoenix not the [$_{N}$,one] from Tucson

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One replacement

- The student from Phoenix not the [$_{N'}$one] from Tucson
- *The student of linguistics not the one of chemistry

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One replacement

- The student from Phoenix not the [$_{N'}$one] from Tucson
- *The student of linguistics not the one of chemistry

For those of you who find the last sentence grammatical, your rule targets both N and N' and this test won't work for you to distinguish adjuncts from complements

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Telling complements from adjuncts

You should be able to list an example or two of these on the exam

Complements	*Adjuncts*
only 1	multiple allowed
closest to head	may be separated from head
cannot be reordered	can be reordered
conjoin with complements	conjoin with adjuncts
*[one]+complement	✓[one]+adjunct

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An easy mistake to make!

- When you have only one PP modifier or AdjP modifier, be very careful to see if it is a complement or adjunct. If it is an adjunct it must be a sister to the X' level!!!!!

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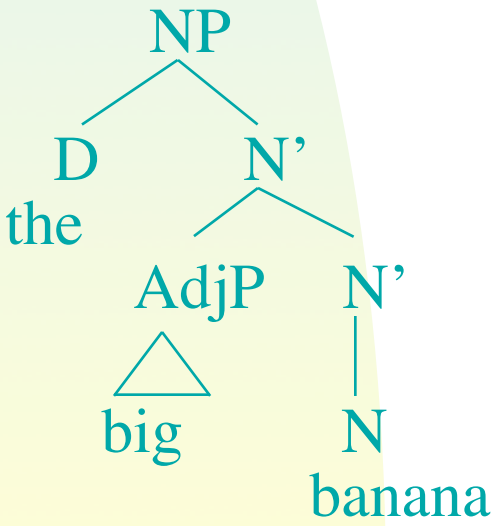

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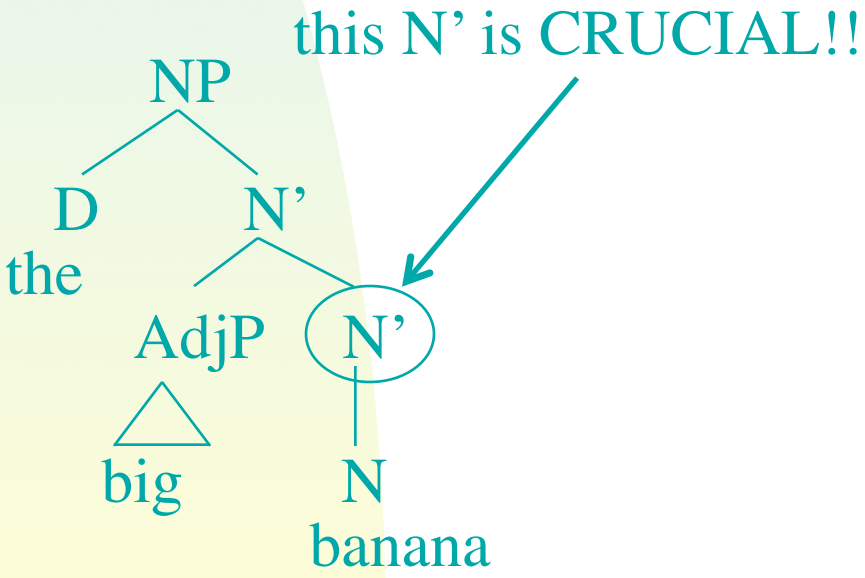

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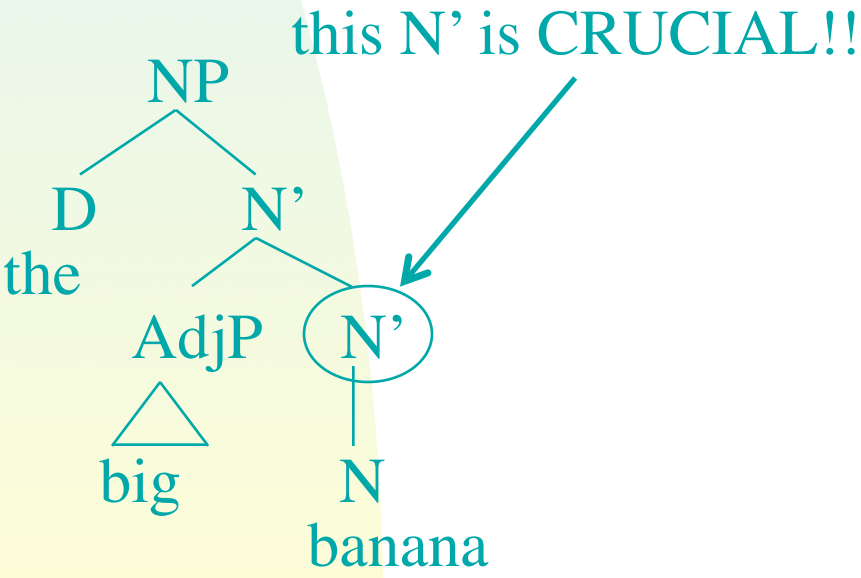

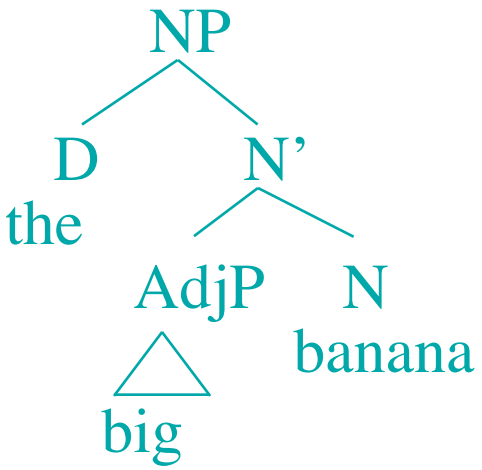

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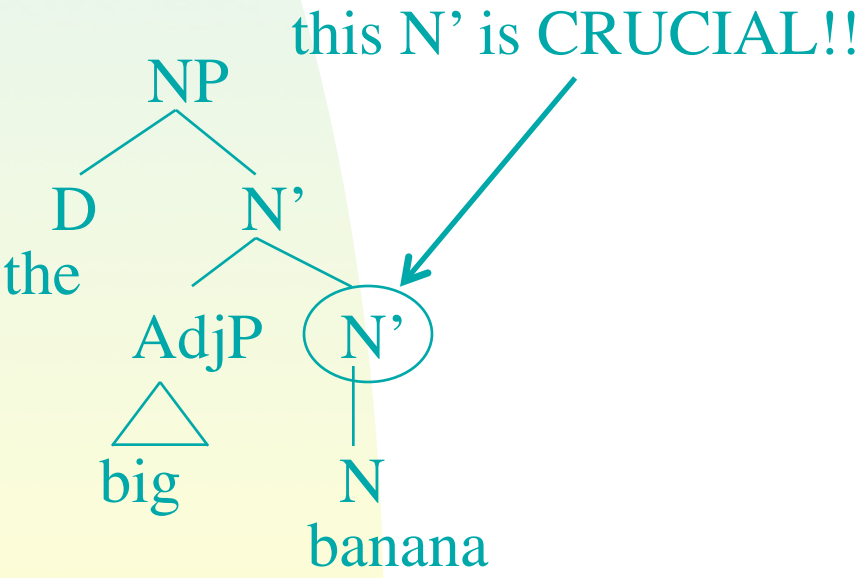

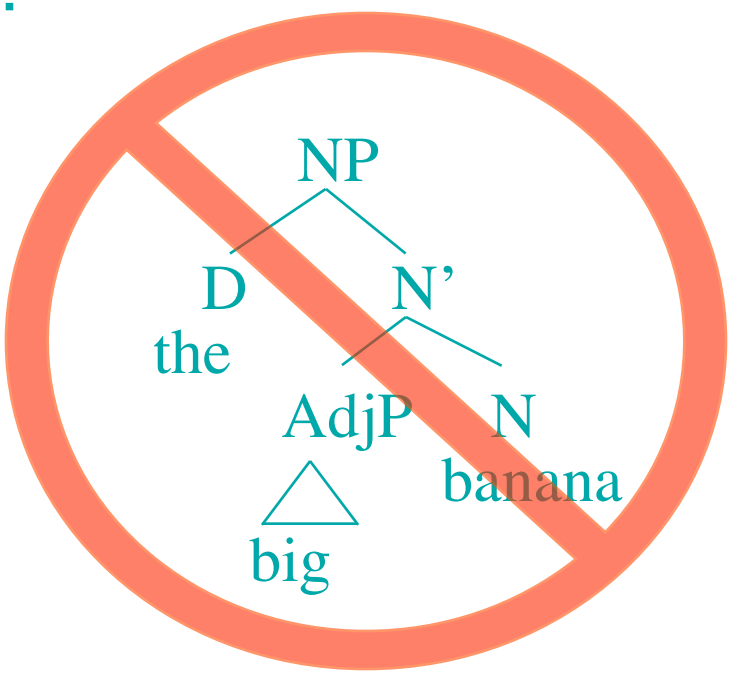

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The complement/adjunct distinction in VPs

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The complement/adjunct distinction in VPs

- John [$_{VP}$ often eats apples with a fork]

  adjunct head complement adjunct

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The complement/adjunct distinction in VPs

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  adjunct head complement adjunct

- In VPs, the direct object is always the complement. (Almost) everything else is an adjunct.

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The complement/adjunct distinction in VPs

- John [$_{VP}$ often eats apples with a fork]

  adjunct head complement adjunct

- In VPs, the direct object is always the complement. (Almost) everything else is an adjunct.
- (Exception to the rule: the verbs give and put take two complements a NP and PP.)
  - I gave the apple to John (both are complements)
  - I put the book on the table

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I loved the policeman intensely with all my heart

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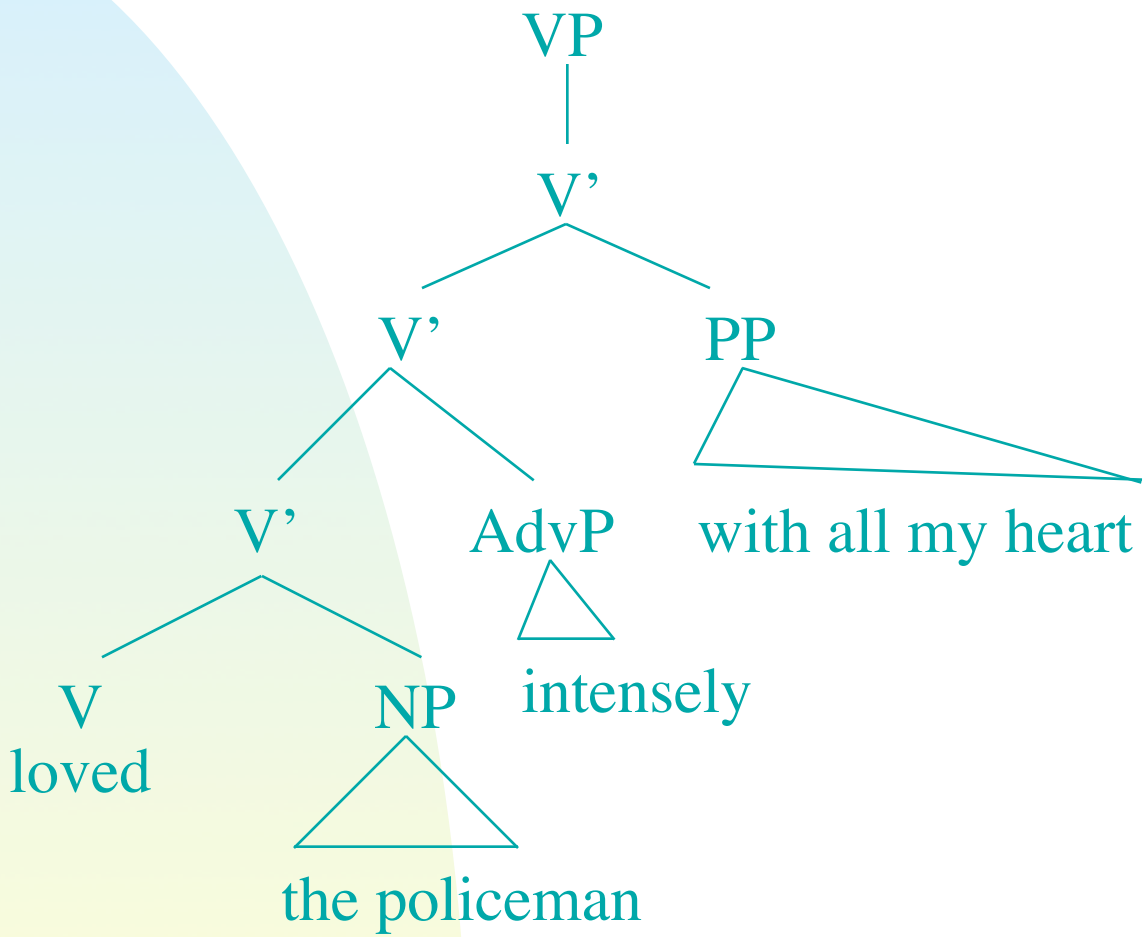
I loved the policeman intensely with all my heart



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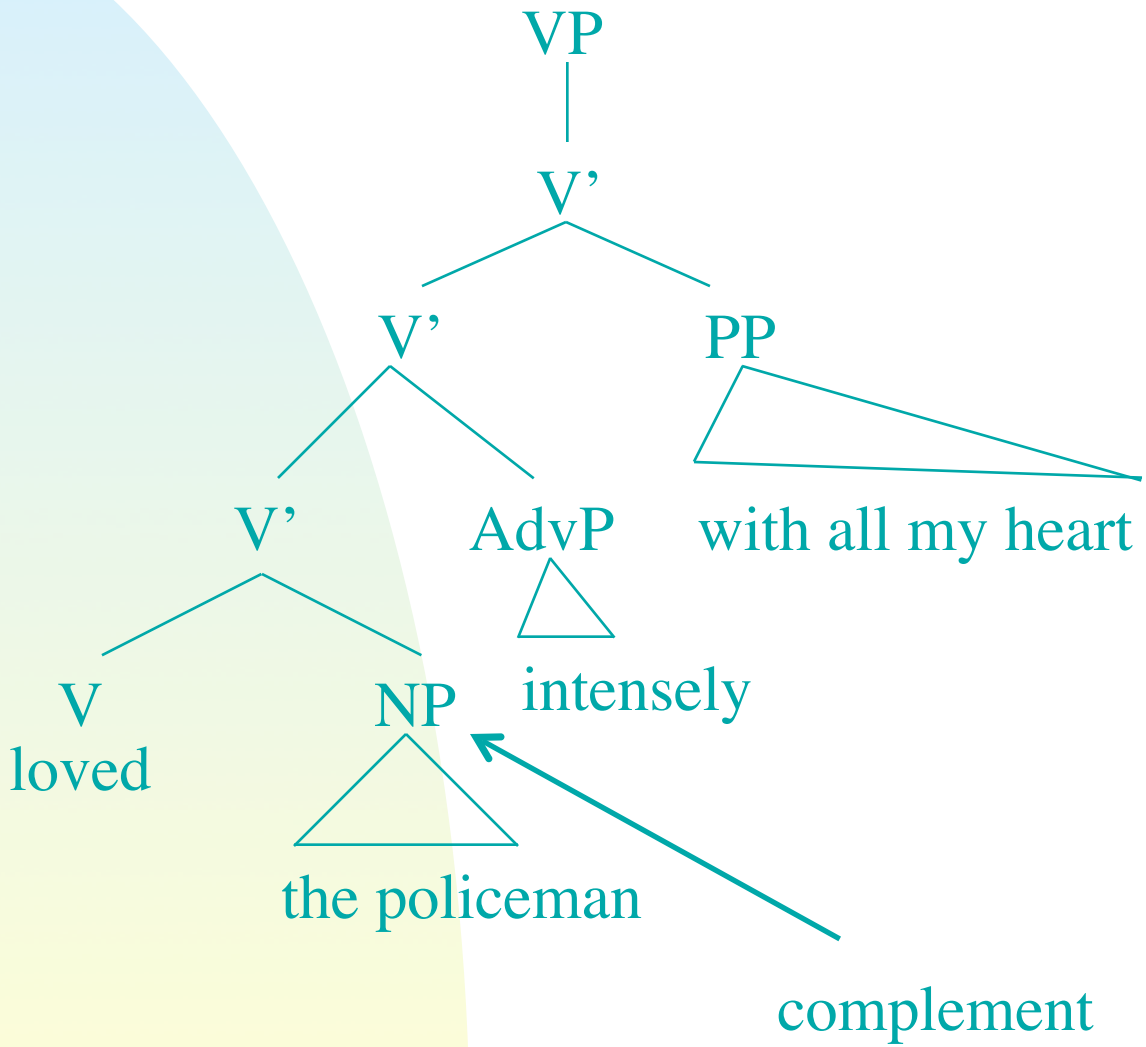

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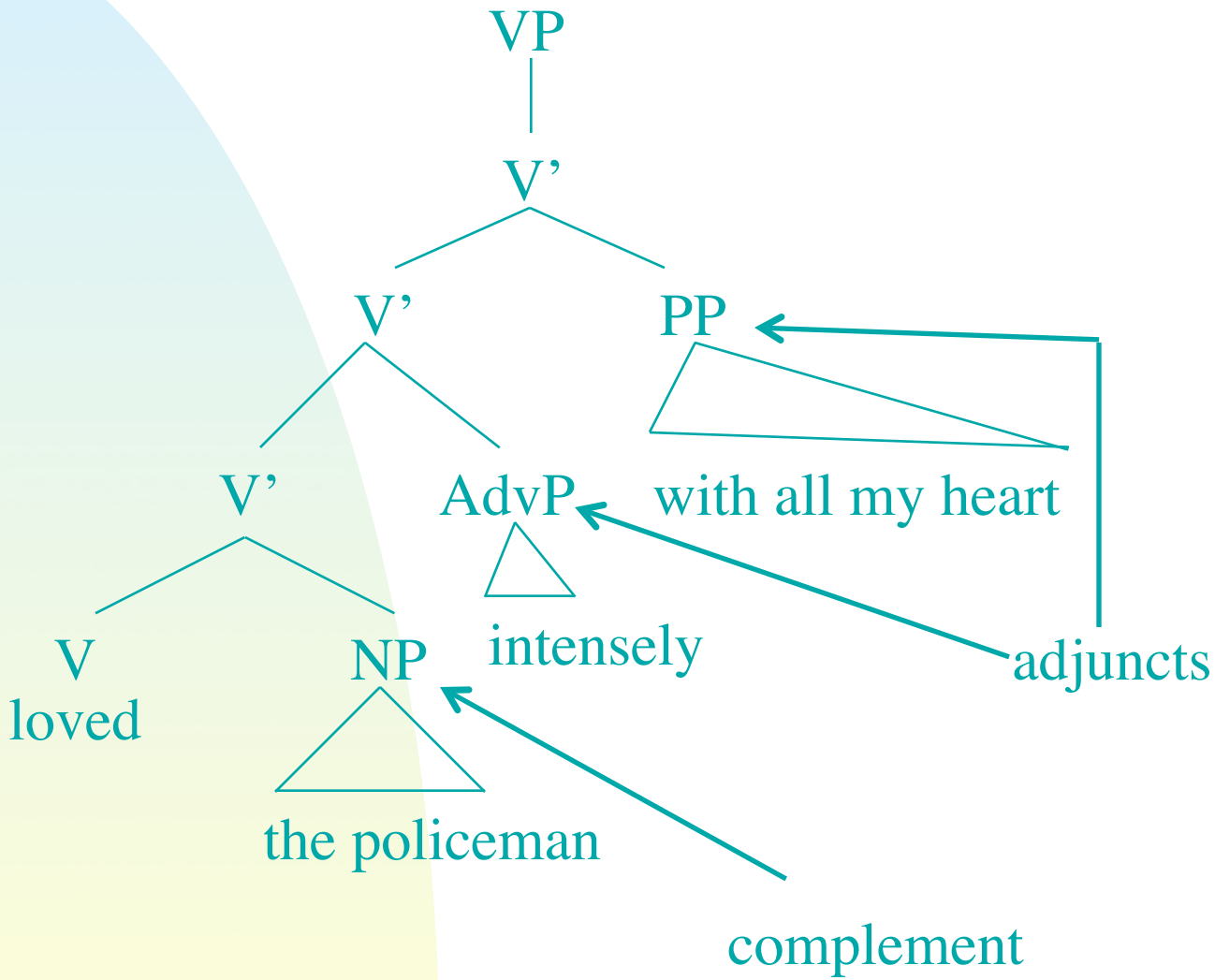
I loved the policeman intensely with all my heart



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- Only 1 complement
  - *I loved the policeman the fireman

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- Only 1 complement
  - *I loved the policeman the fireman
- Reordering
  - I loved the policeman with all my heart intensely
  - I loved the policeman intensely with all my heart
  - *I loved intensely the policeman with all my heart
  - *I loved intensely with all my heart the policeman

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- Only 1 complement
  - *I loved the policeman the fireman
- Reordering
  - I loved the policeman with all my heart intensely
  - I loved the policeman intensely with all my heart
  - *I loved intensely the policeman with all my heart
  - *I loved intensely with all my heart the policeman
- Conjunction
  - I loved the policeman and the fireman
  - I loved the policeman intensely and with all my heart
  - *I loved the policeman and intensely

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- *Do so* replacement

  Susan loved the policemen intensely with all her heart but/and

  - Mary did so with her brain!
  - Mary did so mildly with her brain
  - *Mary did so the fireman

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AdjPs and PPs???

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AdjPs and PPs???

- Evidence is much weaker.
  - very afraid of tigers
    adjunct head complement
  - very in love with himself
    adjunct head complement adjunct

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AdjPs and PPs???

- Evidence is much weaker.
  - very afraid of tigers
    adjunct head complement
  - very in love with himself
    adjunct head complement adjunct
- We will assume the distinction exists here for parsimony reasons (that is, to make the theory pretty)

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Specifiers

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Specifiers

- The only element we have seen in specifiers so far is the determiner. In the next chapter, we'll argue that even these aren't real specifiers.

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STAY TUNED FOR EXCITING DEVELOPMENTS ON SPECIFIERS

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Summary

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- Specifier: sister to X', daughter of XP

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- Specifier: sister to X', daughter of XP
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- Specifier: sister to X', daughter of XP
- Adjunct: sister to X', daughter of X'
- Complement: sister to X, daughter of X'

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Summary

- Specifier: sister to X', daughter of XP
- Adjunct: sister to X', daughter of X'
- Complement: sister to X, daughter of X'
- X-bar theory predicts differences in behavior between complements and adjuncts
  - only one complement, multiple adjuncts
  - complement must be closest to head
  - adjuncts can be reordered
  - conjunction
  - *One/did so + complement

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Summary

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- Complement/Adjunct distinction hold of pre-head material too.

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Summary

- Complement/Adjunct distinction hold of pre-head material too.
- The C/A distinction can capture ambiguity
- There is strong evidence for the C/A distinction in NPs and VPs
- The evidence for AdjPs/AdvPs and PPs is weaker
- We are leaving specifiers aside for the moment as something to be dealt with later.

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