Where am I?

- HUL242: **Fundamentals of Language Sciences**
- **Syntax (Lecture-6)**
- Monday, April 7

Constituents

- A group of words that functions together as a unit in the Syntax.

- There's something natural about constituency-
  - The constituents in a sentence "hang together" in a way the non-constituents do not.

- Some constituency tests
  - The fragment test
  - Substitution/replacement test
  - Movement tests

- Phrases are constituents.

Review: Constituents

1. John told Mary that he was watching a nice movie.

Q: Is **'a nice movie'** a constituent in (1)?

Fragment test:

- What did John tell Mary that he was watching?
  Ans: A nice movie (passed the test)

The replacement test:

1. John told Mary that he was watching a nice movie.
2. John told Mary that he was watching **it**. (passed the test)

Movement test:

- **A nice movie,** John told Mary that he was watching ____. (passed the test)

Constituency test

1. John told Mary that he was watching a nice movie

   - What about '**a nice**' ? Is '*a nice*' a constituent?

Fragment test:

- What did John tell Mary that he was watching?
  *a nice (failed the test)

The replacement test:

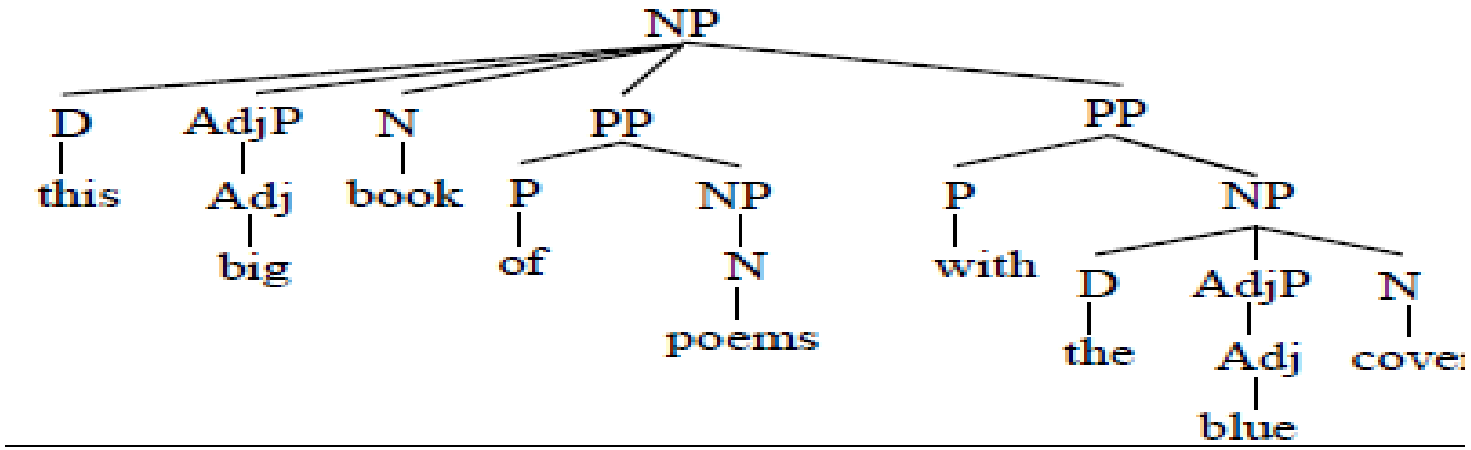
- *John told Mary that he was watching **it** movie. (failed the test)

Movement test:

- ***A nice,*** John told Mary that he was watching ____ movie. (failed the test)

More on constituents and their structural representation

- Consider the following NP “this big book of poems with the blue cover” and its flat structure

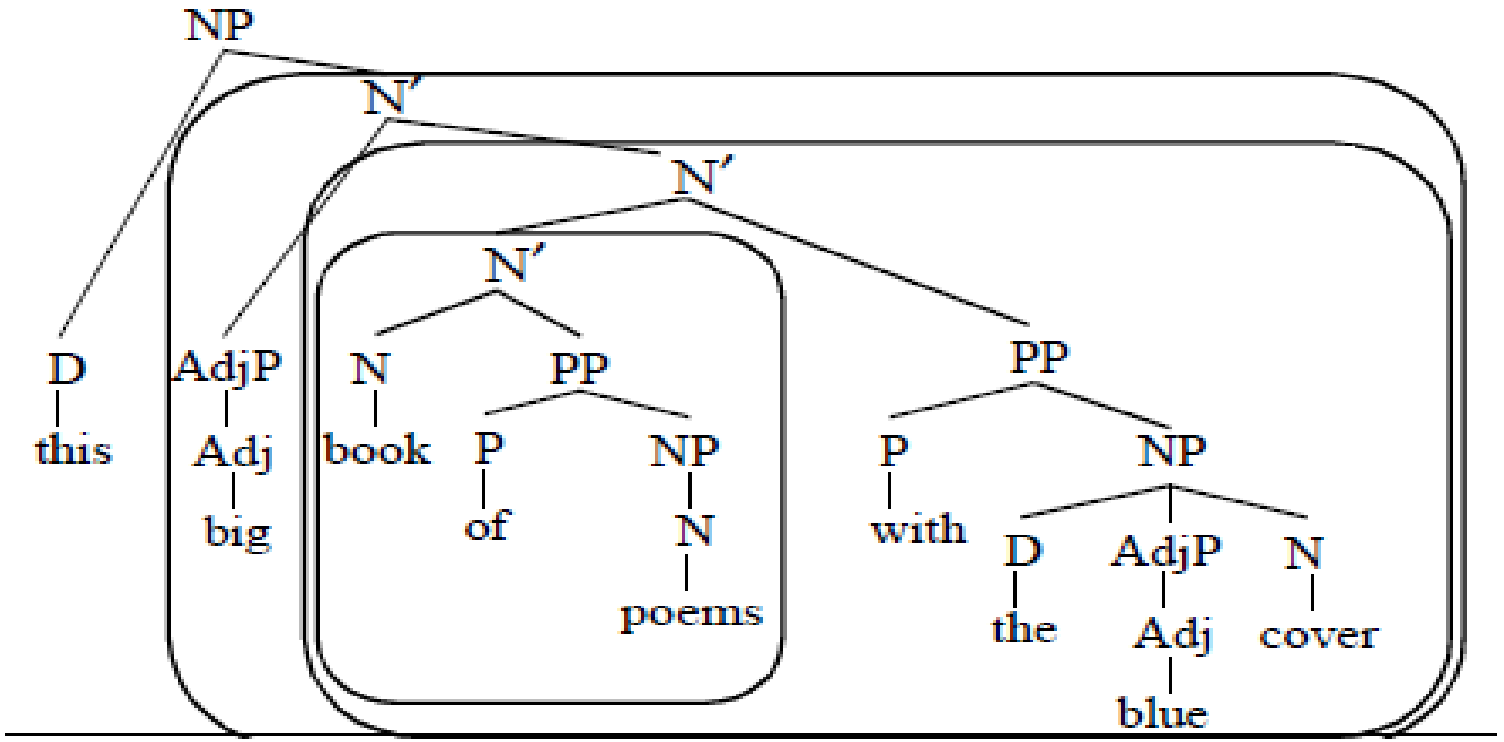


- Constituency test of replacement, called *one*-replacement, targets a group of nodes that don’t form a constituent in the above tree:

  - This big one
  - This big one with the blue cover
  - This one

More deeply embedded structure

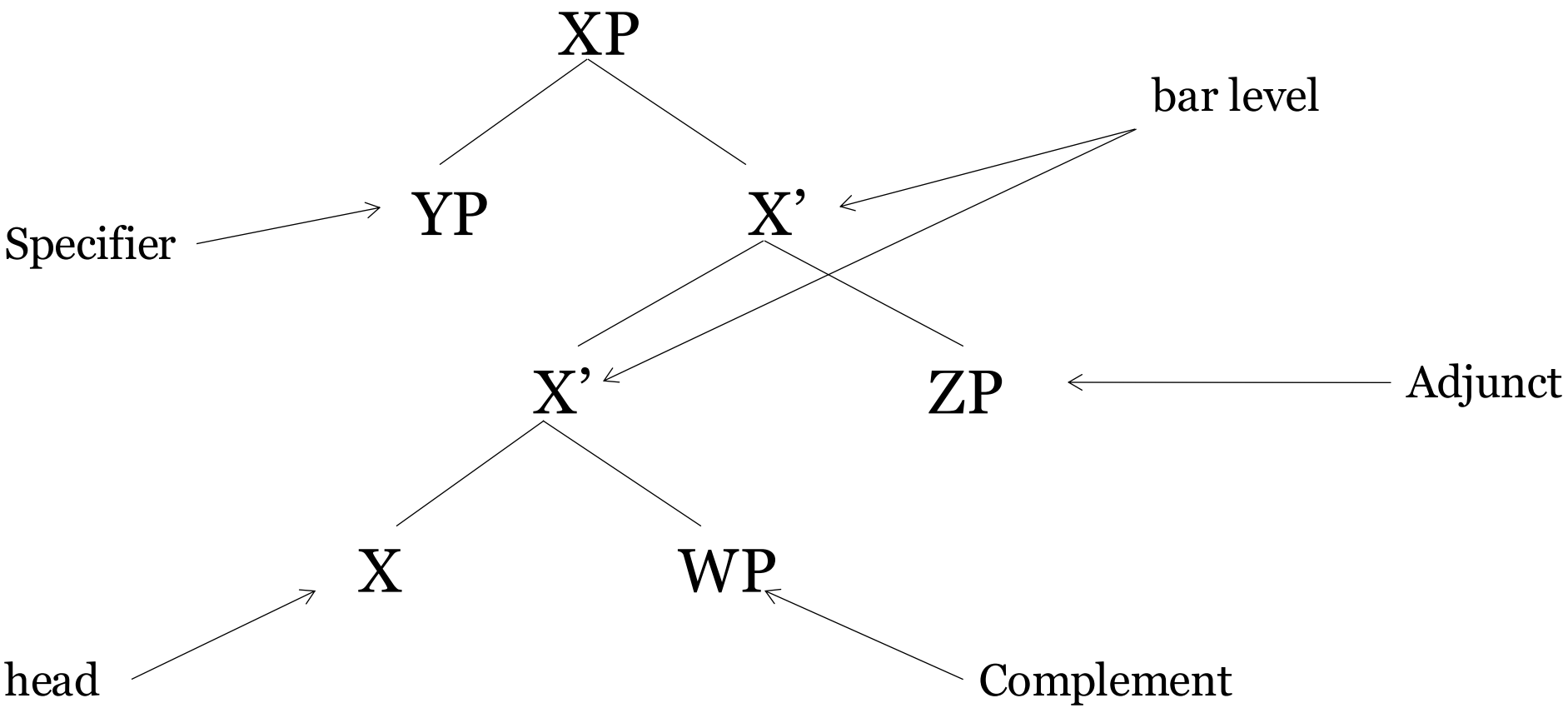
- X-bar structure
- Bar-level gives you an additional place where constituents are formed.



X-bar Theory

The X-bar structure

Here, WP, KP, ZP, and YP represent a phrase.



The X-bar theory

- XP ⟶ YP X’ (specifier rule)

  X’ ⟶ X’ ZP (adjunct rule)

  X’ ⟶ X WP (Complement rule)

Motivation: headedness

1. CP → (c) S or (c)TP
2. TP/S → {NP/CP} (T) VP
3. NP → (D) (AdjP+) N (PP+) (CP)
4. PP → P (NP)
5. AdjP → (AdvP) Adj
6. AdvP → (AdvP) Adv
7. VP → (AdvP+) V ({NP/CP}) ({NP/CP/PP}) (AdvP+) (PP+) (AdvP+)

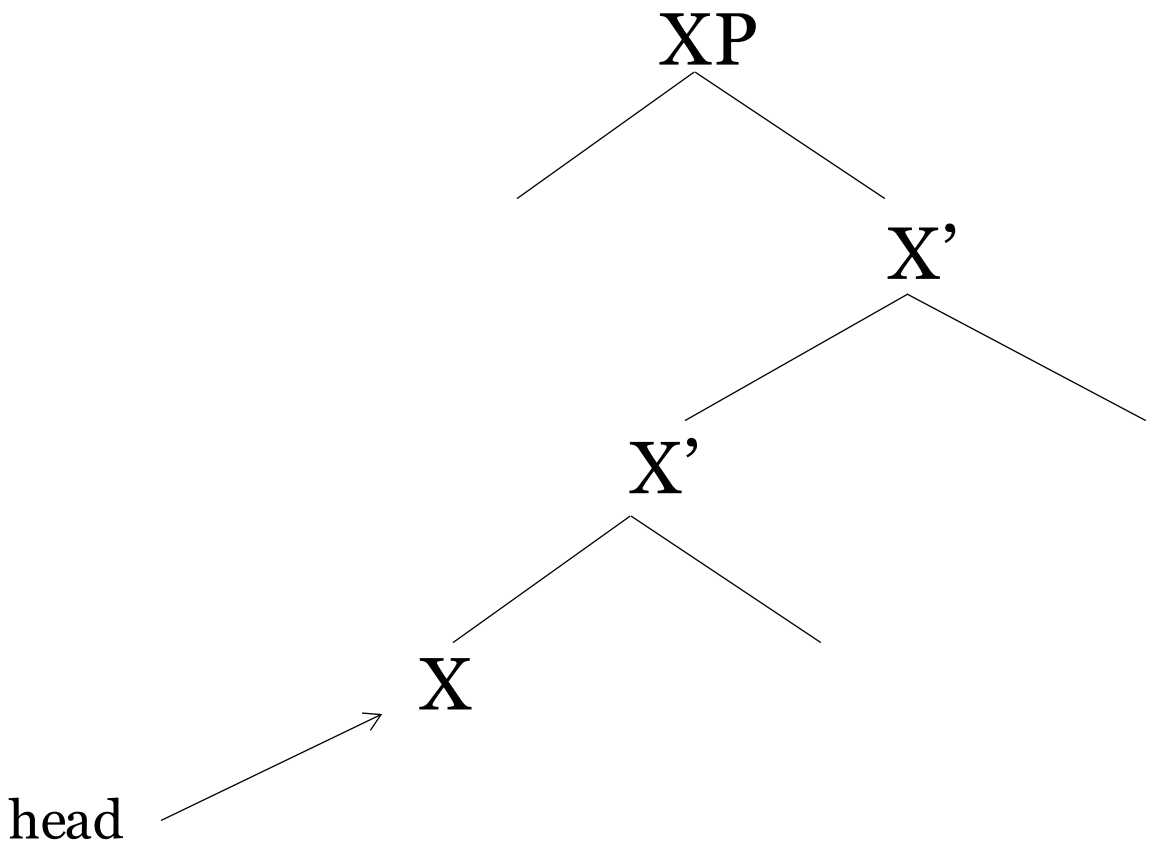
- Every phrase must have a head of the same category.

Motivation: headedness

- Every phrase must have a head of the same category.
- Cannot be explained by phrase structure rules. There is no principled explanation for why the NP rule is the way it is in (1) but not as in (2)

1. NP → (D) (Adj+) N (PP+)
2. NP → (D) (Adj+) V (PP+) (not found in a language)

The X-bar structure



- If X is N, then XP = NP
- If X is V, then XP = VP
- And so on

Motivation: complement vs. adjunct

- You can have any number of adjuncts, but you can only ever have one complement

(1) the book [of poem] [with a red cover] [from Blackwel] [by Robert Burns]

complement *adjunct* *adjunct* *adjunct*

(2) *the book [of poems] [of fiction] [with a red cover]

complement *complement* *adjunct*

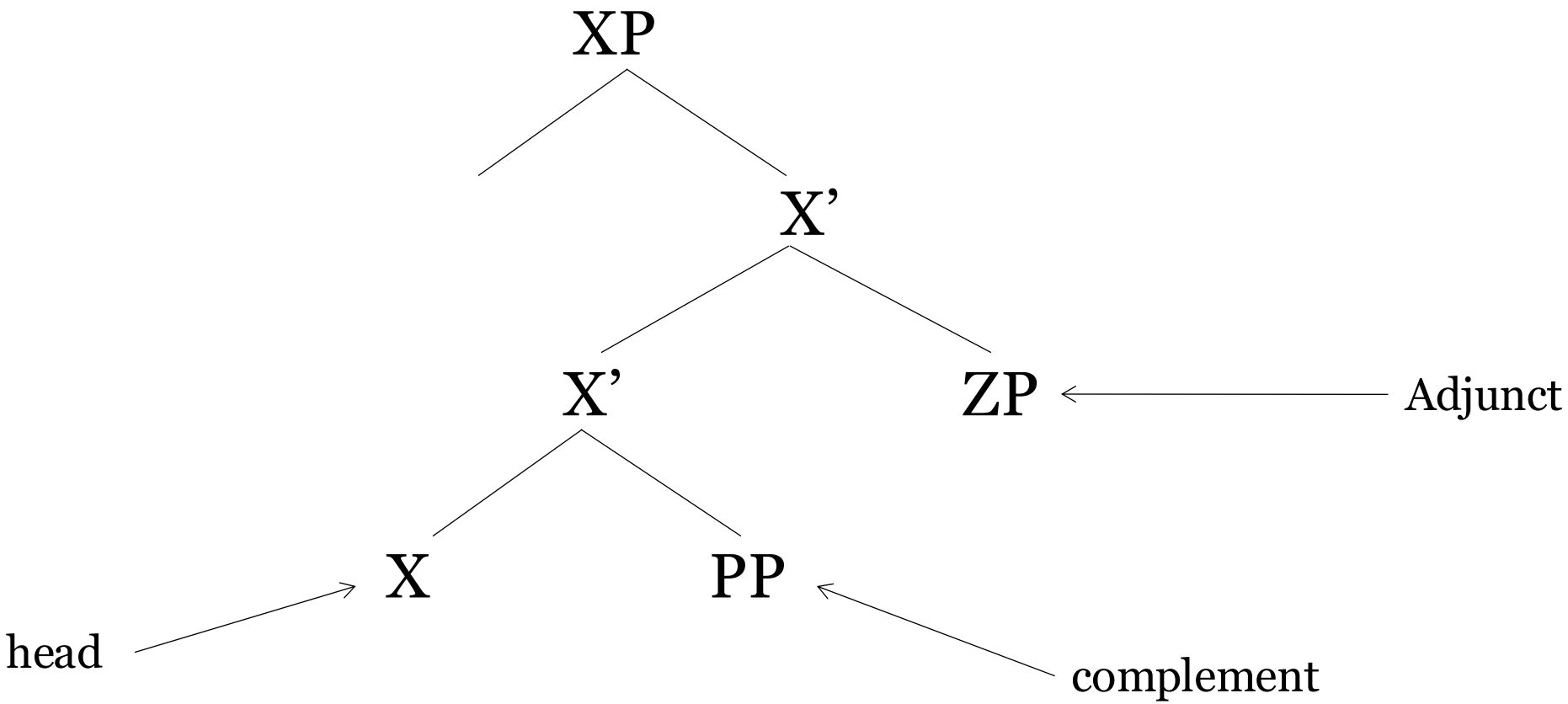
Motivation: complement vs. adjunct

- Also complements are always near to the head.

- You can generally reorder adjuncts with respect to one another, but you can never reorder a complement with the adjuncts

a) the book of poems with a red cover from Blackwell by Robert Burns
b) the book of poems from Blackwell with a red cover by Robert Burns
c) the book of poems from Blackwell by Robert Burns with a red cover
d) *the book with a red cover of poems from Blackwell by Robert Burns
e) *the book with a red cover from Blackwell of poems by Robert Burns

The X-bar structure



- The adjunct rule is an iterative rule: it takes an X'-level category and generates another X' category.
- The complement rule is not an iterative rule: it takes an X' and generates an X.

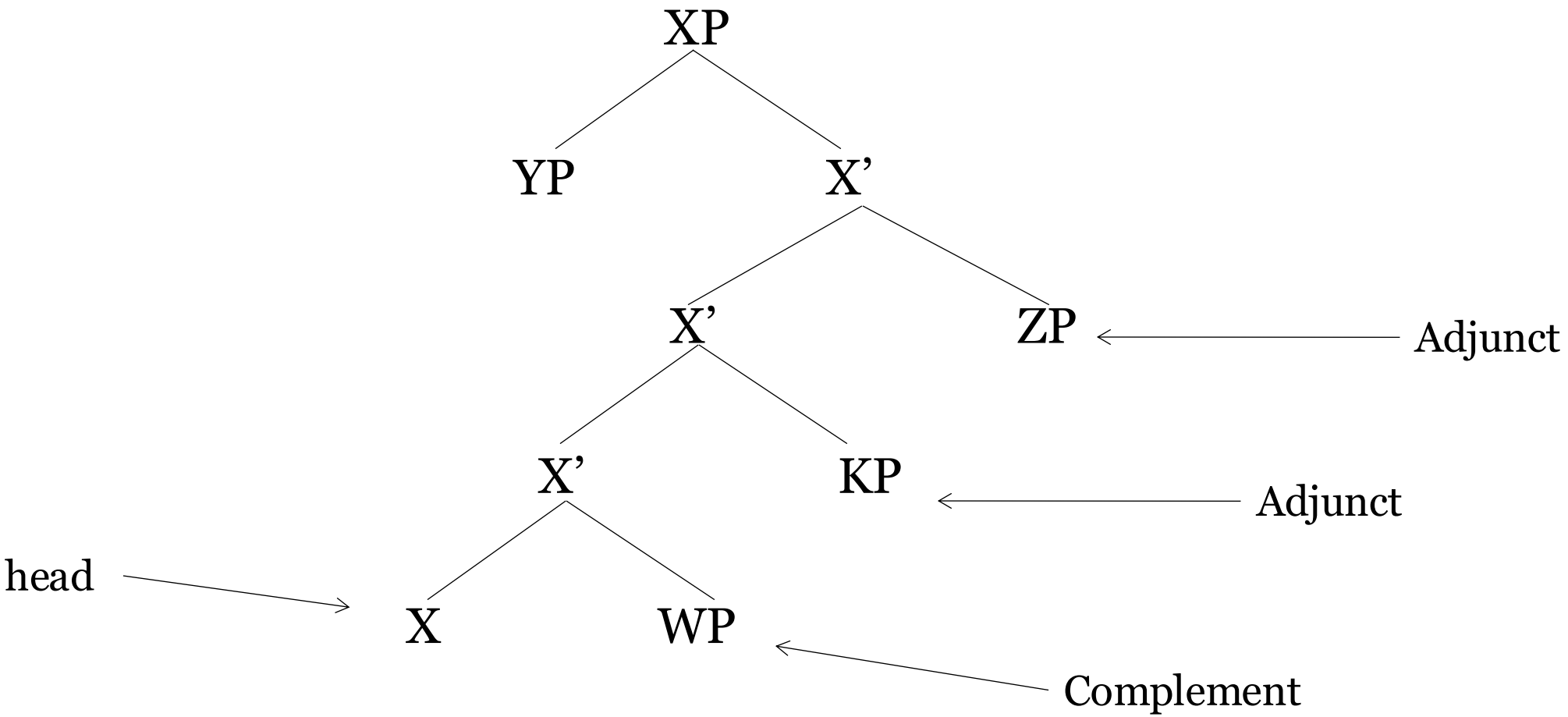
The X-bar structure

X’ → X’ ZP (adjunct rule)

X’ → X’ KP (adjunct rule)

X’ → X WP (complement rule)

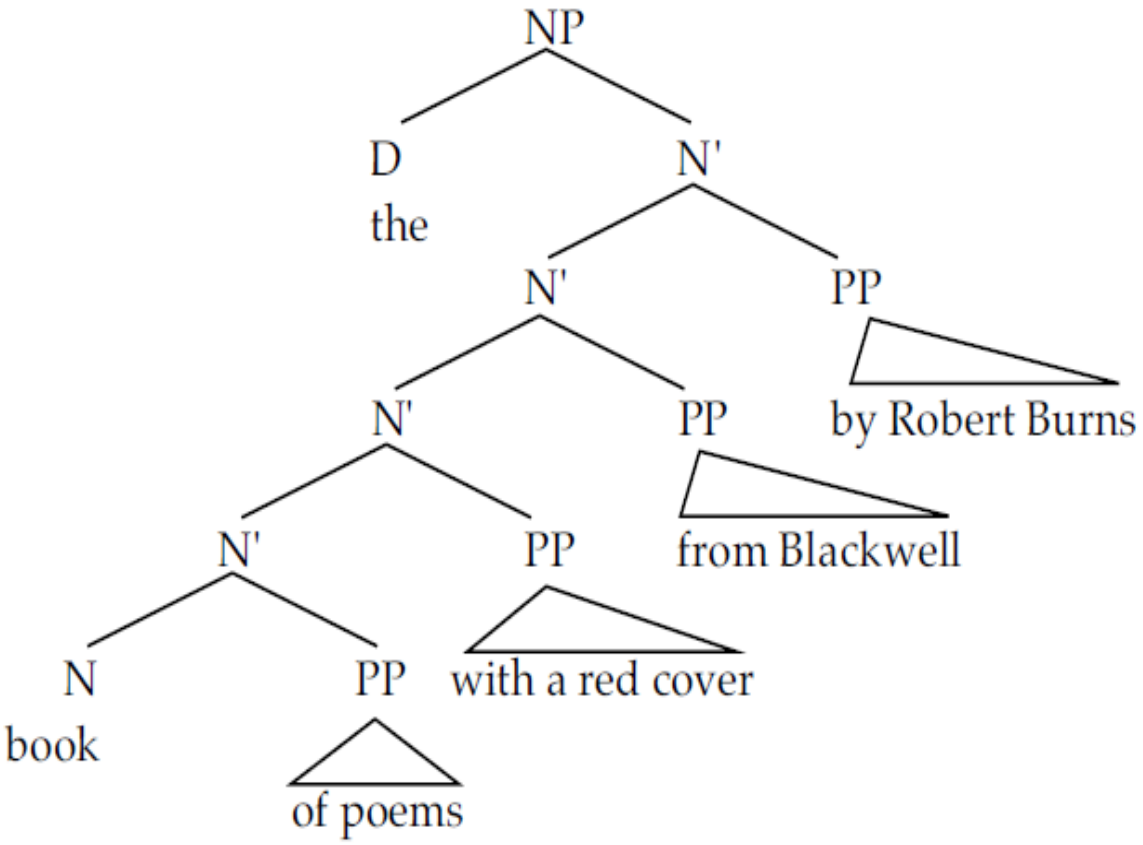
Here, WP, KP, ZP, YP represent a phrase.



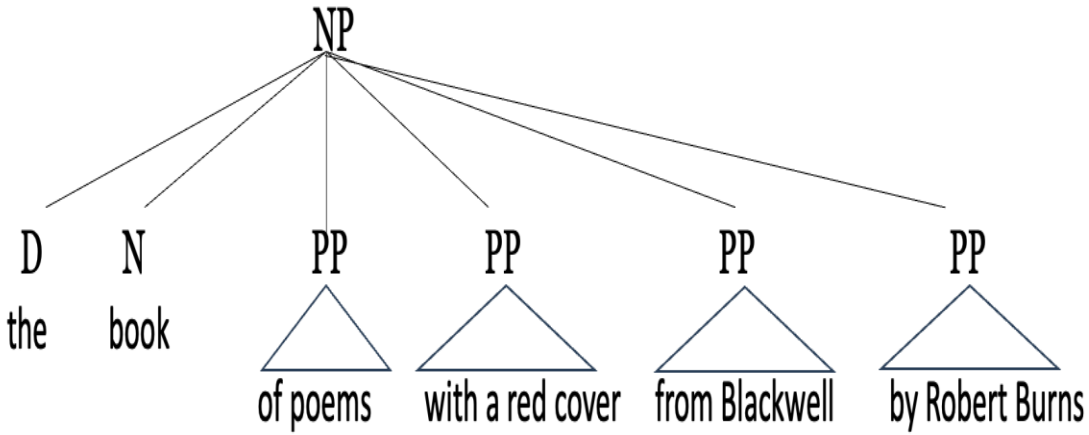
Motivation: complement vs. adjunct

- Compare (1) with its corresponding flat structure in (2).

(1)



(2)



Motivation: complement vs. specifier

- The specifier rule is not recursive, you can only have one specifier (unlike adjuncts)

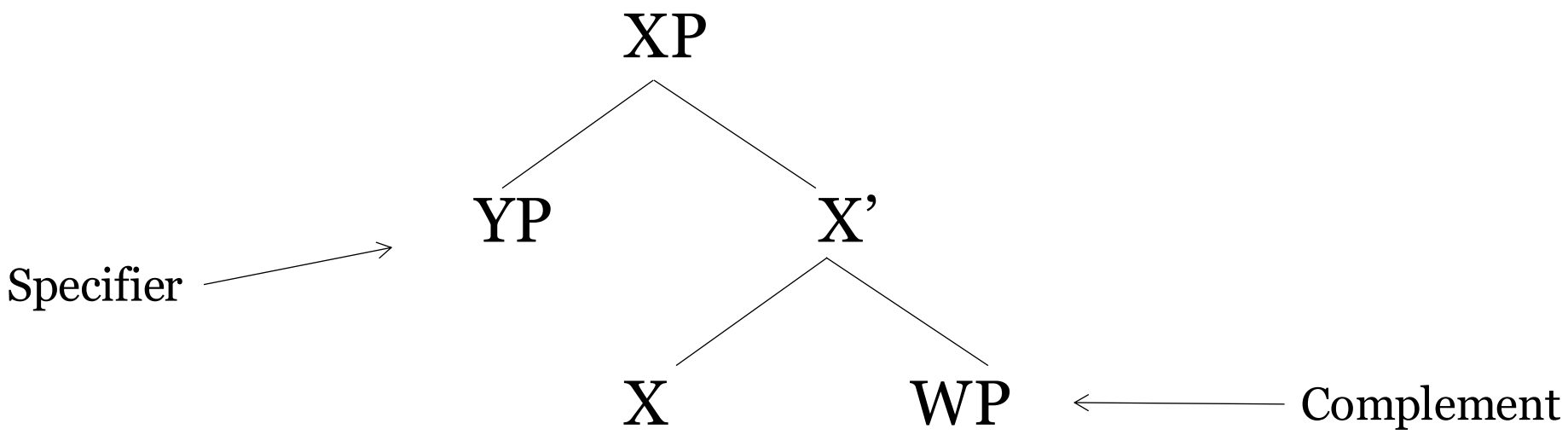
- A head has a special relation with the complement and not with the specifier
  - Idioms: head + complement, not head + specifier
  - Theta/semantic role: head assigns to complement, head + complement to specifier

- Specifier is the leftmost element. Thus, always higher than adjuncts and complements.

The X-bar theory/structure

XP → YP X’ (specifier rule)

X’ → XWP (complement rule)



The X-bar theory

- XP ⟶ YP X’ (specifier rule)

  X’ ⟶ X’ ZP (adjunct rule)

  X’ ⟶ X WP (Complement rule)

Conclusion: Motivation for X-bar structure

- Every phrase must have a head (of the same category)
- Distinction between complement and adjunct
- Distinction between arguments : complement vs. specifier
- Constituents and their structural representation
- Hierarchy is a crucial property of language

Conclusion: Syntax

- Sentences are formed not by basic word order, but by abstract principles of structure and movement.

- Syntax is the study of these principles.

Practice

Different types of Phrases and their X-bar structures

1. read the book quickly
2. a book from New York in the library
3. I will write a Hindi poem.
4. A woman bought a book from India.