

Wh-movement

movement of question phrases

Another Terminological Point



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- A Movement is the same thing as DP movement
 - Subtypes: Passive, SSR, SOR, movement of subject from VP internal subject to spec, TP

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 - Subtypes: Passive, SSR, SOR, movement of subject from VP internal subject to spec, TP
- A' (A-bar) Movement is the same thing as Wh-movement
 - Subtypes: Wh-movement, topicalization, relative clause formation

Two kinds of Questions



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■ Yes/No questions:

- Did you see the octopus? yes/no /*dog
 - Have you eaten yet? yes/no /*apple

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■ Yes/No questions:

- Did you see the octopus? yes/no /*dog
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■ Wh-questions

- Who was here last week? Howard /*no
 - What do you have there? Nail clippers /*yes

Wh words

who
what
which X

whose X

where
when
why
how

Usually arguments

Usually adjuncts

Wh words

who
what
which X

Usually arguments

whose X

Can be either adjunct or argument

where
when
why
how

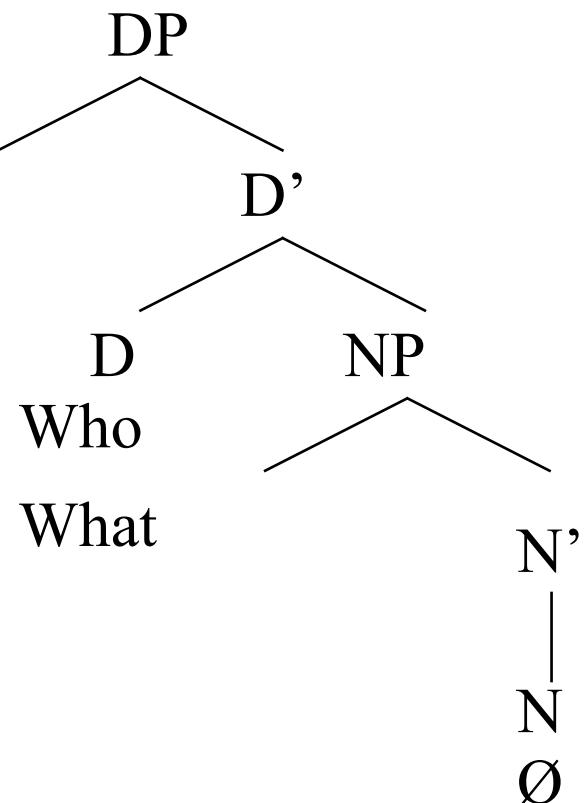
Usually adjuncts

Wh-phrases are what move

- We move wh-*phrases*,
- *Who, What, Which, Whose* are determiners:

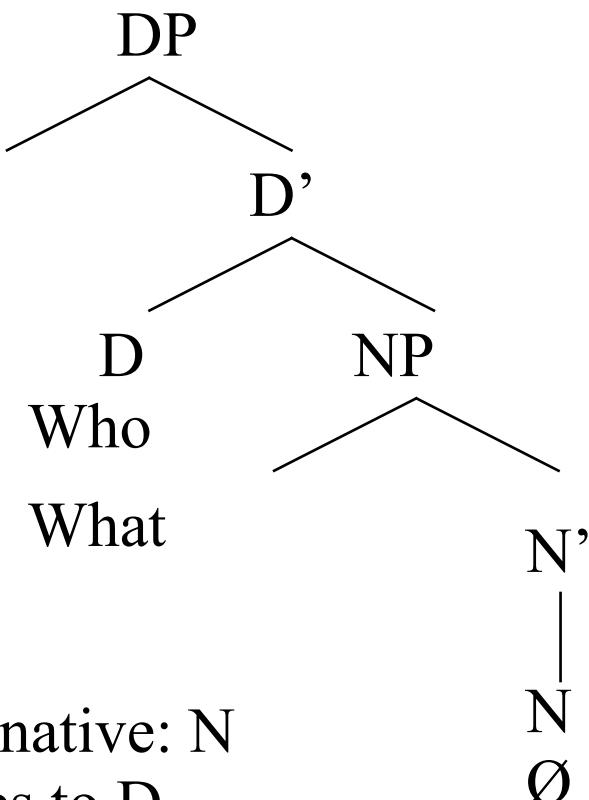
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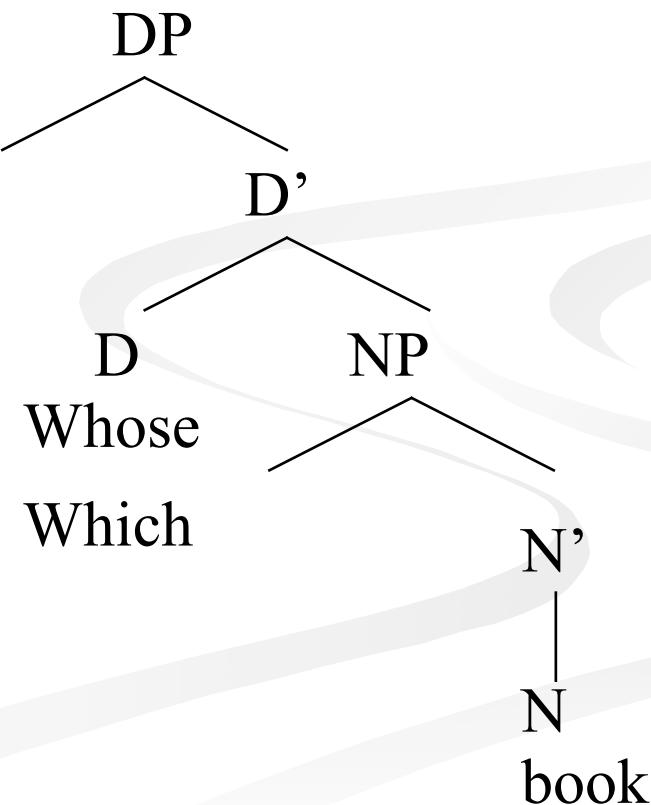
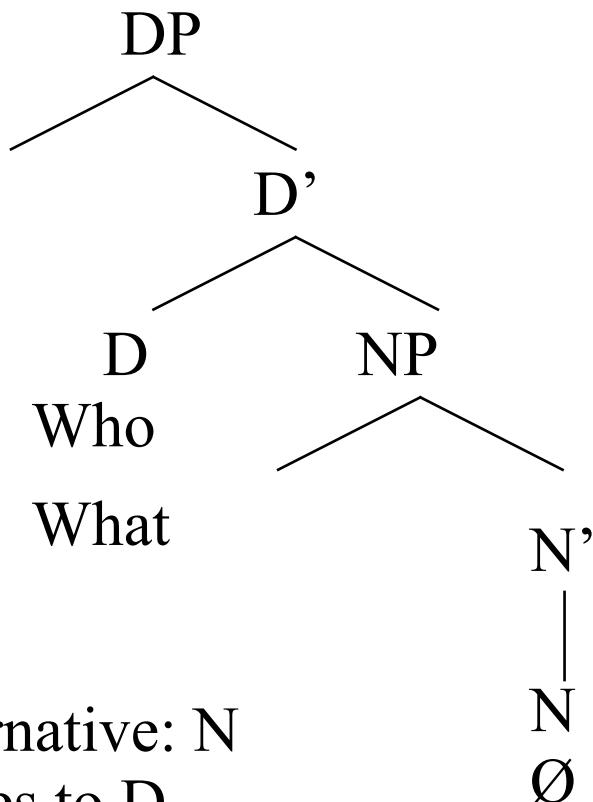
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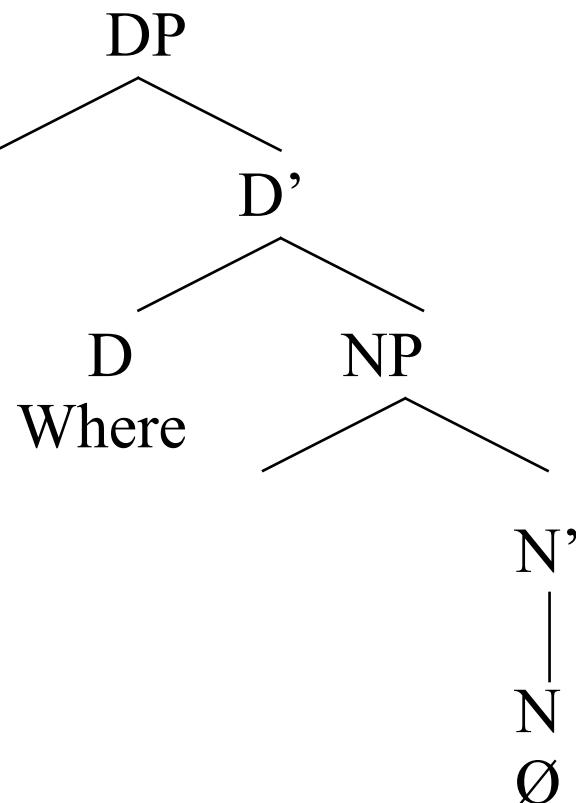


Wh-phrases are what move

- *Where* is sometimes a determiner
 - Where did John go to (cf. John went to school)
- And sometimes an Adverb
 - Where did John go (cf. John went home)

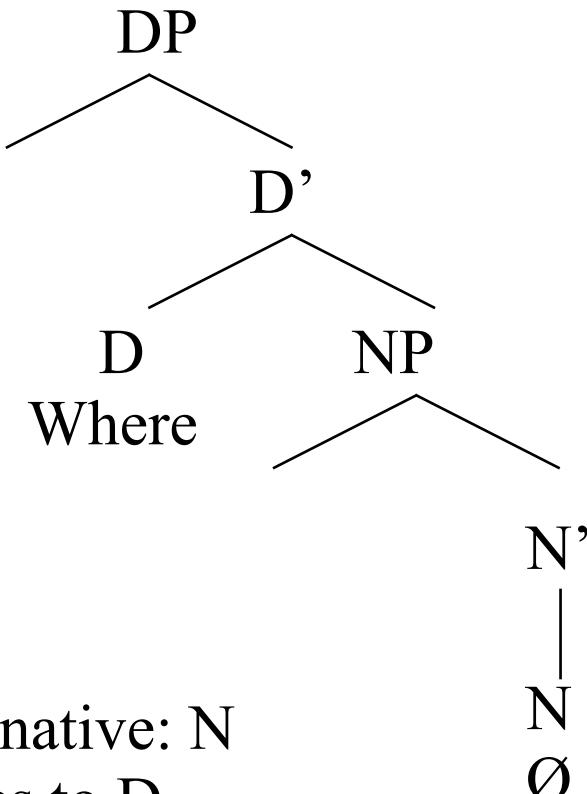
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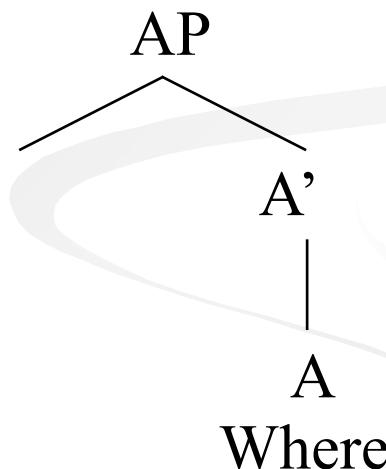
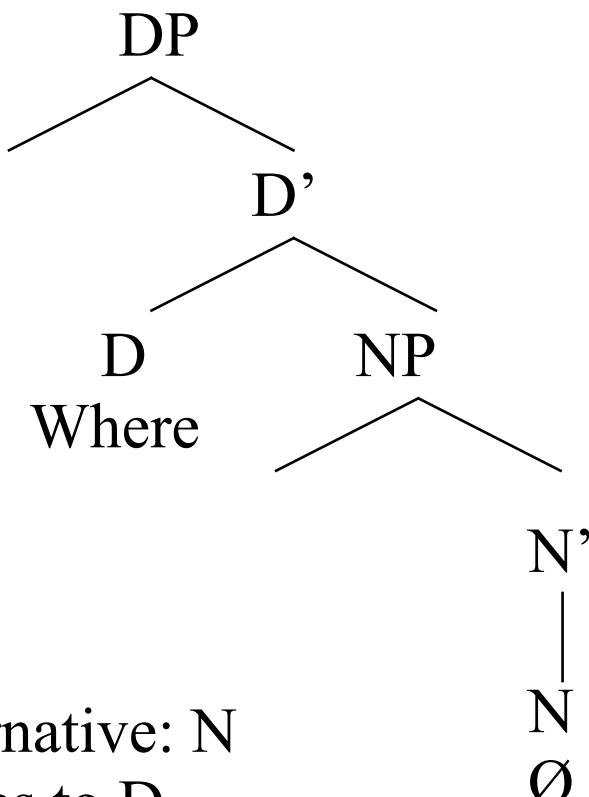
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Alternative: N
moves to D

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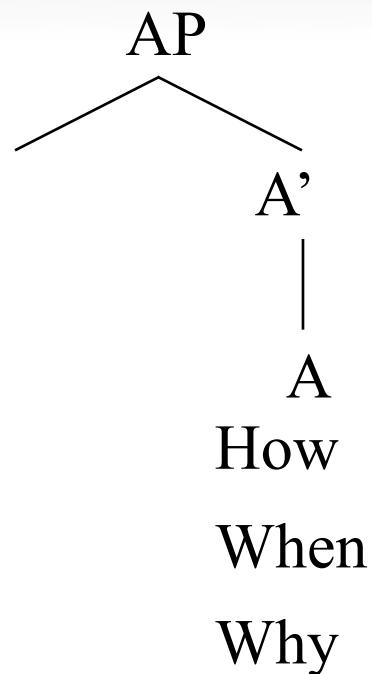


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- *How, When, Why* are usually adverbs

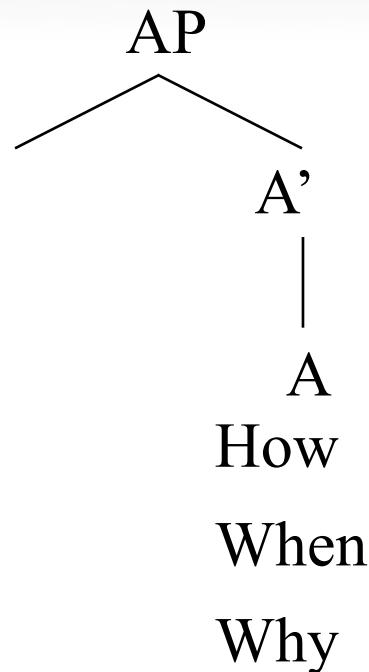
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REMEMBER:
The *whole* phrase
moves, not just the head

Wh-questions involve movement

- I bought a book
- What did you buy _____
 ↑

Where from?

What did you say [_____ was hit _____]



Where from?

What did you say [_____ was hit _____]

↑
gets theta
role here

cf. John hit the ball

Where from?

What did you say [_____ was hit _____]

gets case here

↑

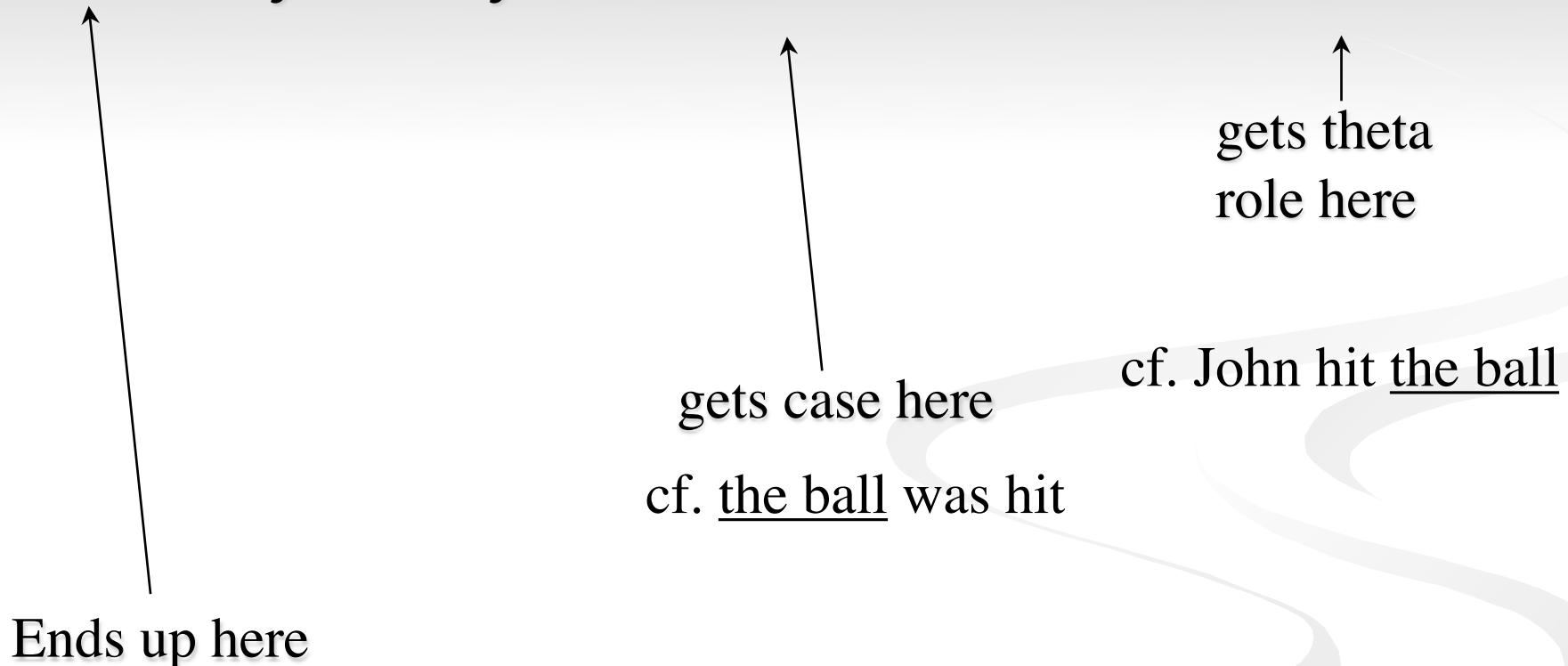
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cf. John hit the ball

cf. the ball was hit

Where from?

What did you say [_____ was hit _____]



Where to?

What have you seen _____



Where to?

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subject aux inversion:

means Aux is in C

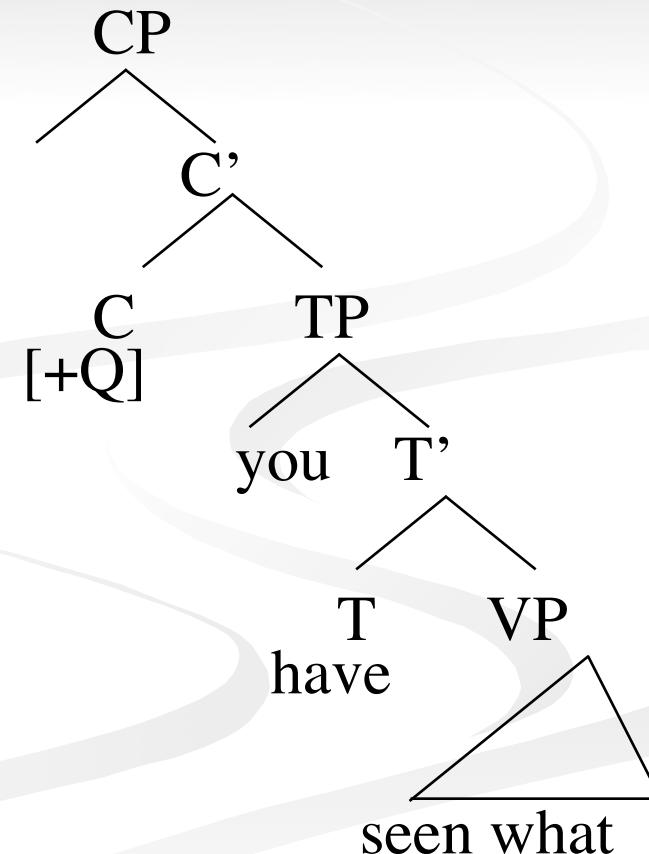


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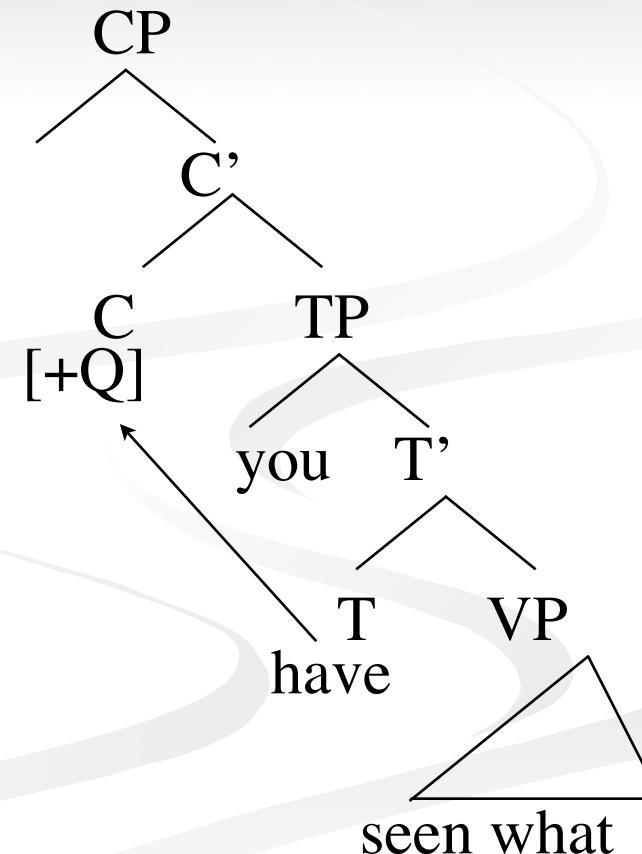


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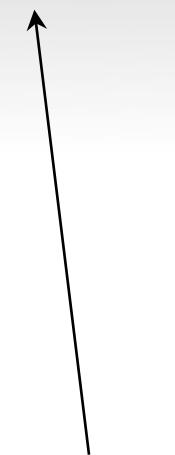
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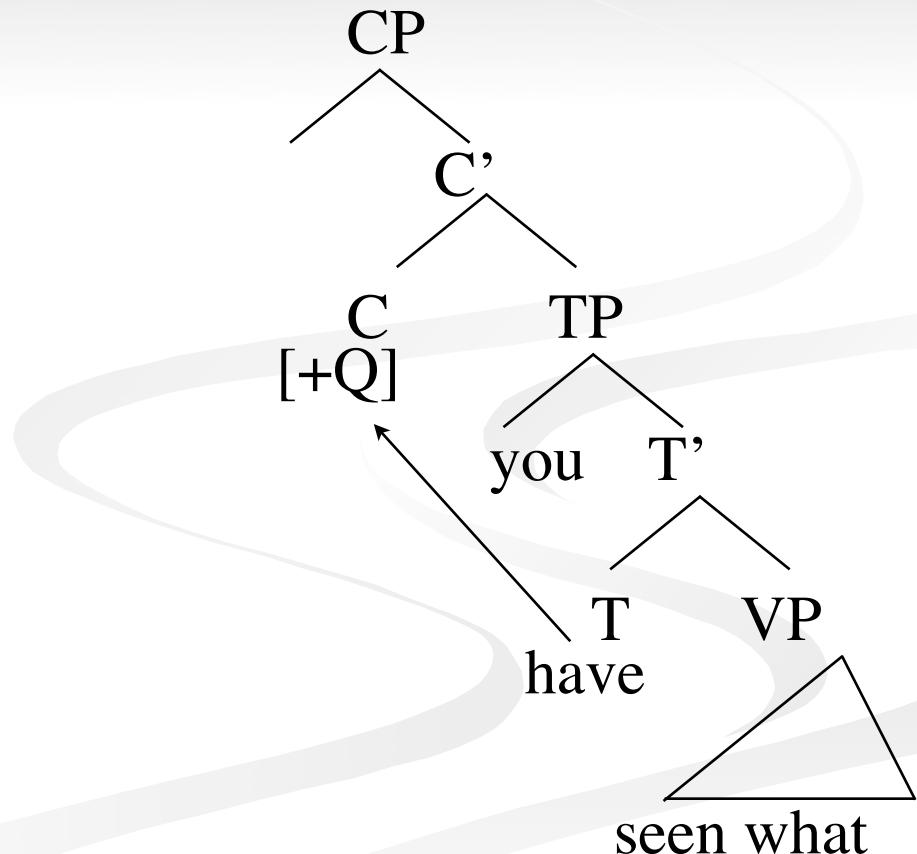
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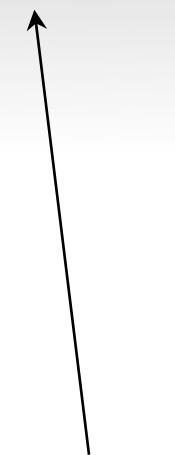
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Wh-word precedes C --
specifier of CP



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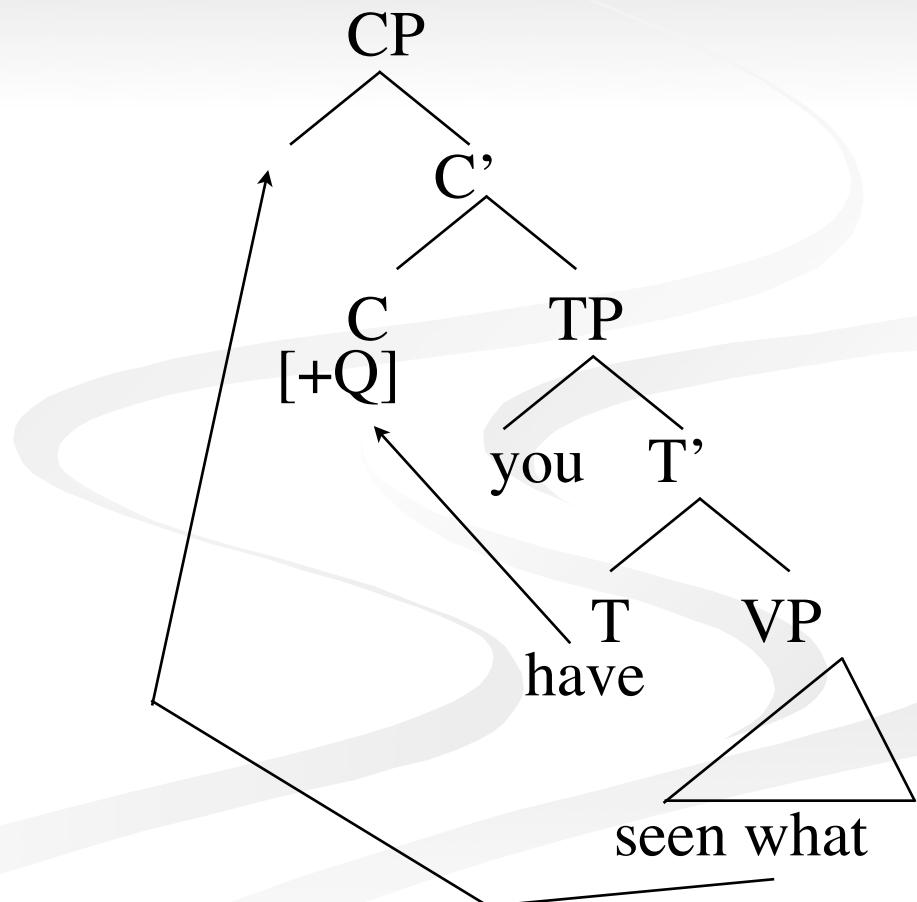
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Movement of T to C is motivated by [+Q]

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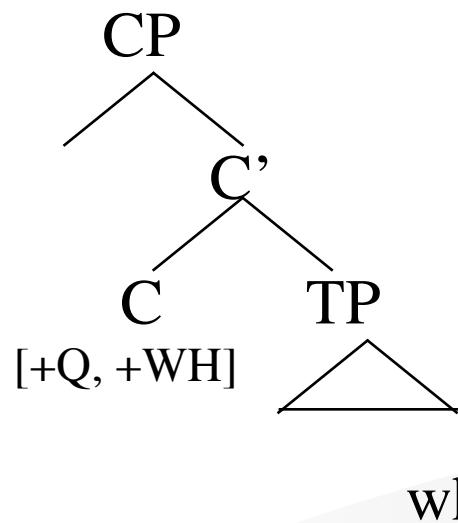
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Proposal: there is a [+WH] feature in C, the *wh*-word must get close to it.

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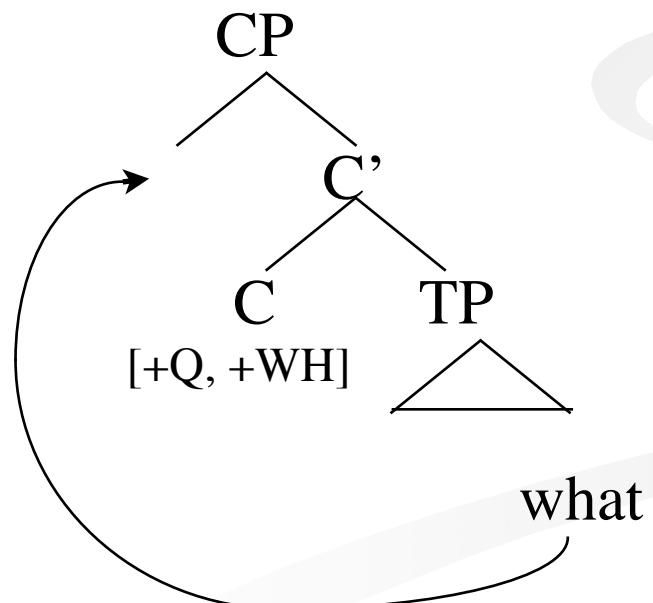
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[+WH] Complementizers

Cé a^L bhí sa seomra?

Who that-wh was in-the room

“Who was in the room”

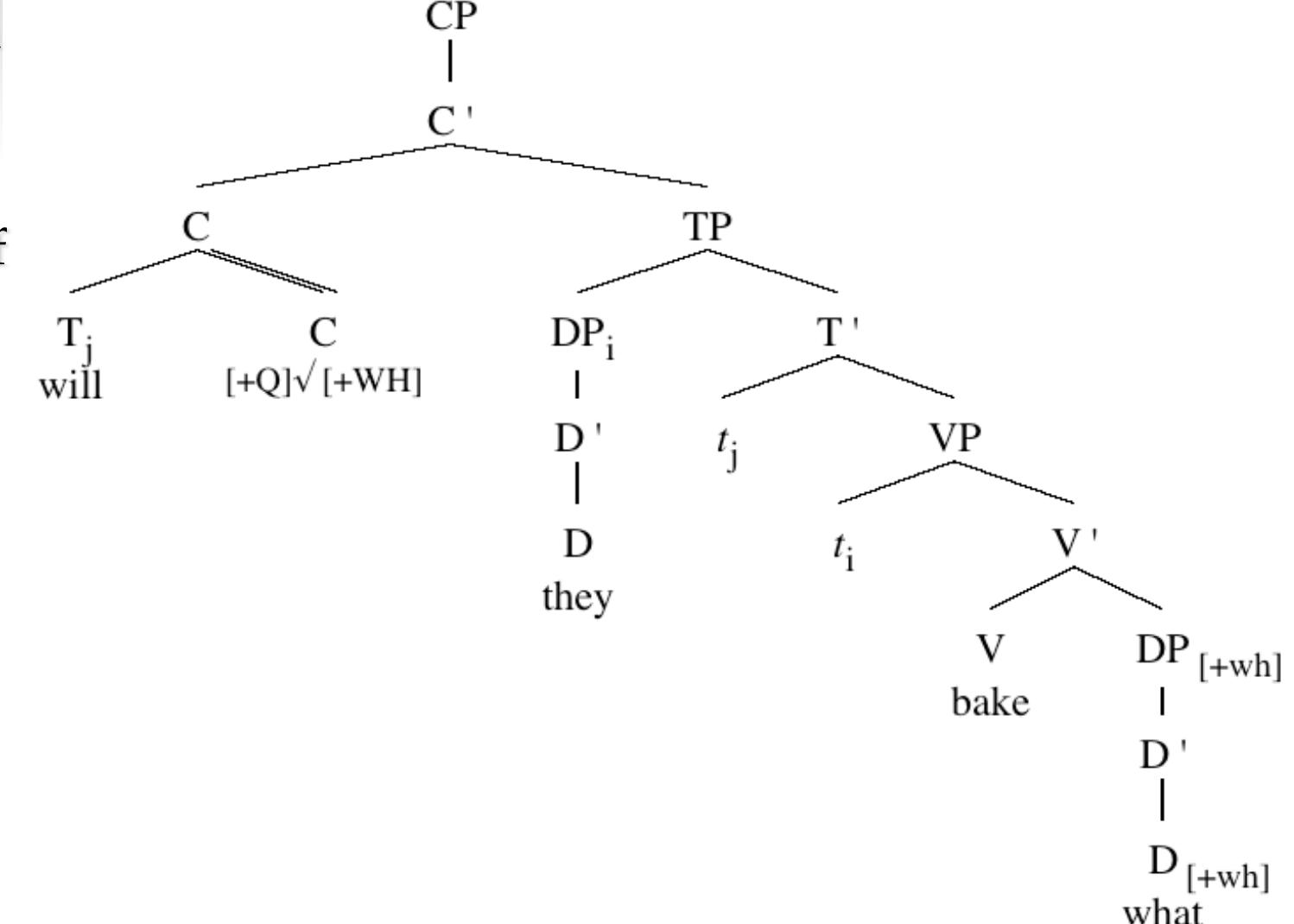
Motivations for movements

Wh-questions

- 1 thing to solve:

- [+Q] C needs T
- [+WH] C needs a [+wh] spec.

- Head-movement** of *will* to C will check the Q feature

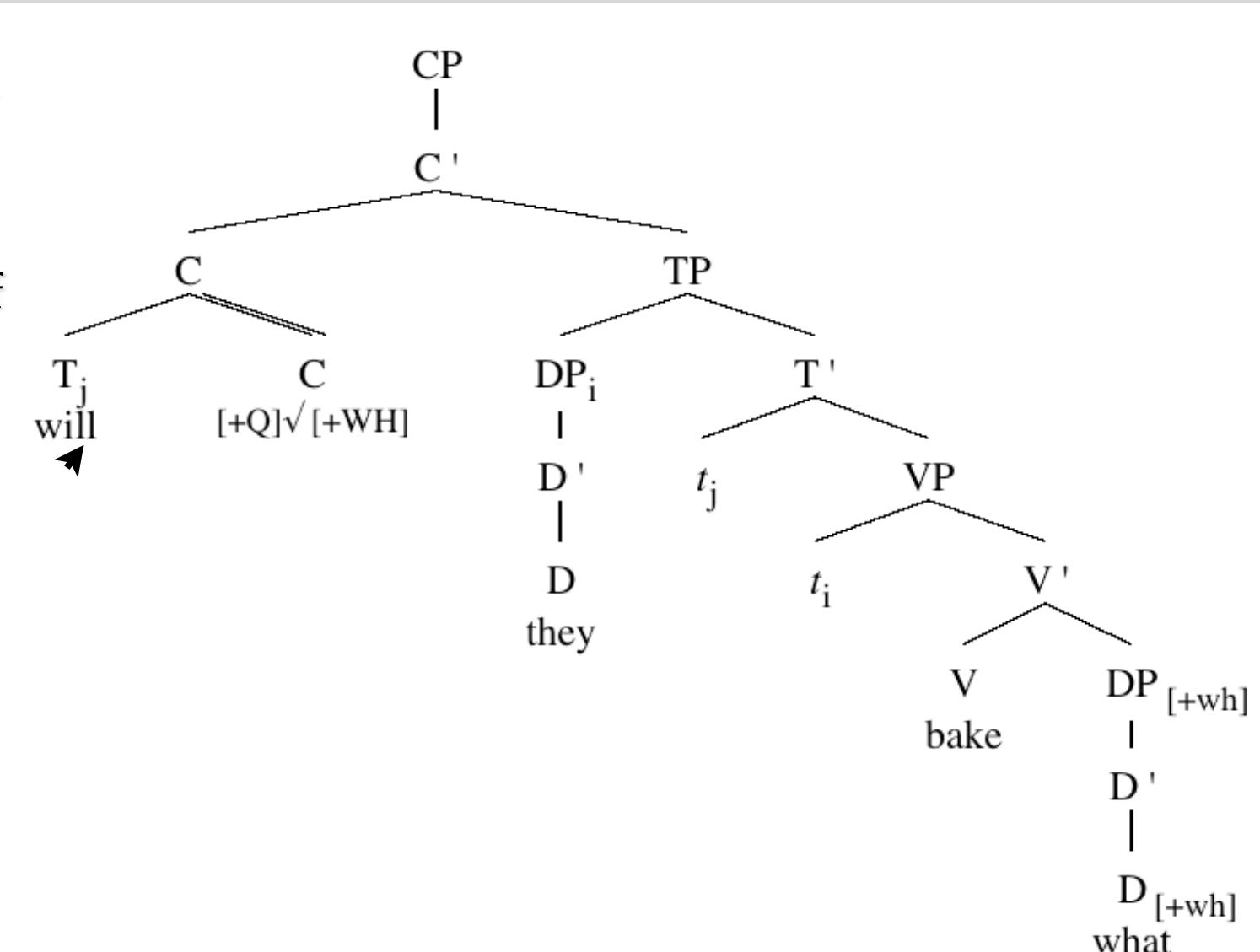


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Two weird English-specific constraints

- *Who that John left?
- *John asked who if Susan loved?
- English doesn't allow you to have both an overt complementizer (other than Aux) and a wh-word
- *The Doubly filled CP filter* (English only)
 - * [_{CP} wh that]

Two weird English-specific constraints

- Who did John think that Susan loved ____?
- *Who did John think that ____ loved Susan?
- Who did John think \emptyset ____ loved Susan?
- can't wh-move from a position next to the word "that".
- *That-trace filter* (English only)
 - * that t

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What did John say was baked?



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Step 1. UNDO all the transformations to figure out the D-structure

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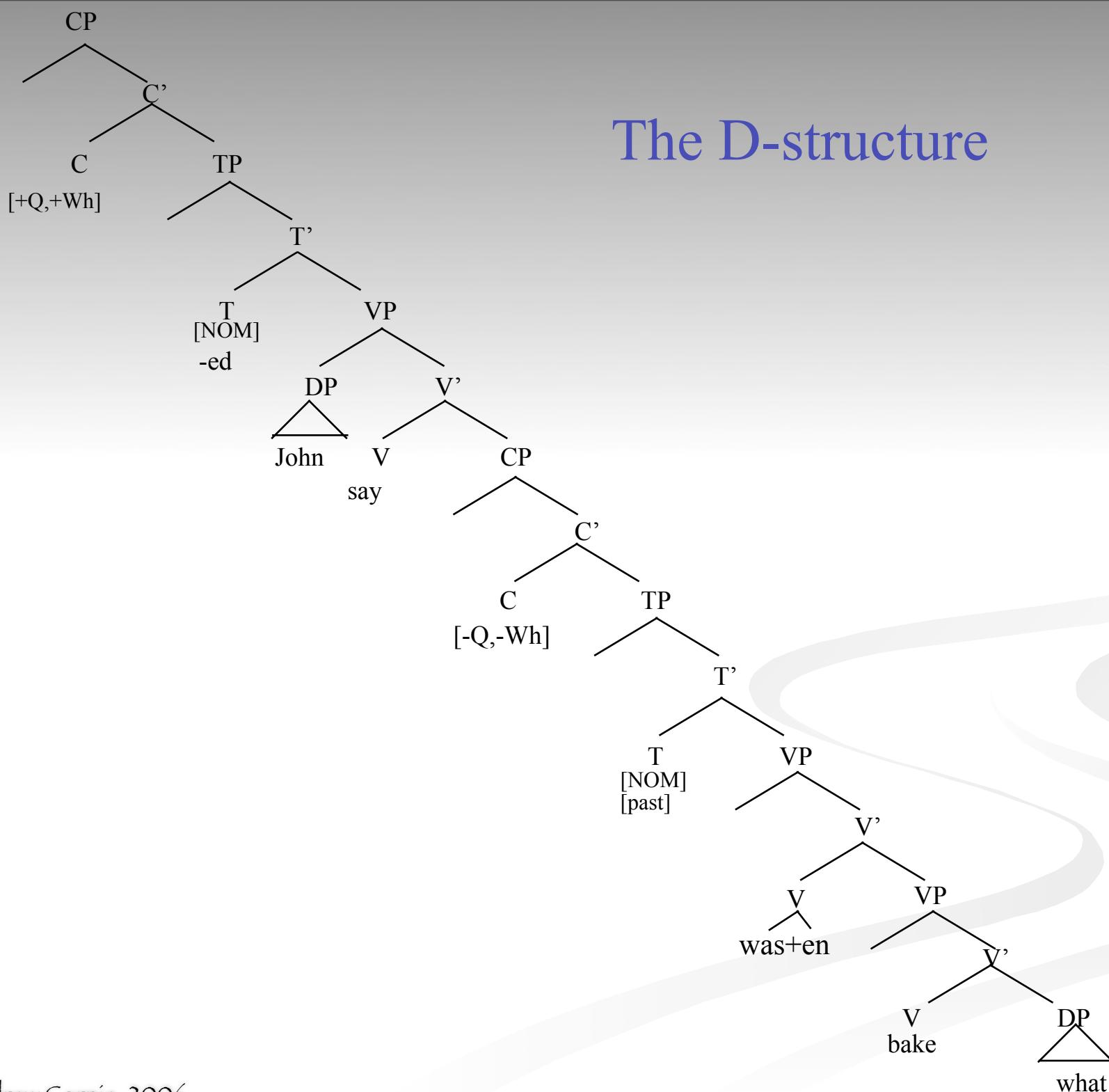
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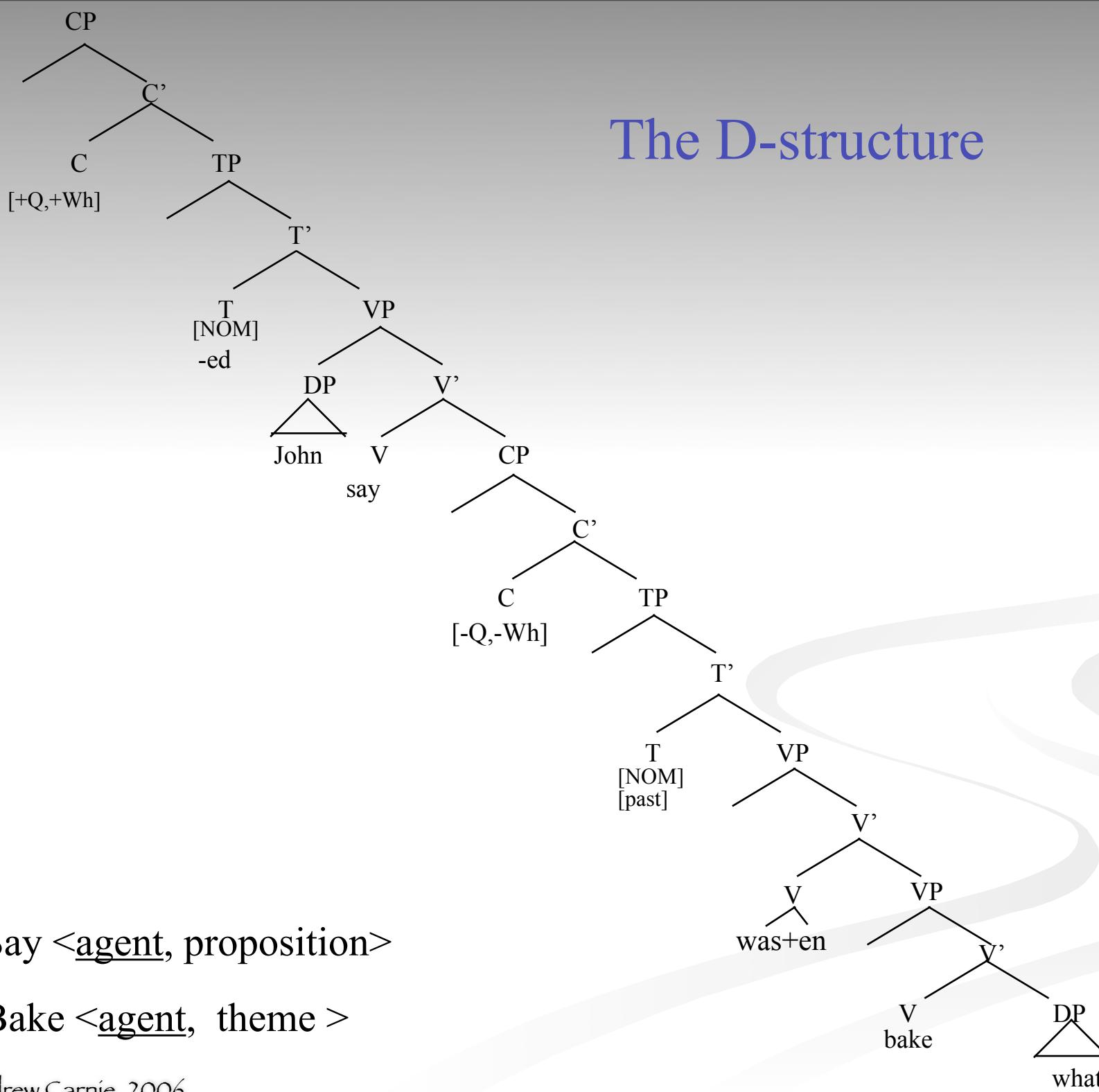
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We are going to tree this string (4): *the D-structure*

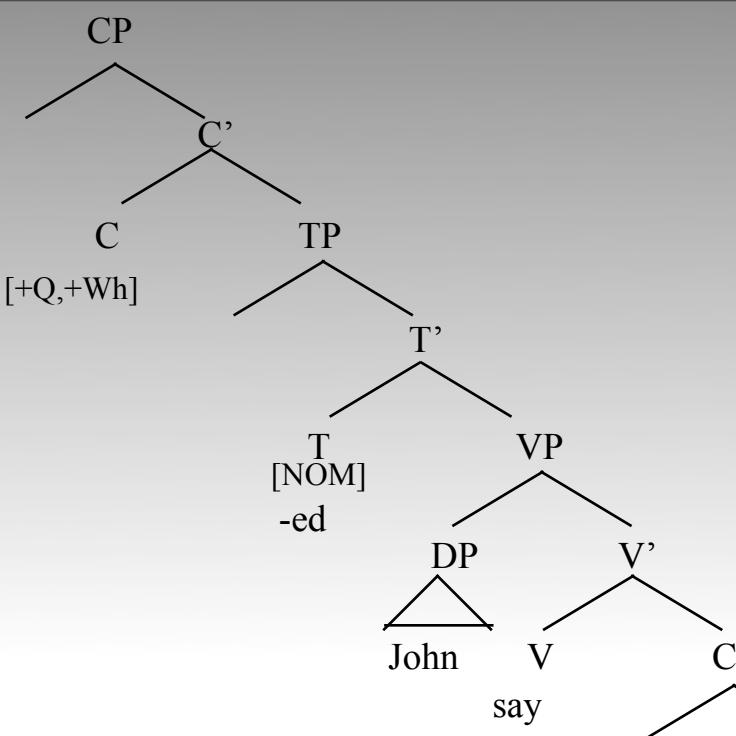
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- Say <agent, proposition>
- Bake <agent, theme >



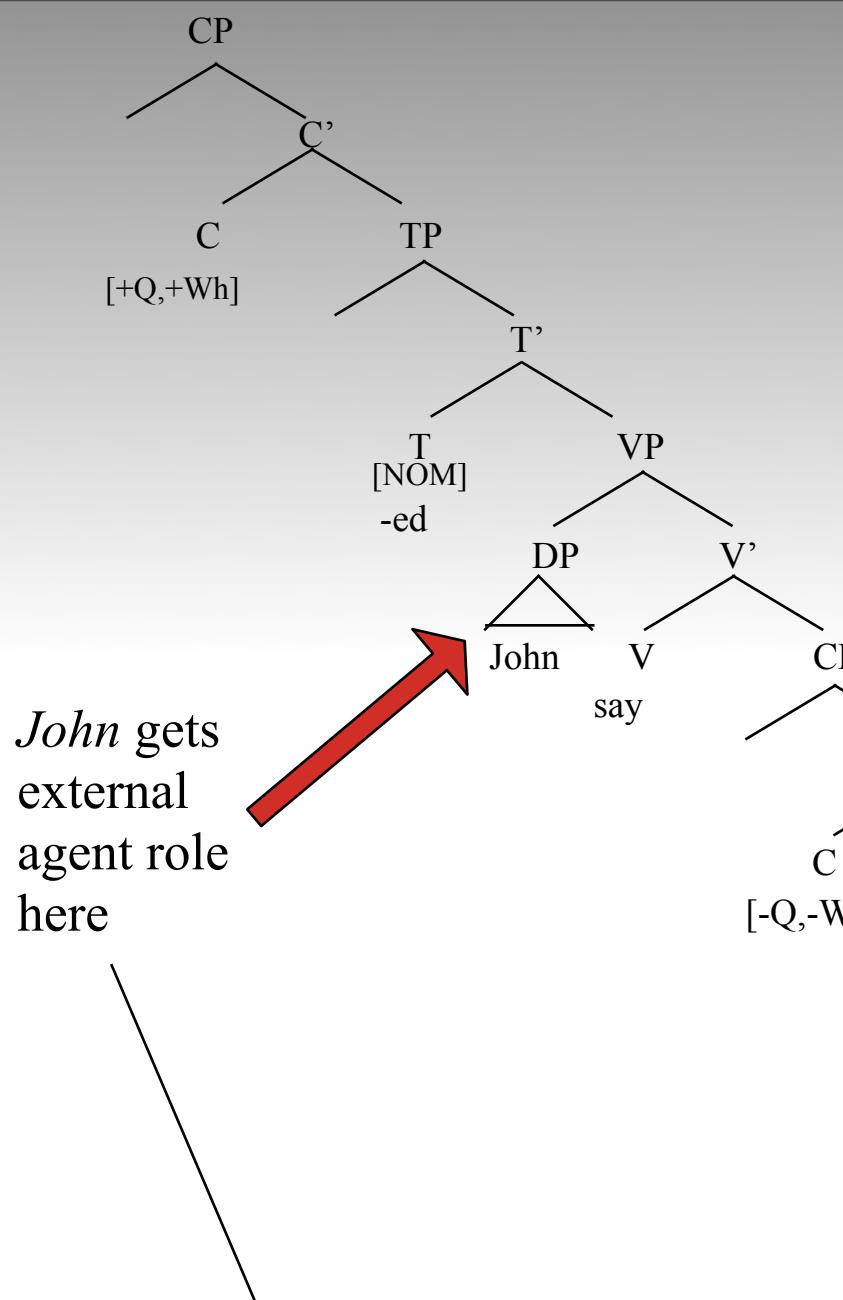
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Constraints to be met

- Theta Criterion
- Case Filter
- Requirement that suffixes are attached
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- EPP

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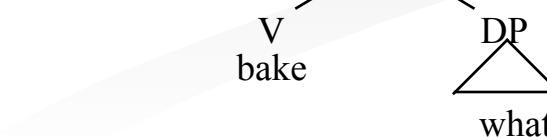
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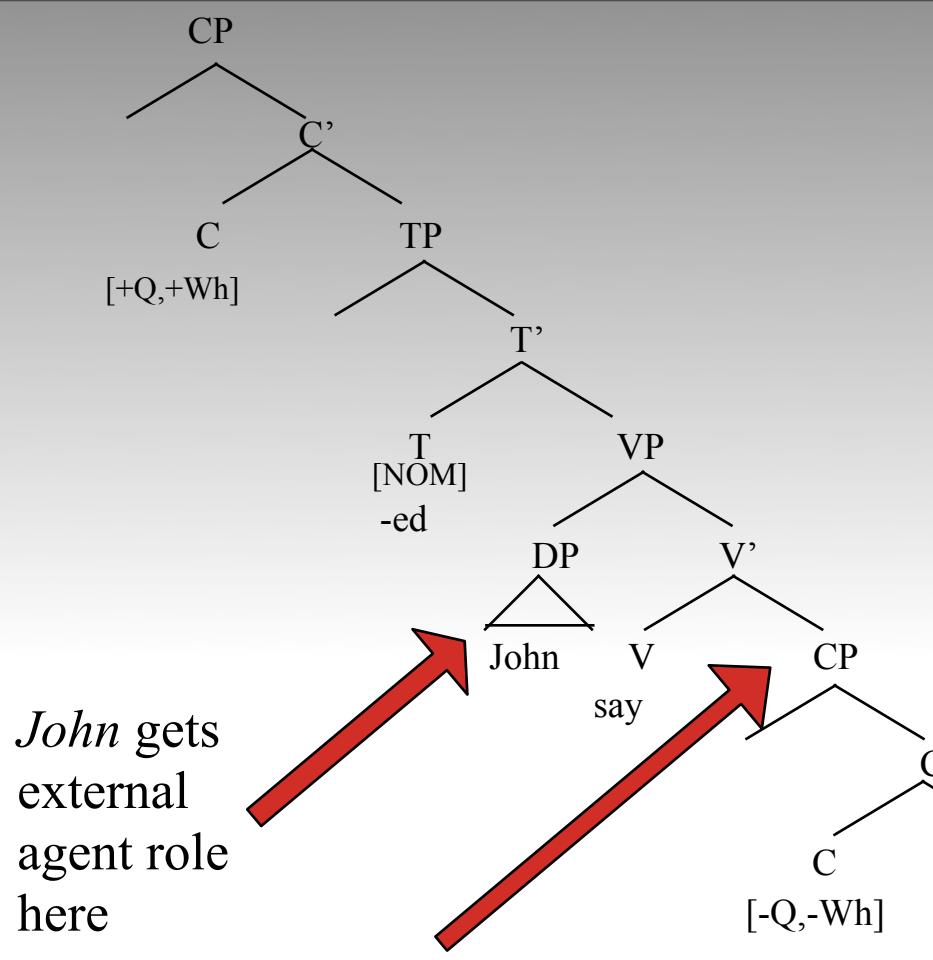


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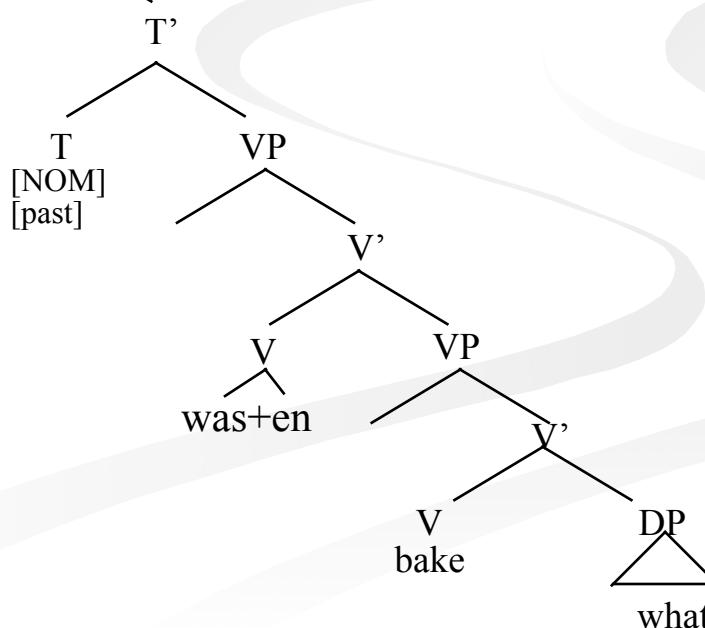
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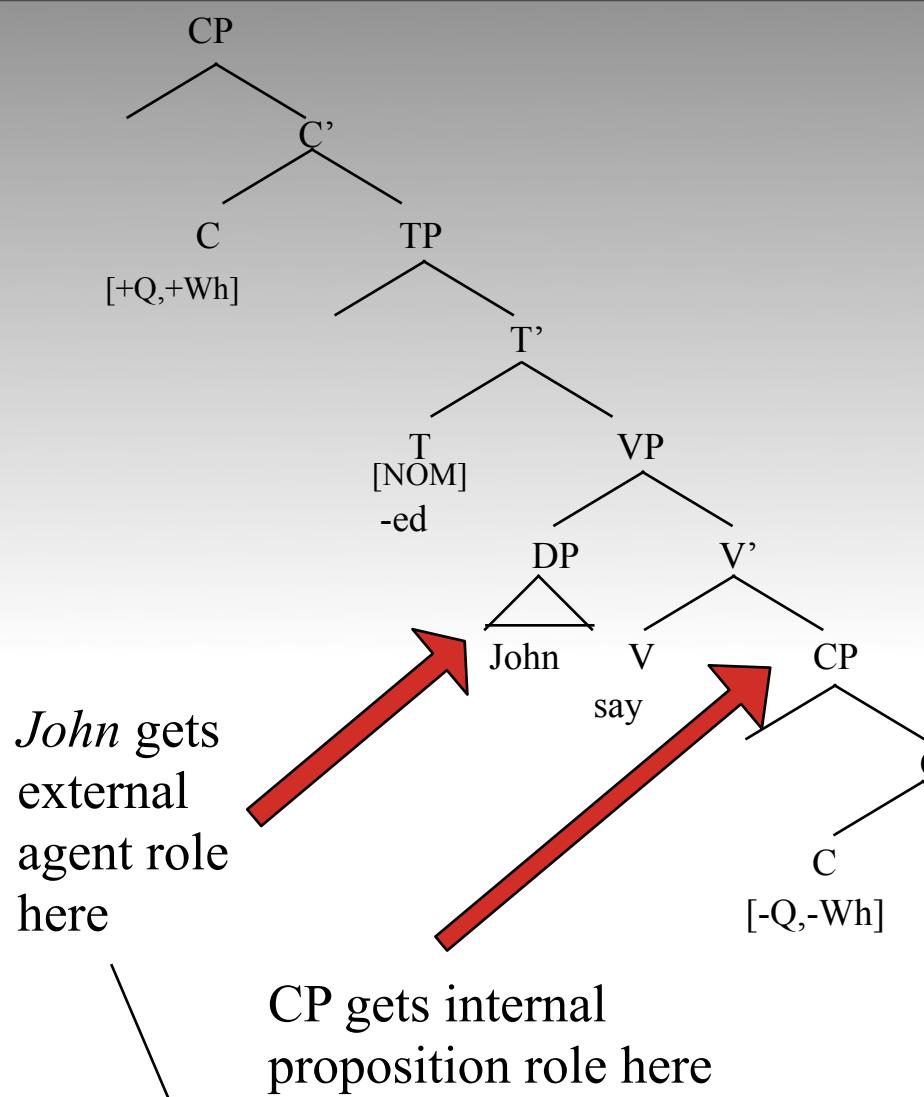
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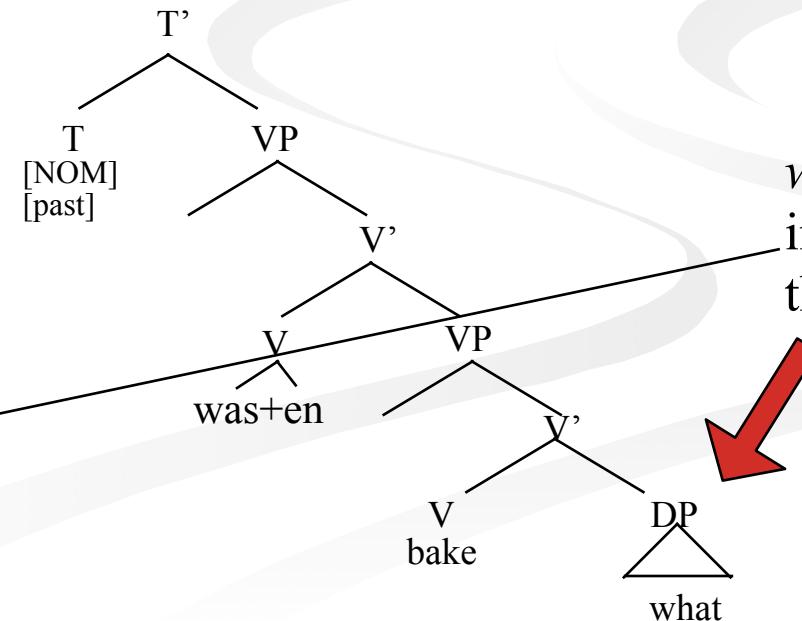
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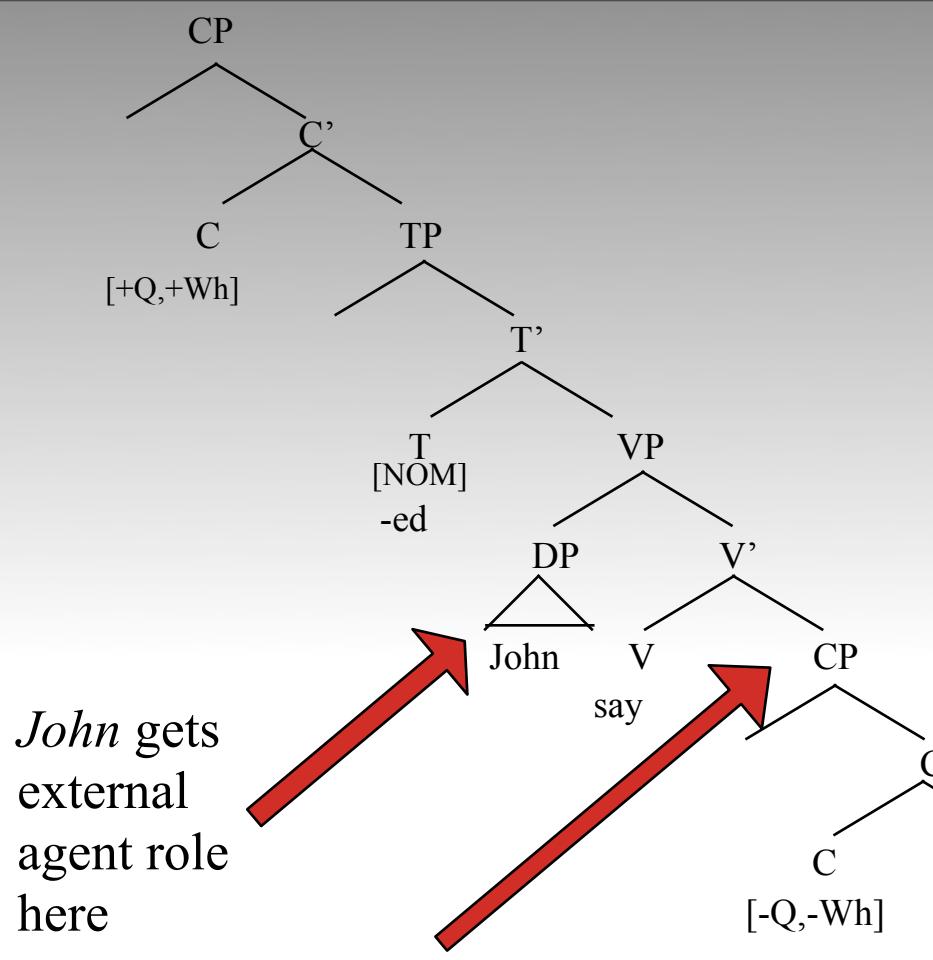
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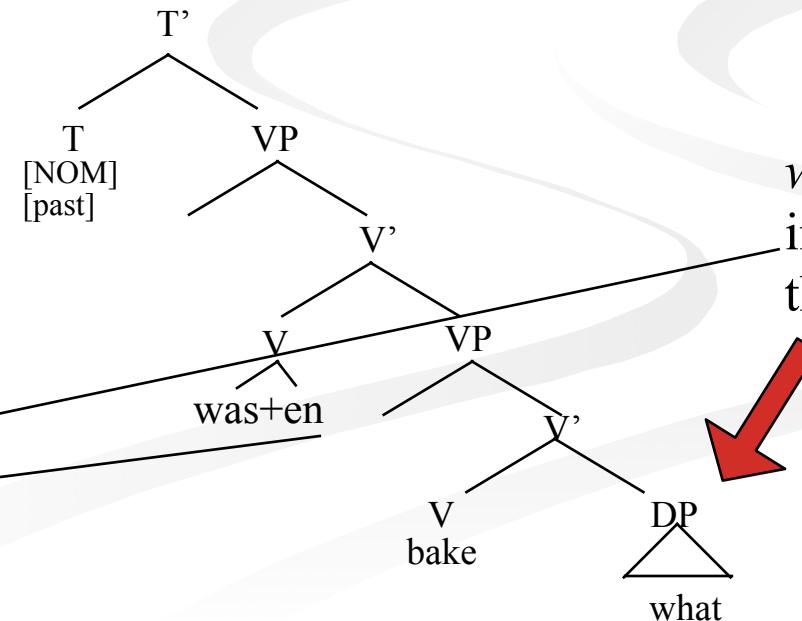
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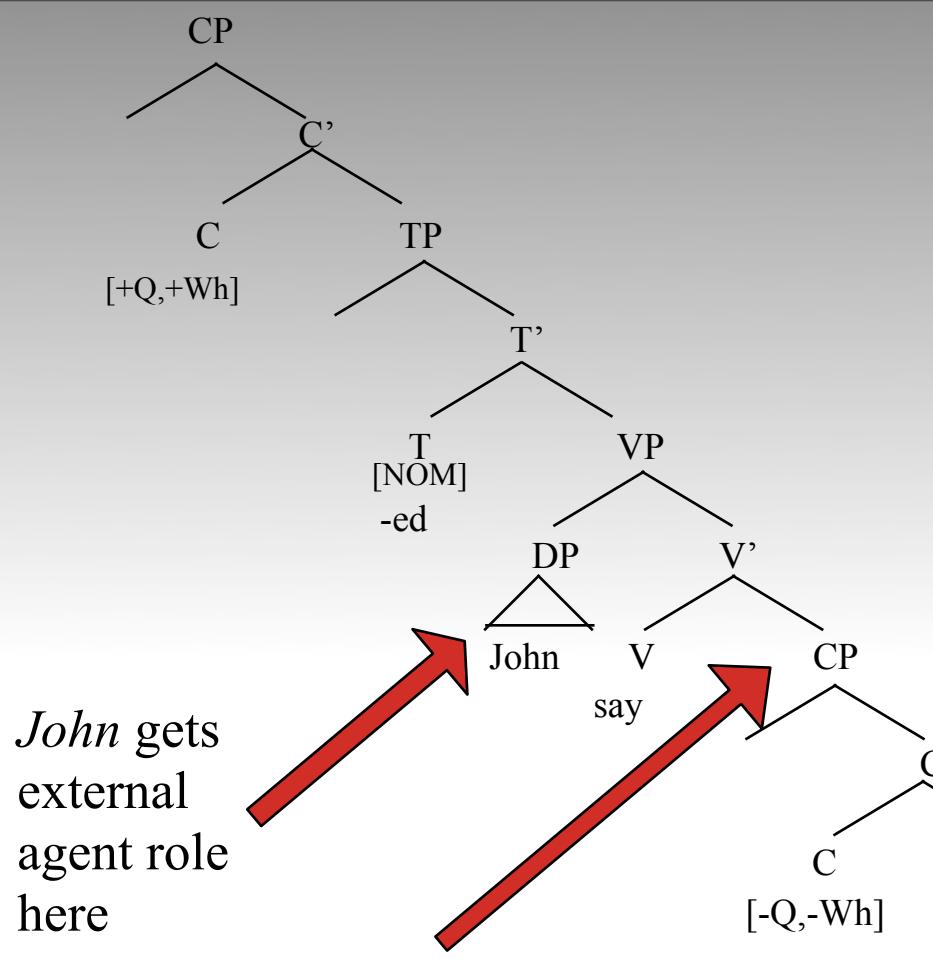
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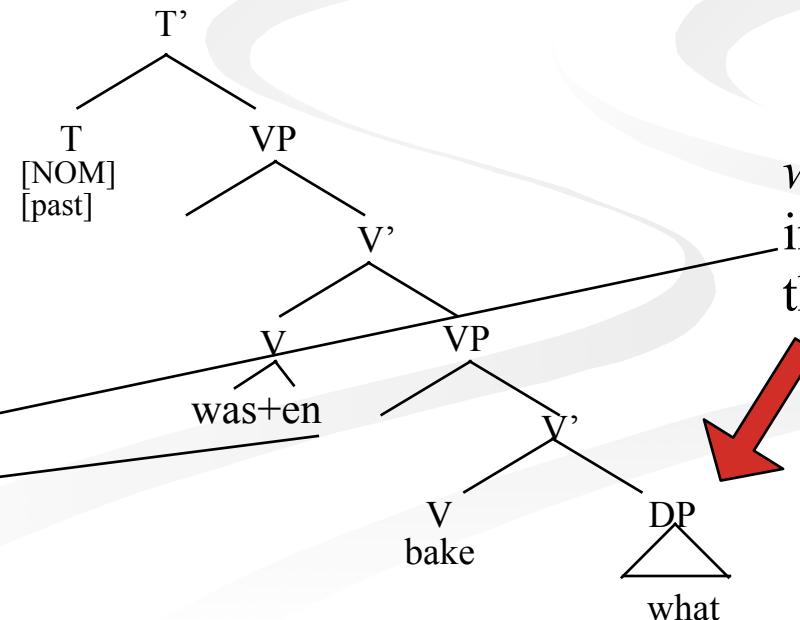
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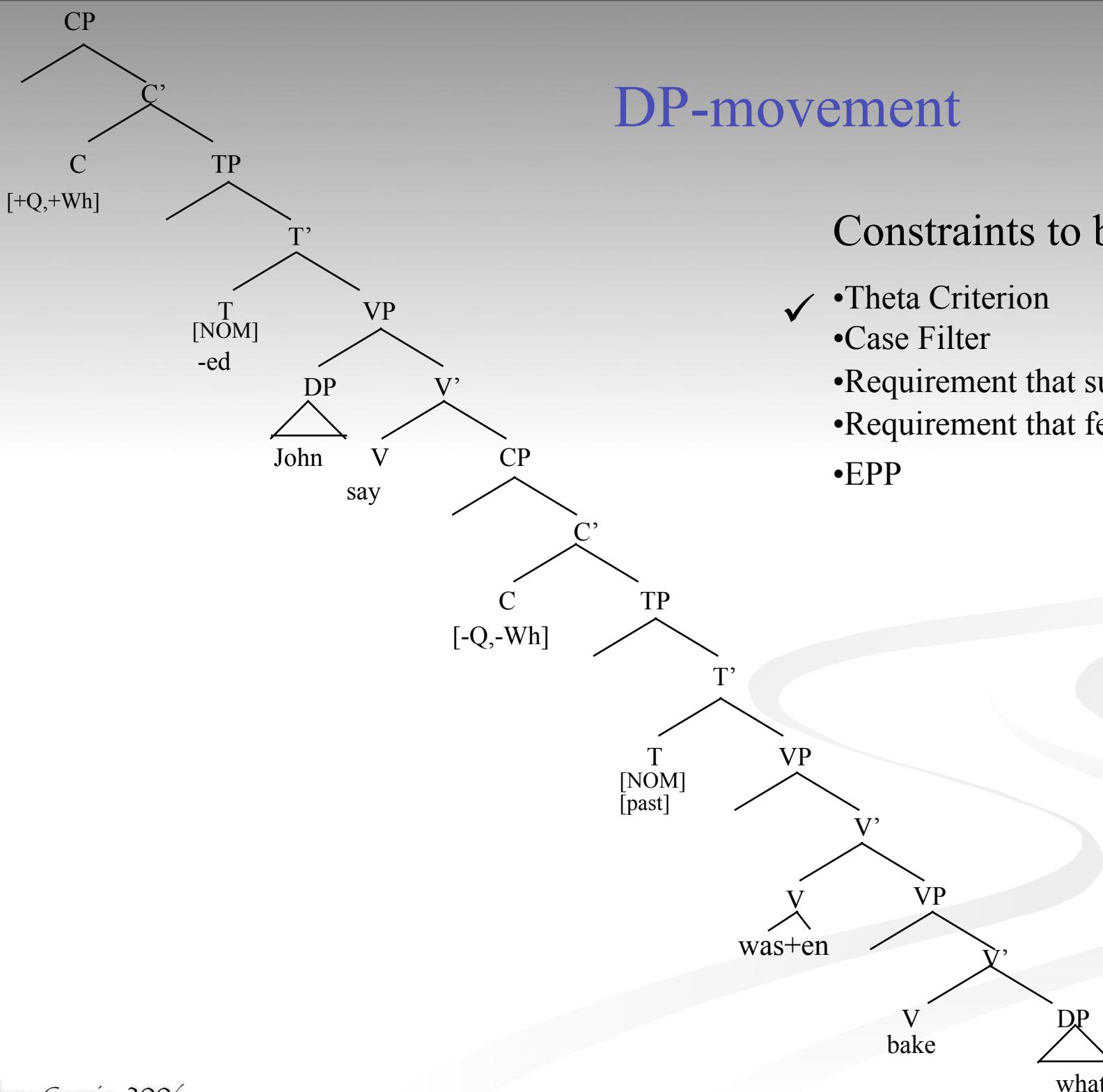
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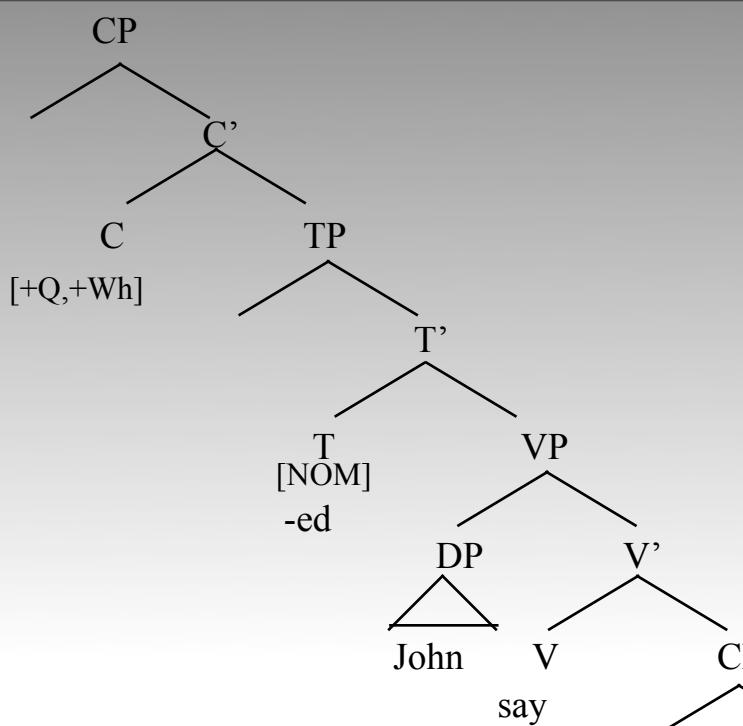
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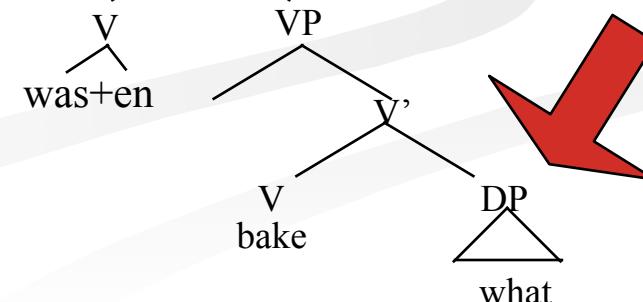
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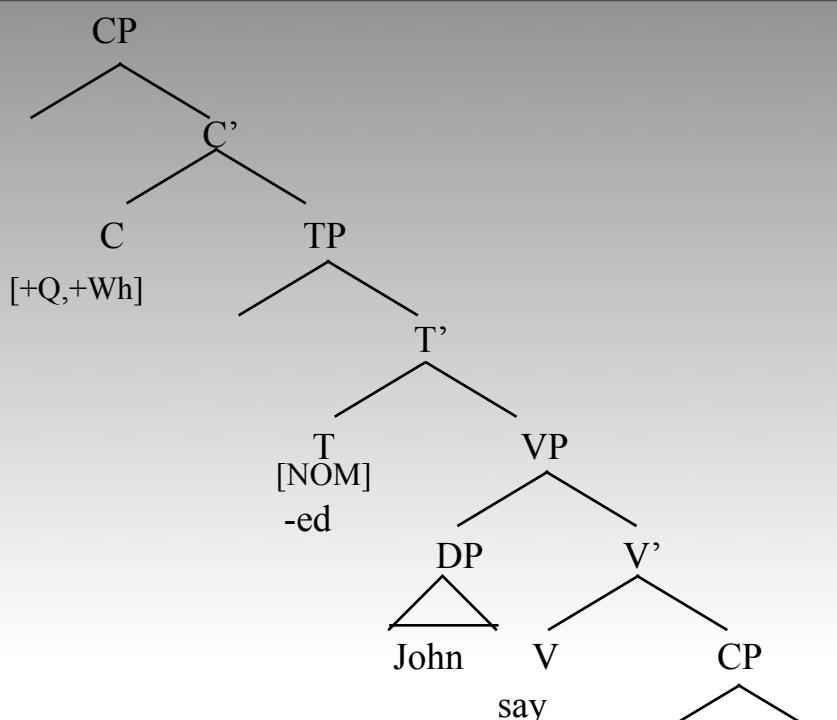
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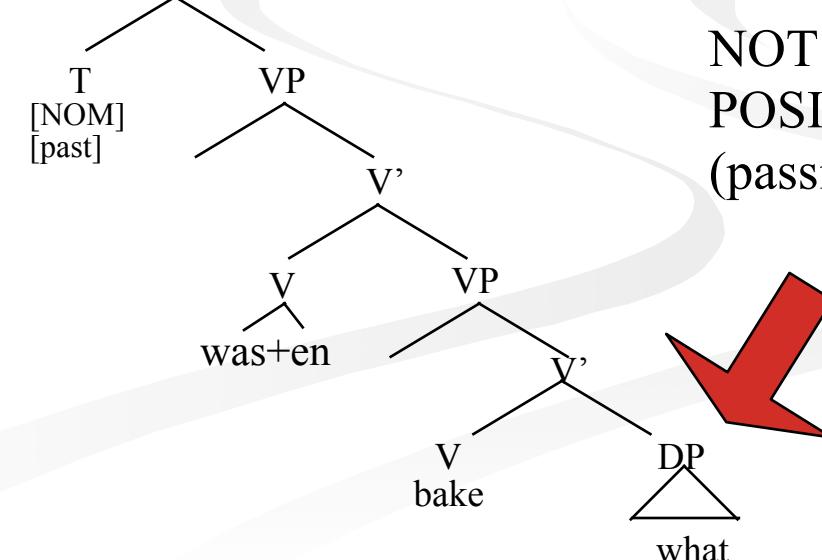
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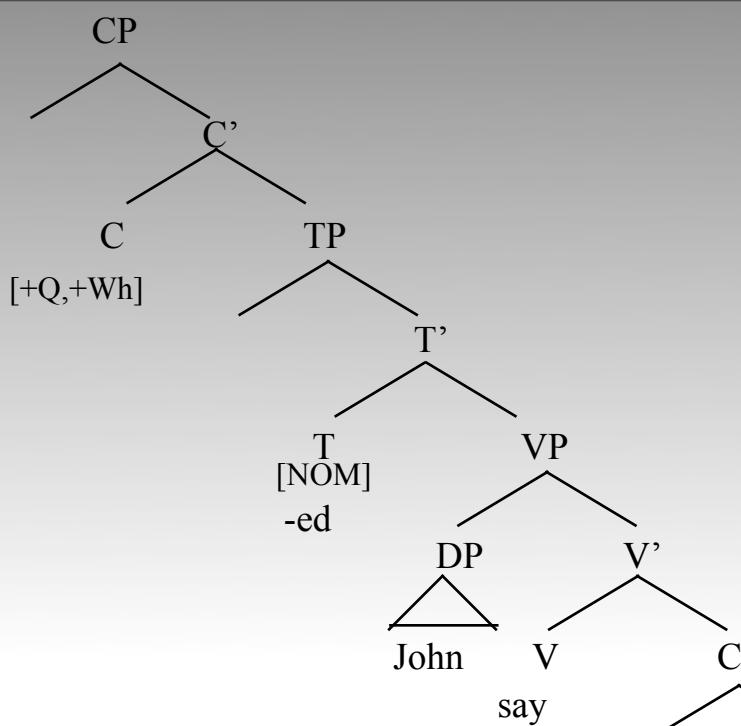
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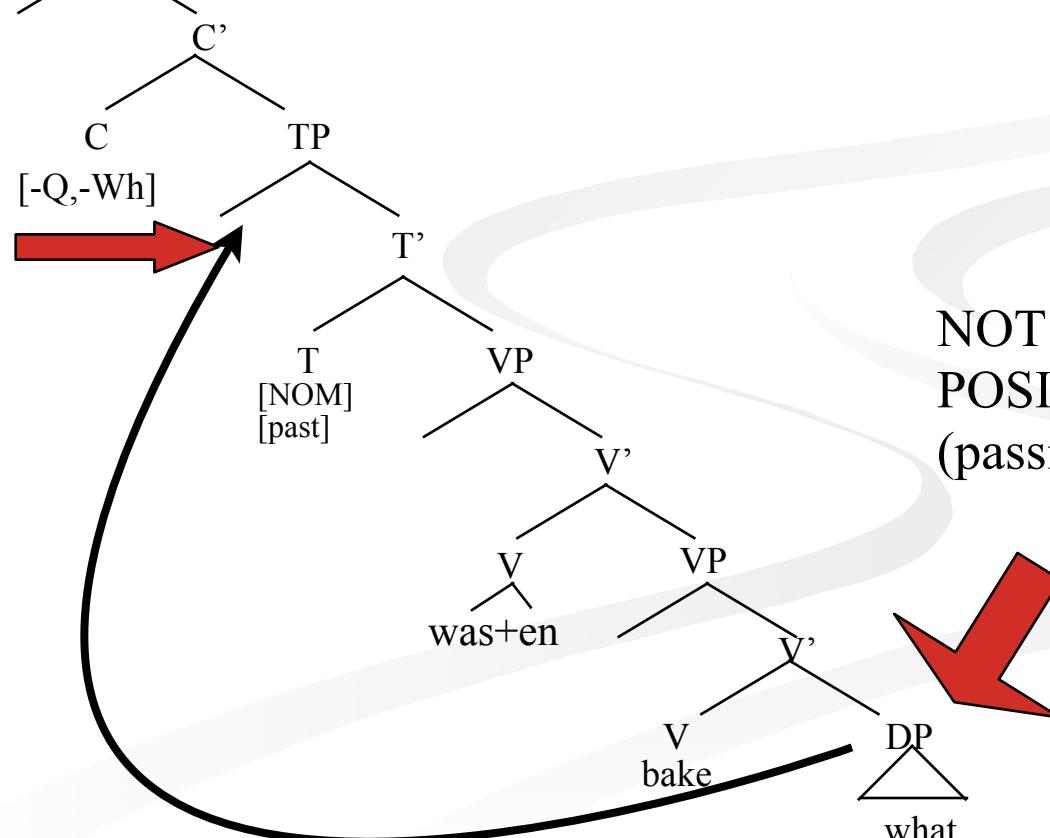
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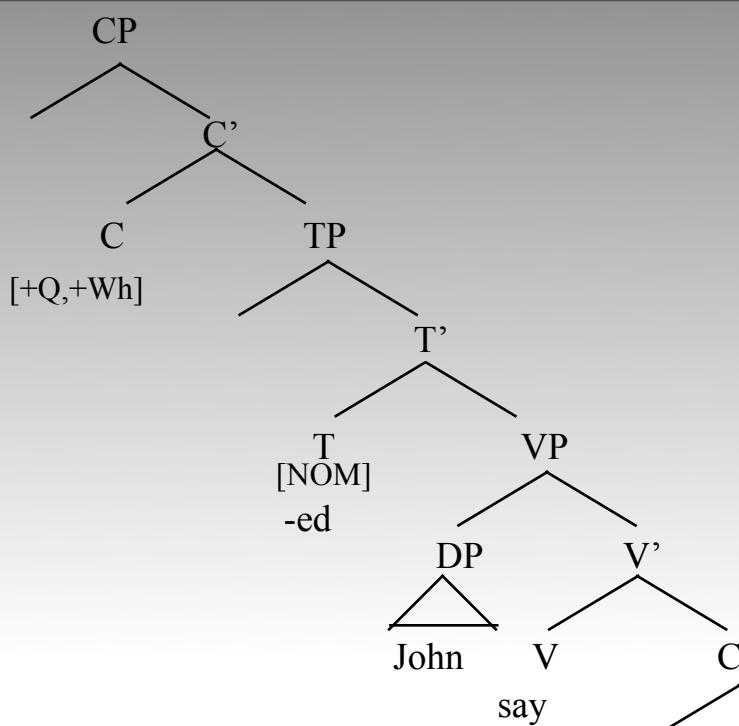
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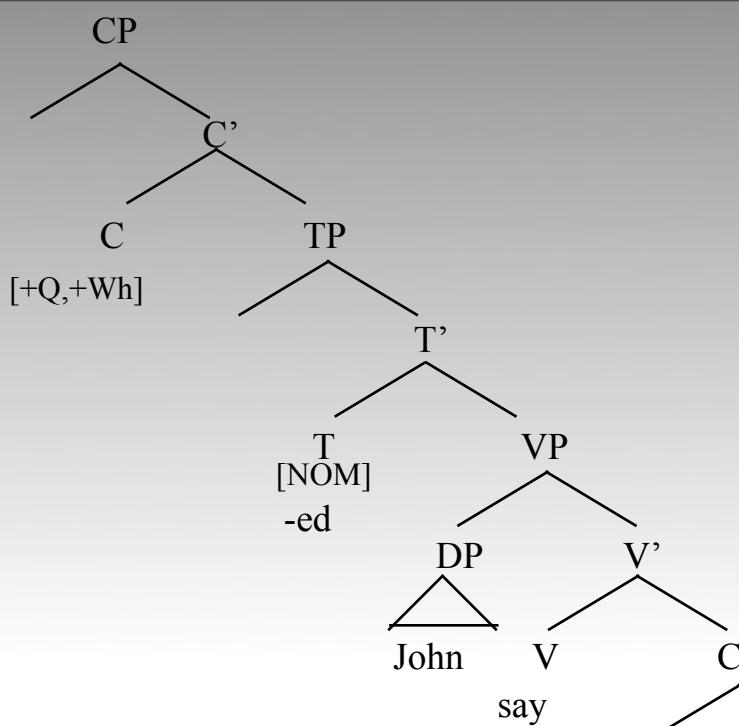
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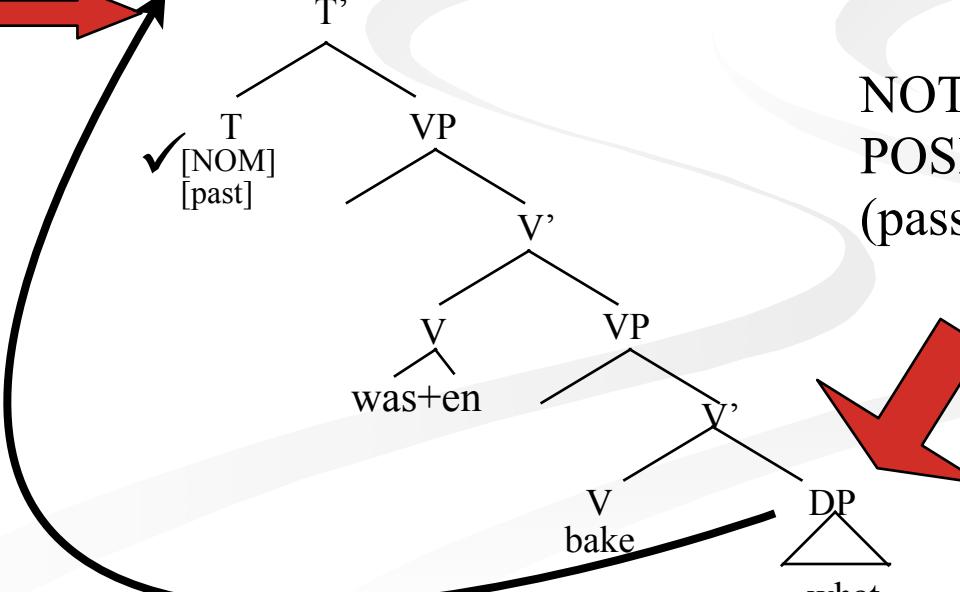
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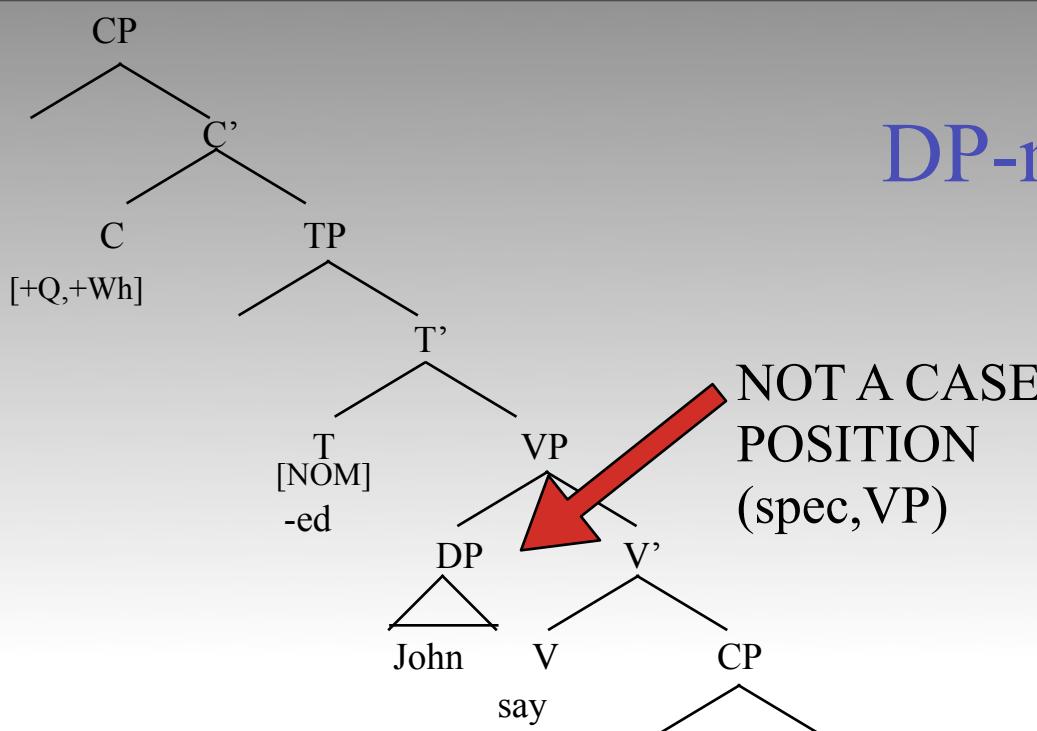
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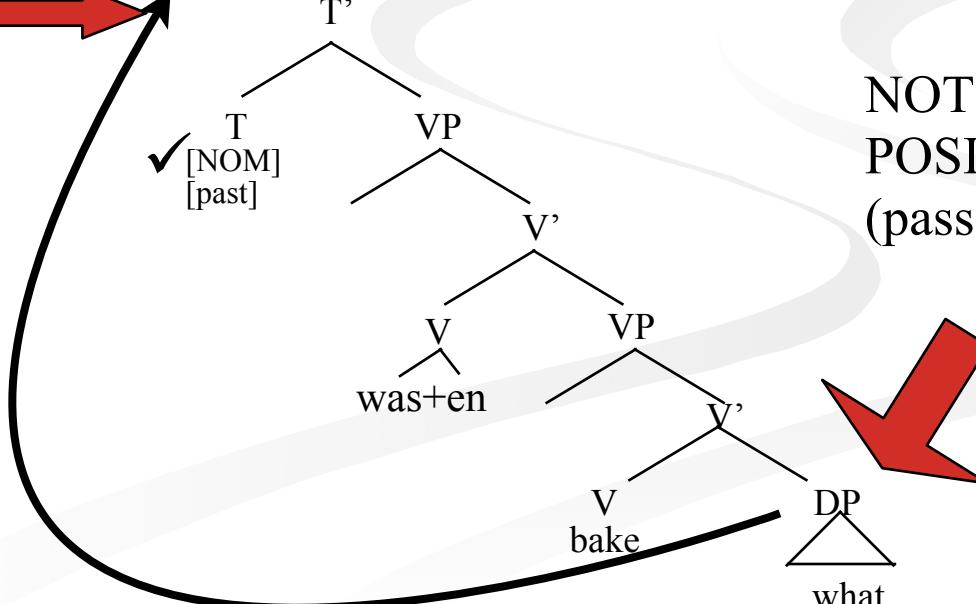
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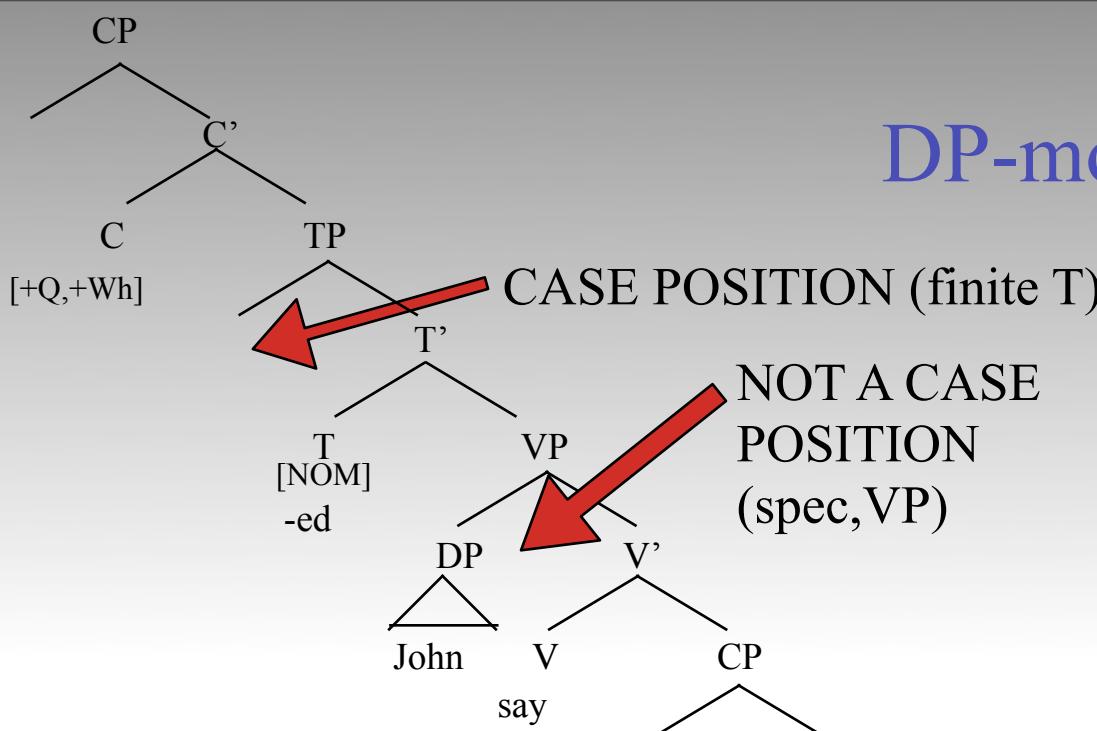
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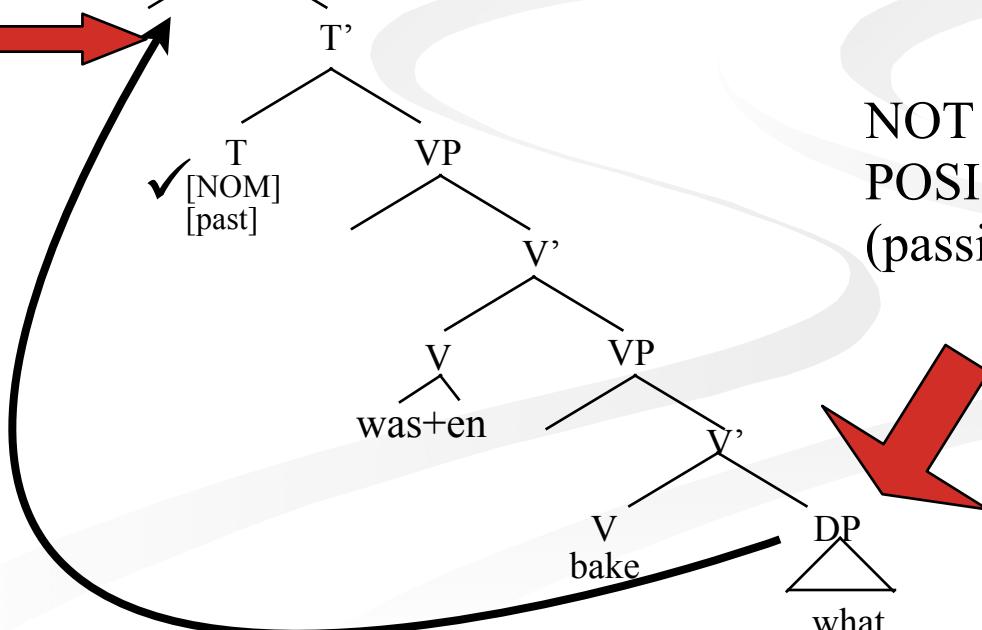


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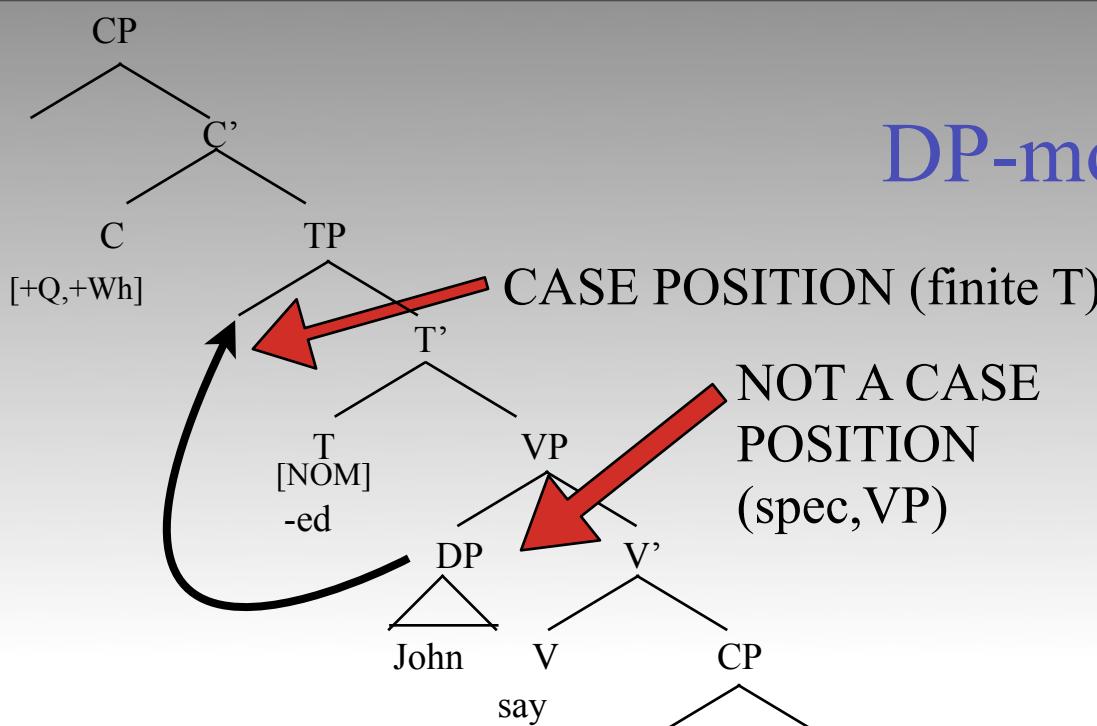
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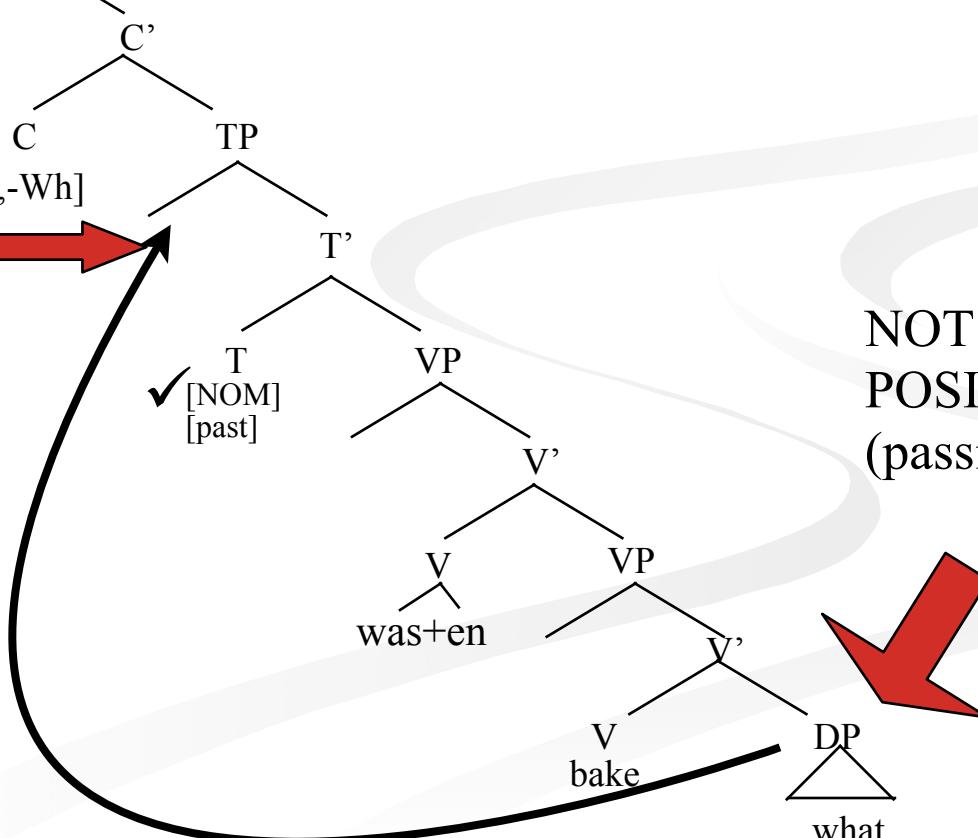


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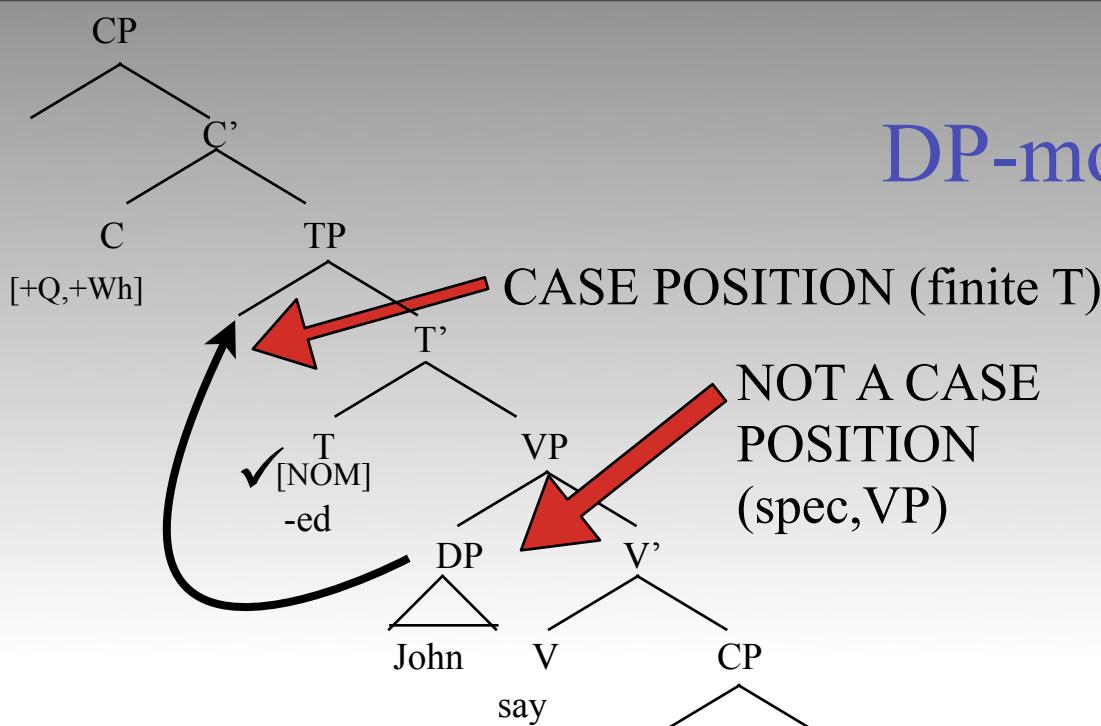
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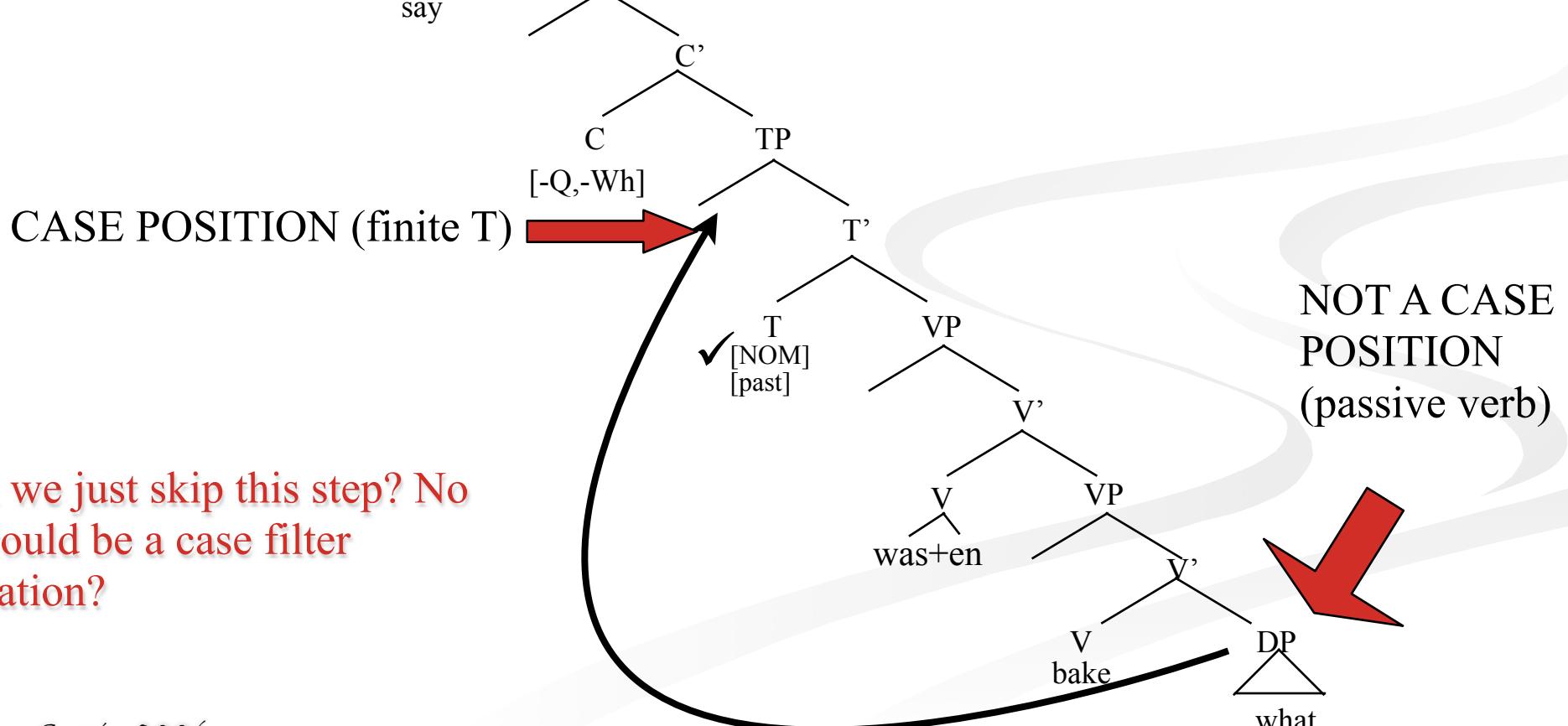
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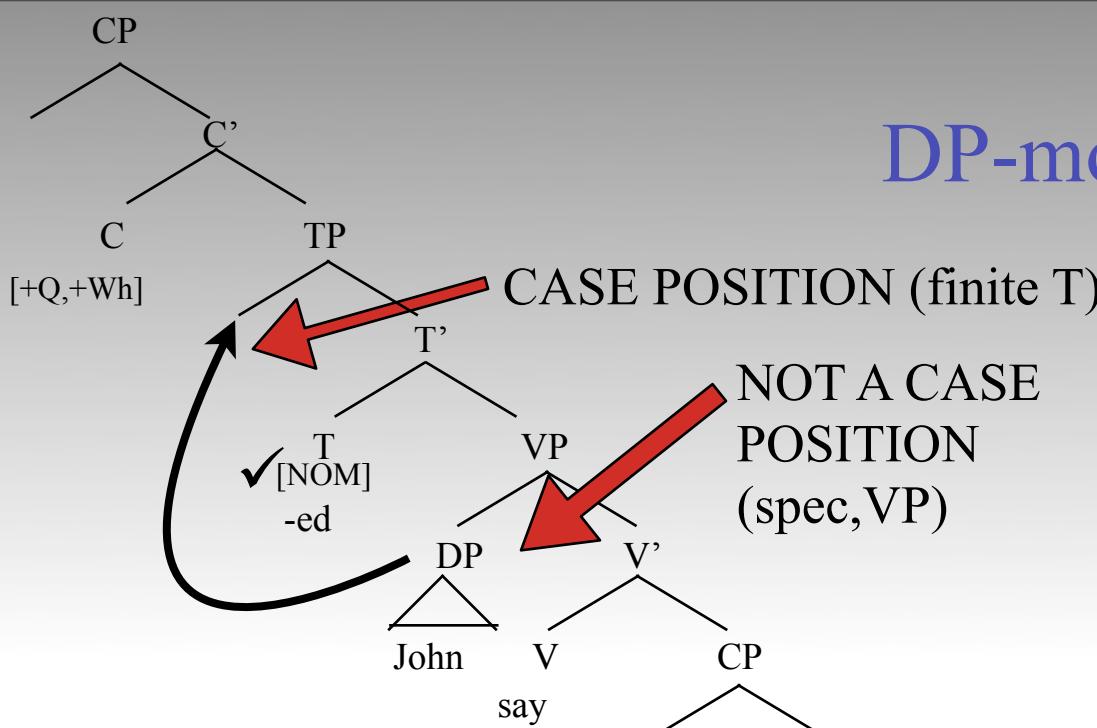
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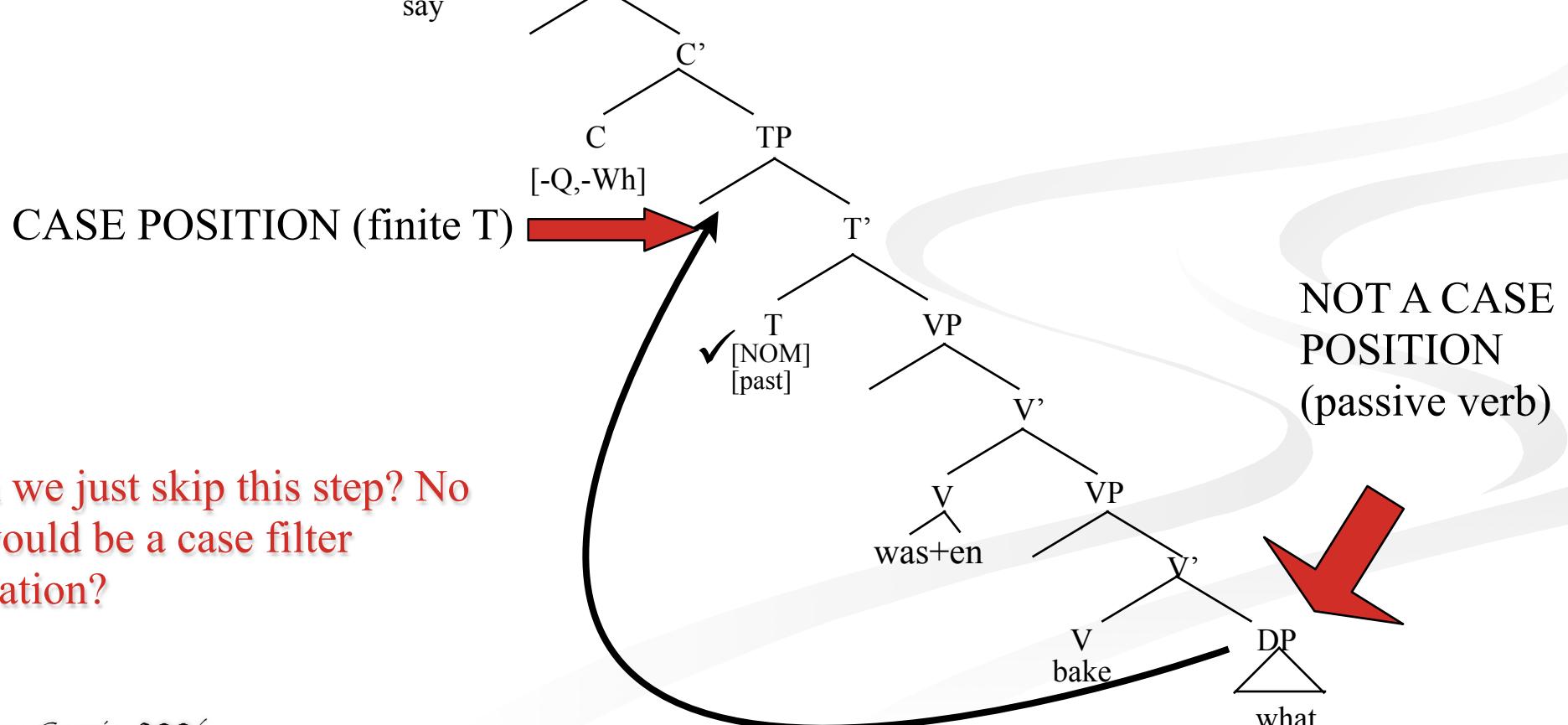
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- Requirement that features are checked
- EPP



An aside: the order of things



An aside: the order of things

- START in your theta position

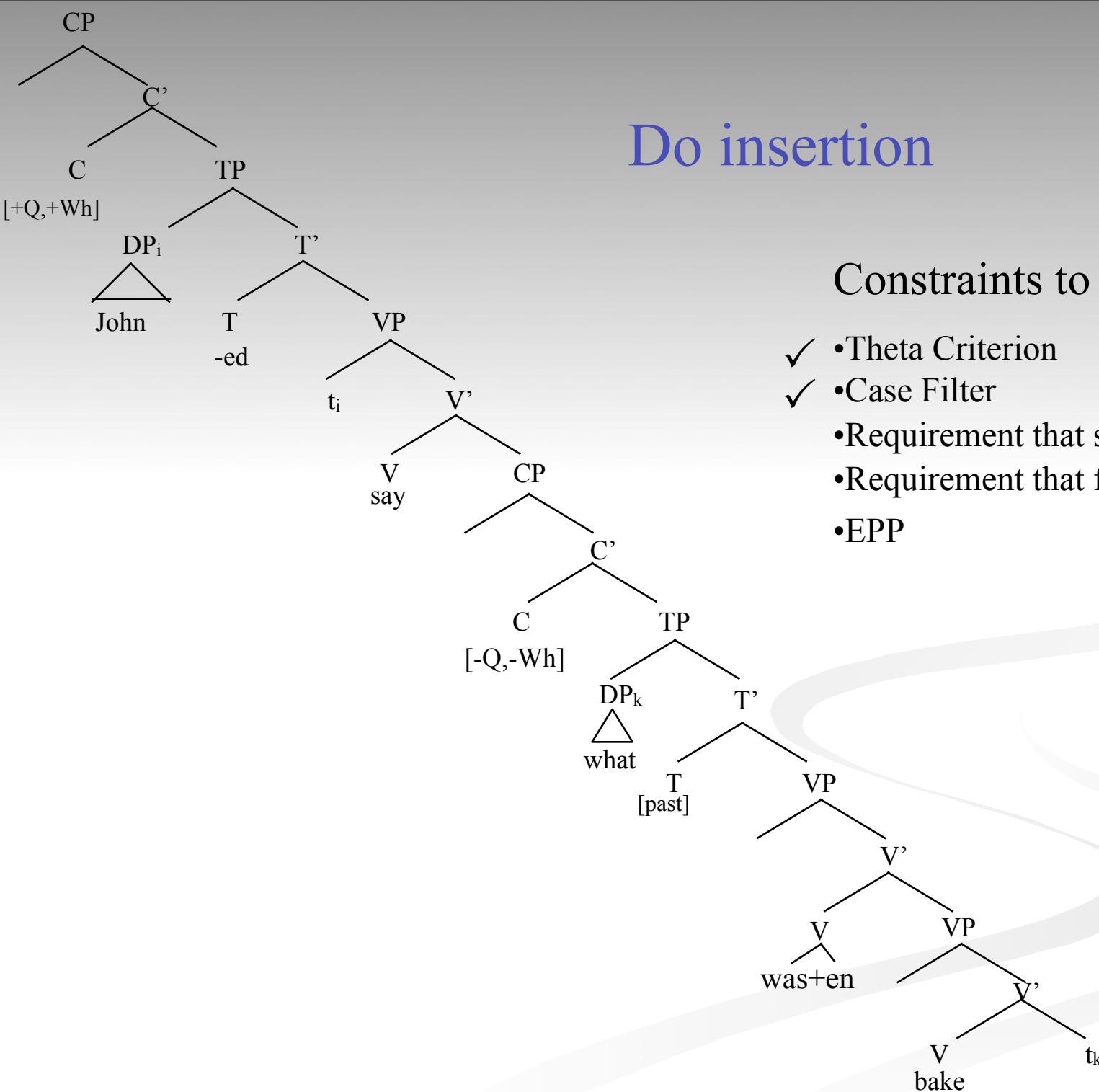


An aside: the order of things

- START in your theta position
- If necessary, DP-move to get case. (*DP movement always ends in a case position*)

An aside: the order of things

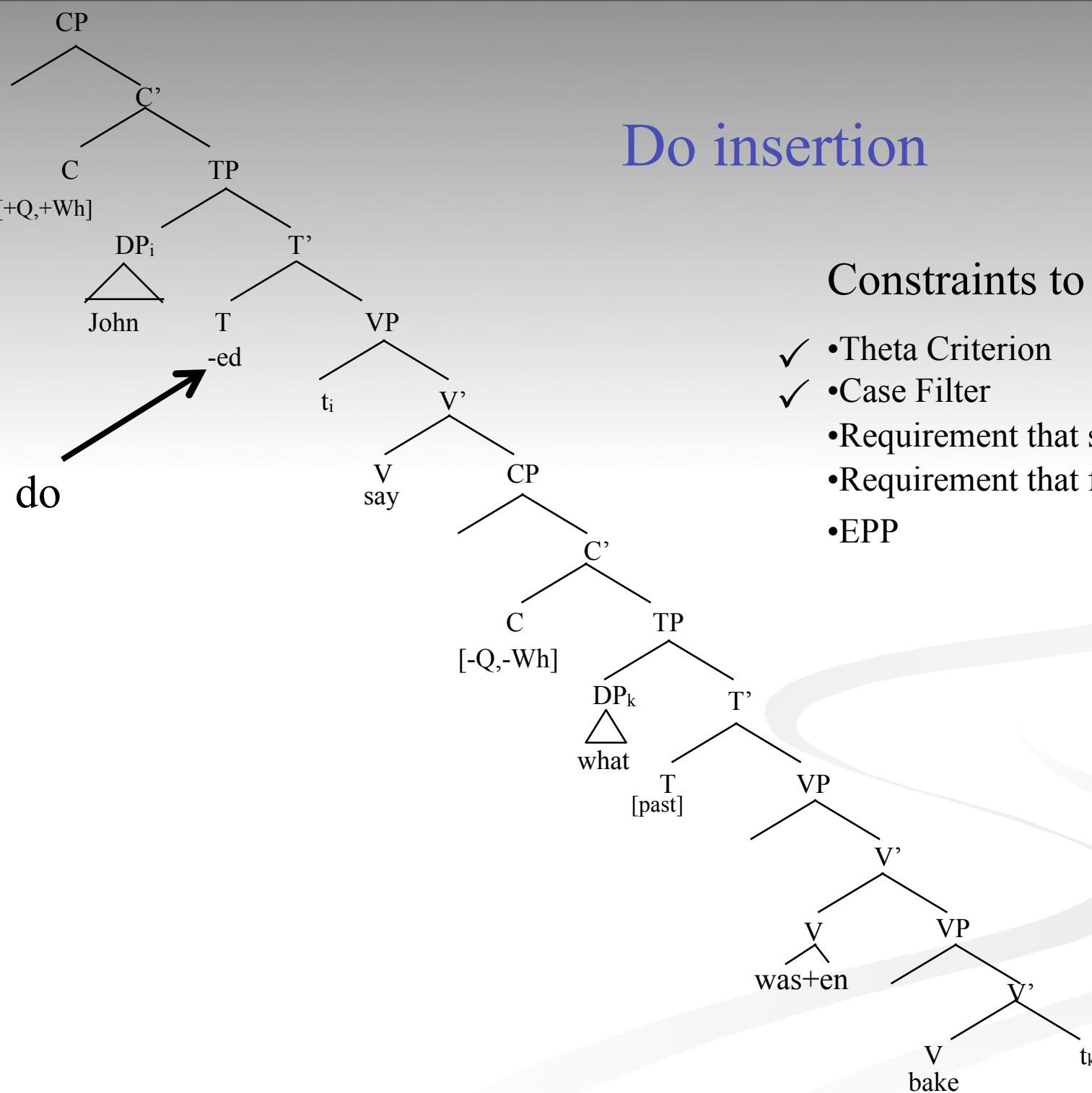
- START in your theta position
- If necessary, DP-move to get case. (*DP movement always ends in a case position*)
- Then if necessary, Wh-move to the specifier of CP to check [+wh]. (*Wh-movement always starts in a case position*)



Do insertion

Constraints to be met

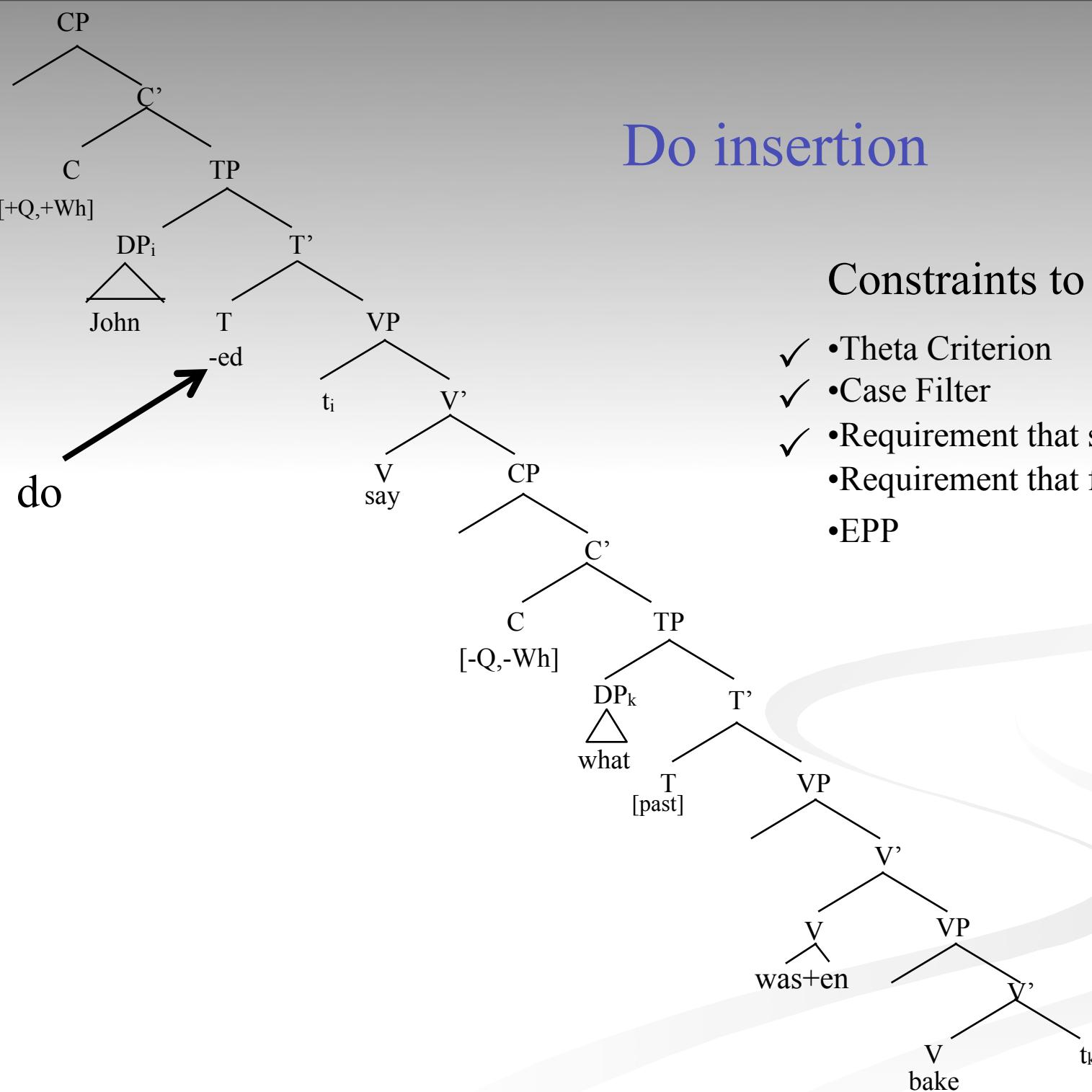
- ✓ •Theta Criterion
- ✓ •Case Filter
- Requirement that suffixes are attached
- Requirement that features are checked
- EPP



Do insertion

Constraints to be met

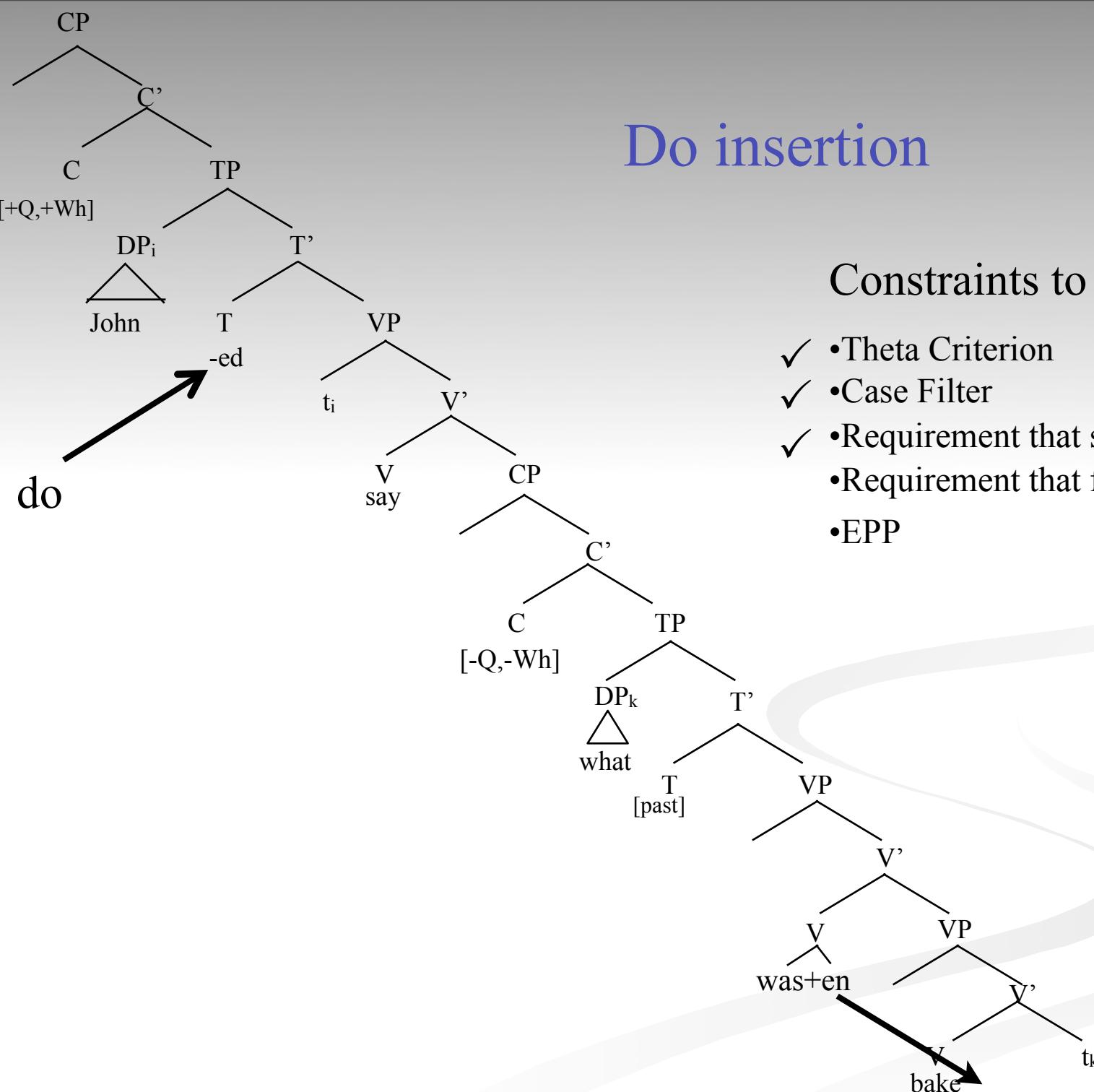
- ✓ •Theta Criterion
- ✓ •Case Filter
- Requirement that suffixes are attached
- Requirement that features are checked
- EPP



Do insertion

Constraints to be met

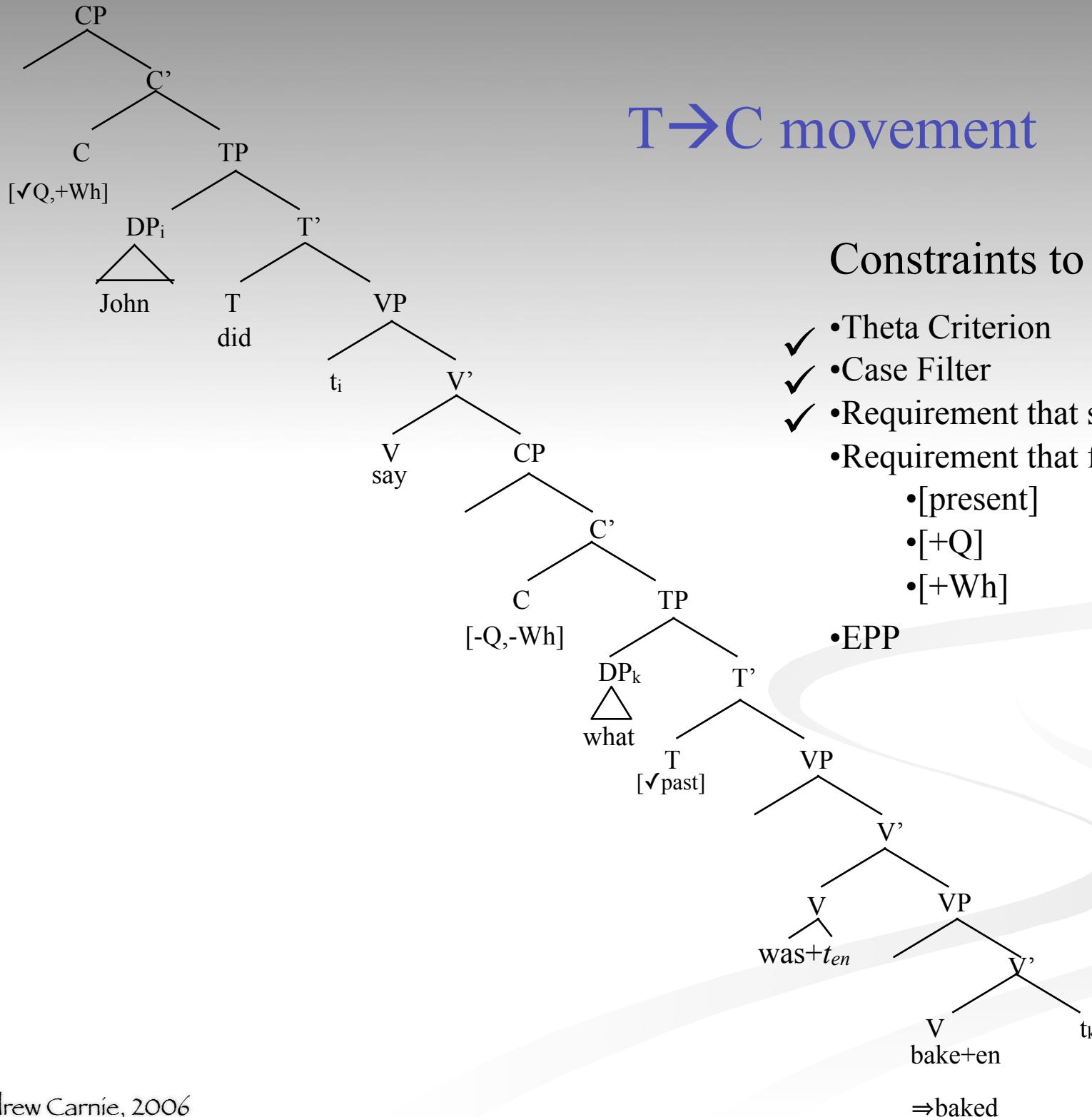
- ✓ •Theta Criterion
- ✓ •Case Filter
- ✓ •Requirement that suffixes are attached
- Requirement that features are checked
- EPP



Do insertion

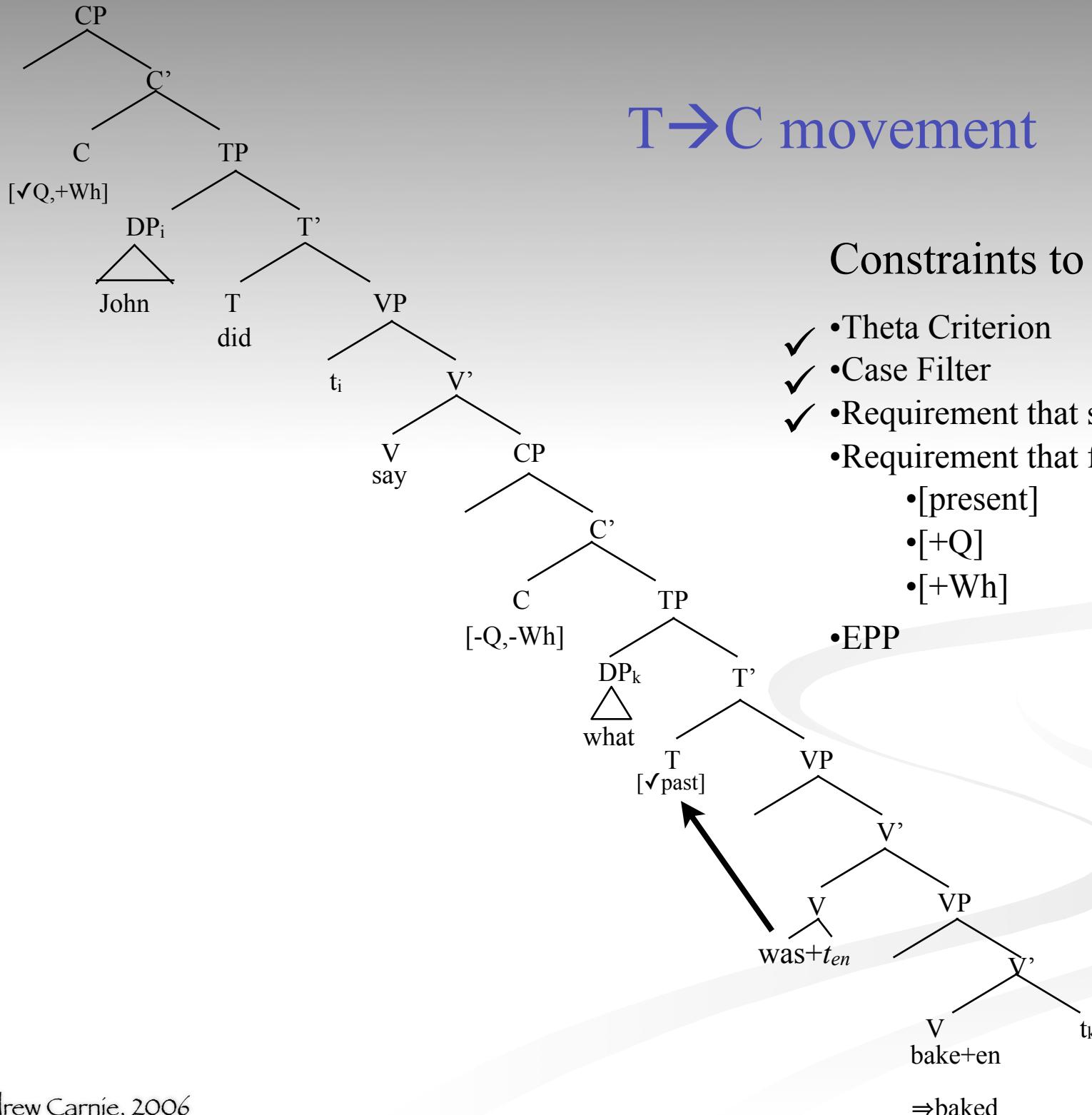
Constraints to be met

- ✓ •Theta Criterion
- ✓ •Case Filter
- ✓ •Requirement that suffixes are attached
- Requirement that features are checked
- EPP



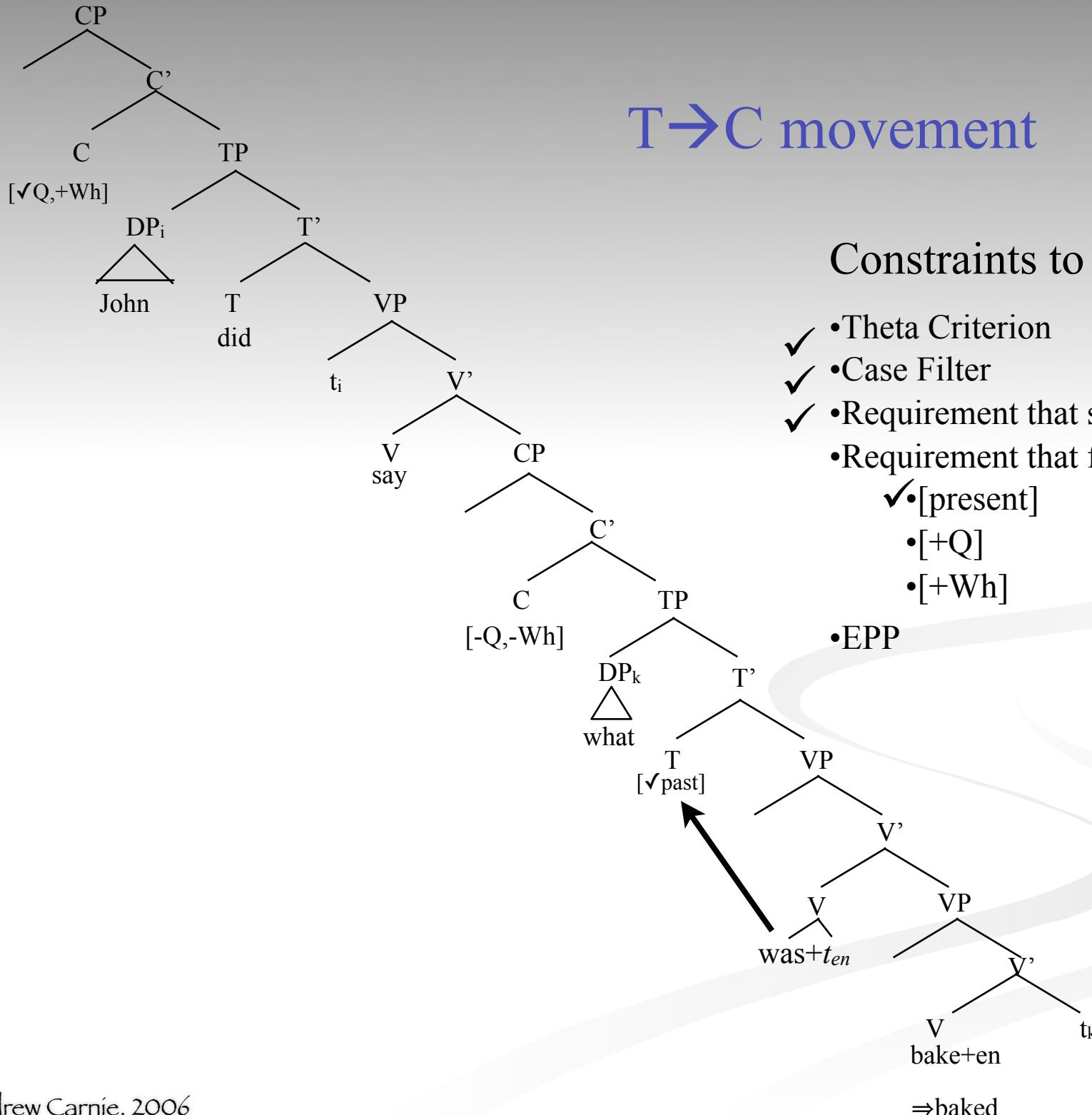
Constraints to be met

- ✓ • Theta Criterion
- ✓ • Case Filter
- ✓ • Requirement that suffixes are attached
- Requirement that features are checked
 - [present]
 - [+Q]
 - [+Wh]
- EPP



Constraints to be met

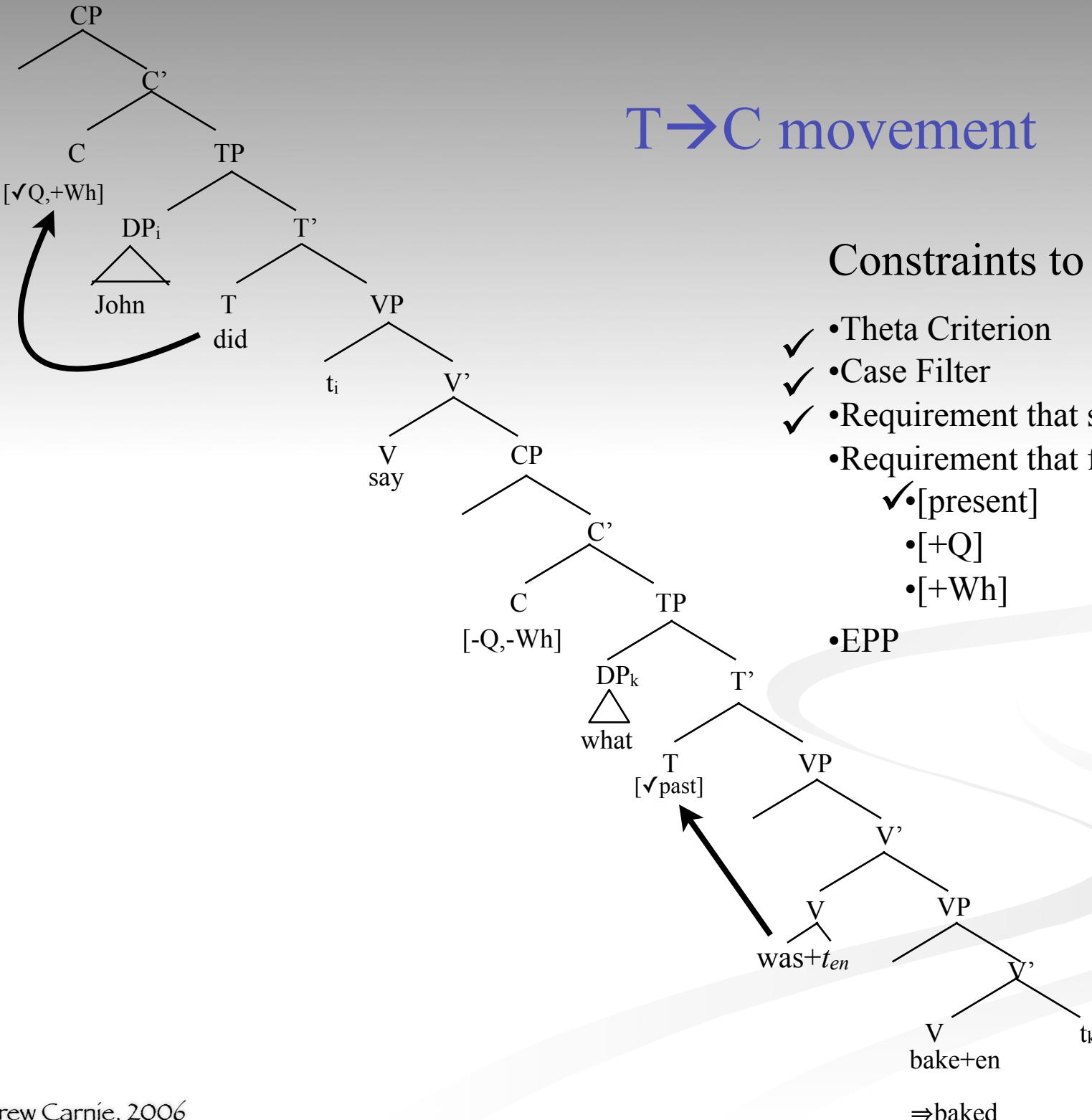
- ✓ • Theta Criterion
- ✓ • Case Filter
- ✓ • Requirement that suffixes are attached
- Requirement that features are checked
 - [present]
 - [+Q]
 - [+Wh]
- EPP



T → C movement

Constraints to be met

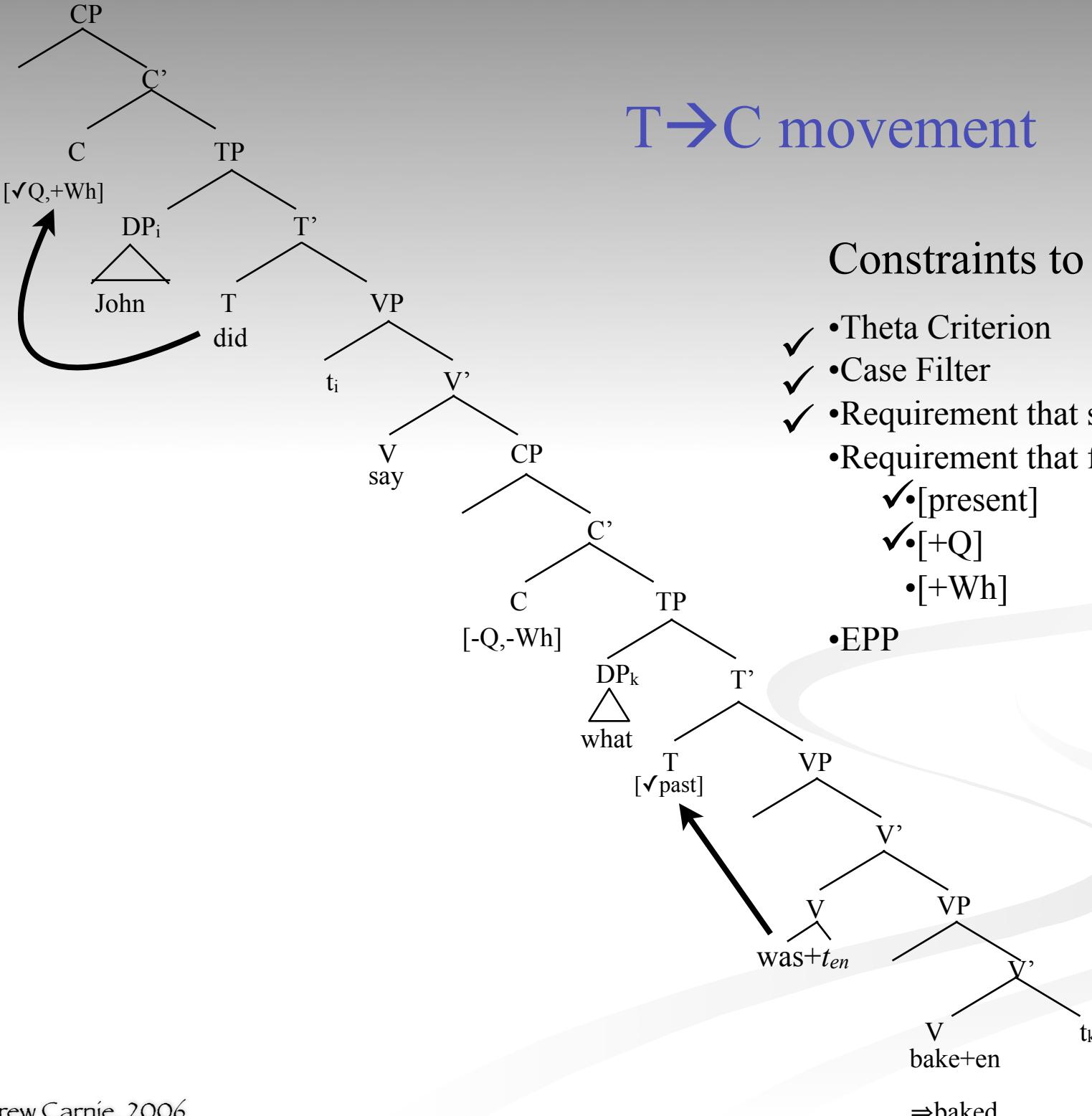
- ✓ • Theta Criterion
- ✓ • Case Filter
- ✓ • Requirement that suffixes are attached
- Requirement that features are checked
 - ✓ • [present]
 - [+Q]
 - [+Wh]
- EPP



T → C movement

Constraints to be met

- ✓ • Theta Criterion
- ✓ • Case Filter
- ✓ • Requirement that suffixes are attached
- Requirement that features are checked
 - ✓ • [present]
 - [+Q]
 - [+Wh]
- EPP

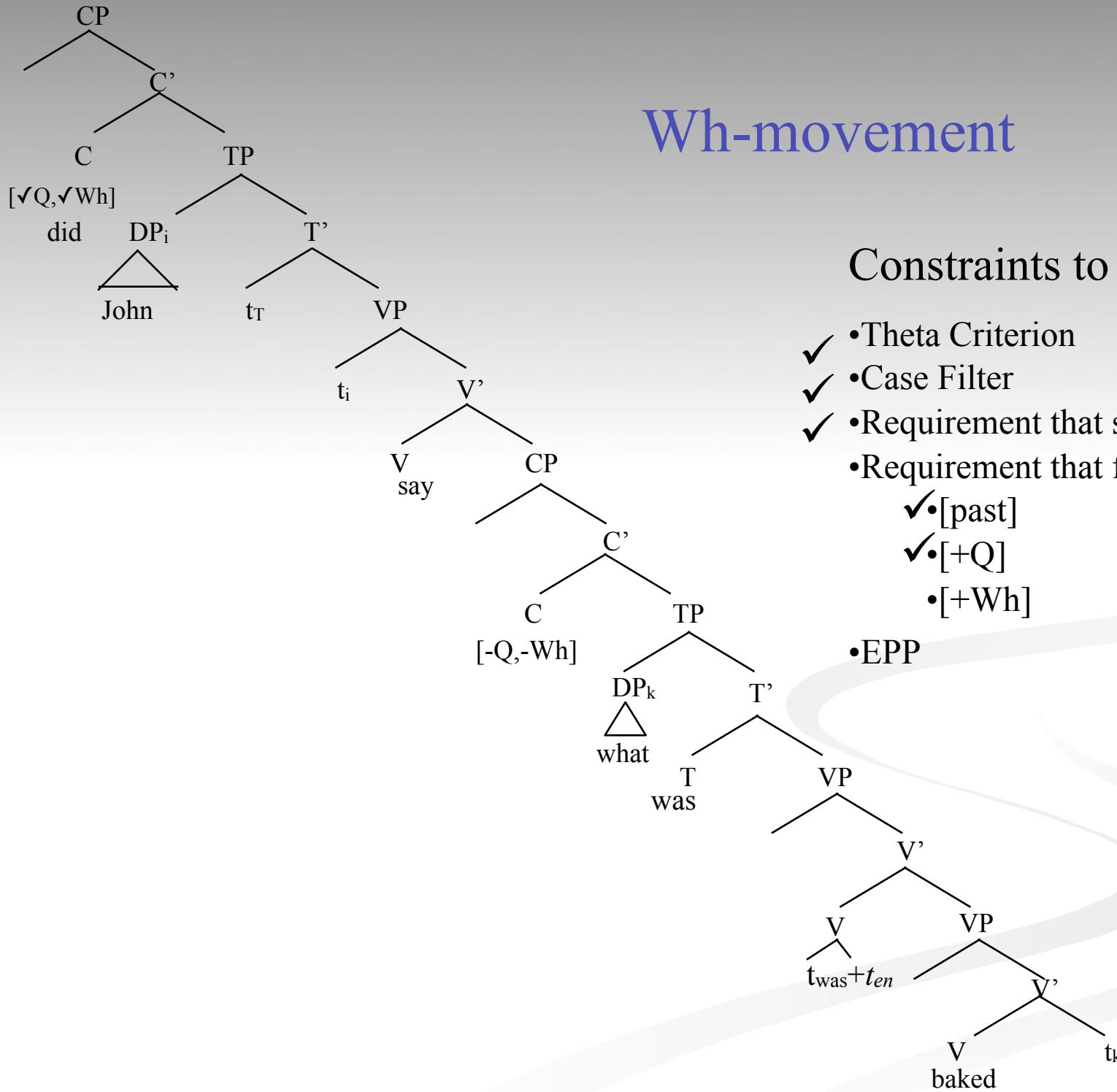


T → C movement

Constraints to be met

- ✓ • Theta Criterion
- ✓ • Case Filter
- ✓ • Requirement that suffixes are attached
- Requirement that features are checked
 - ✓ • [present]
 - ✓ • [+Q]
 - [+Wh]
- EPP

⇒baked

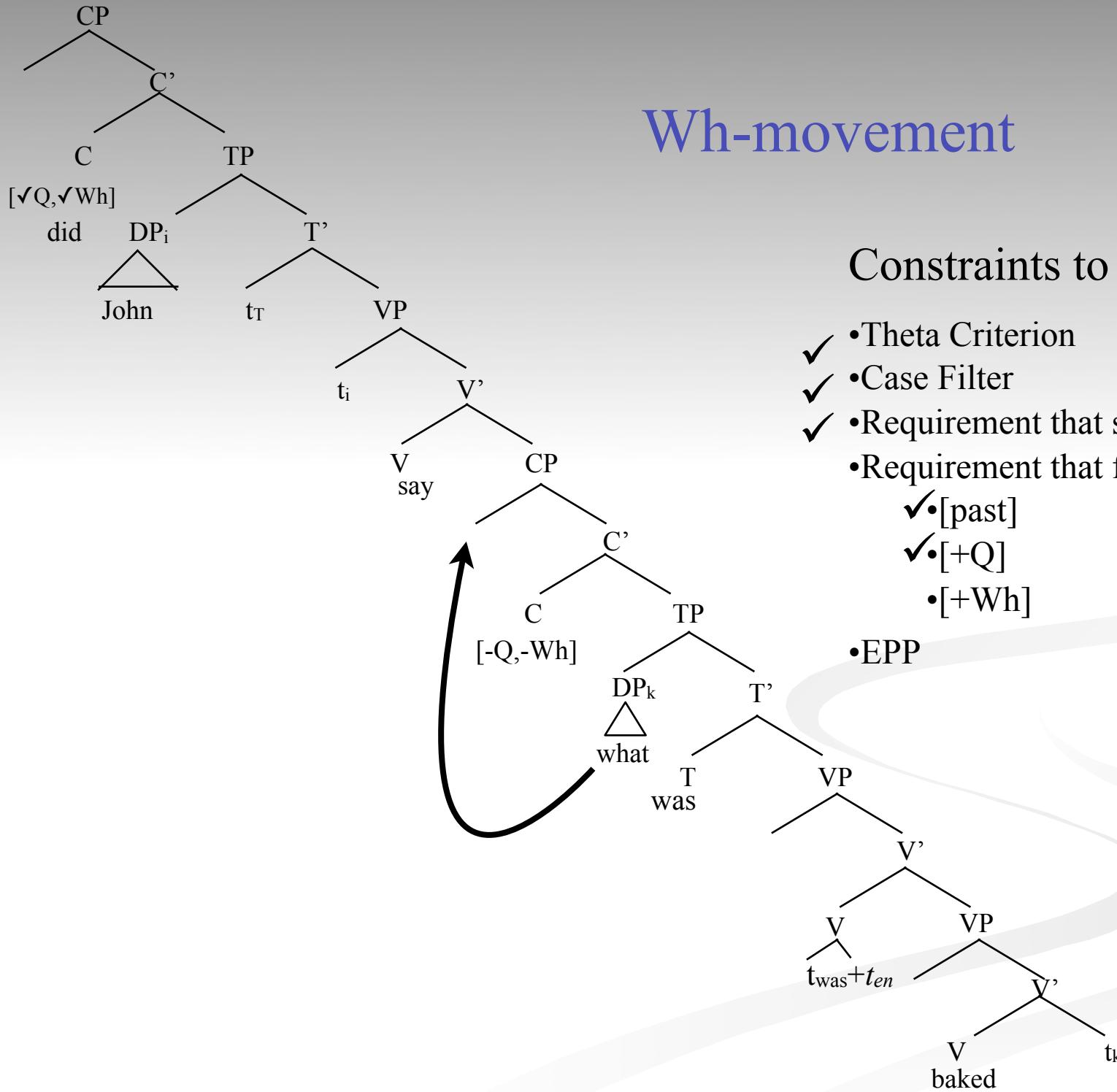


Wh-movement

Constraints to be met

- ✓ • Theta Criterion
- ✓ • Case Filter
- ✓ • Requirement that suffixes are attached
- Requirement that features are checked
 - ✓ • [past]
 - ✓ • [+Q]
 - [+Wh]

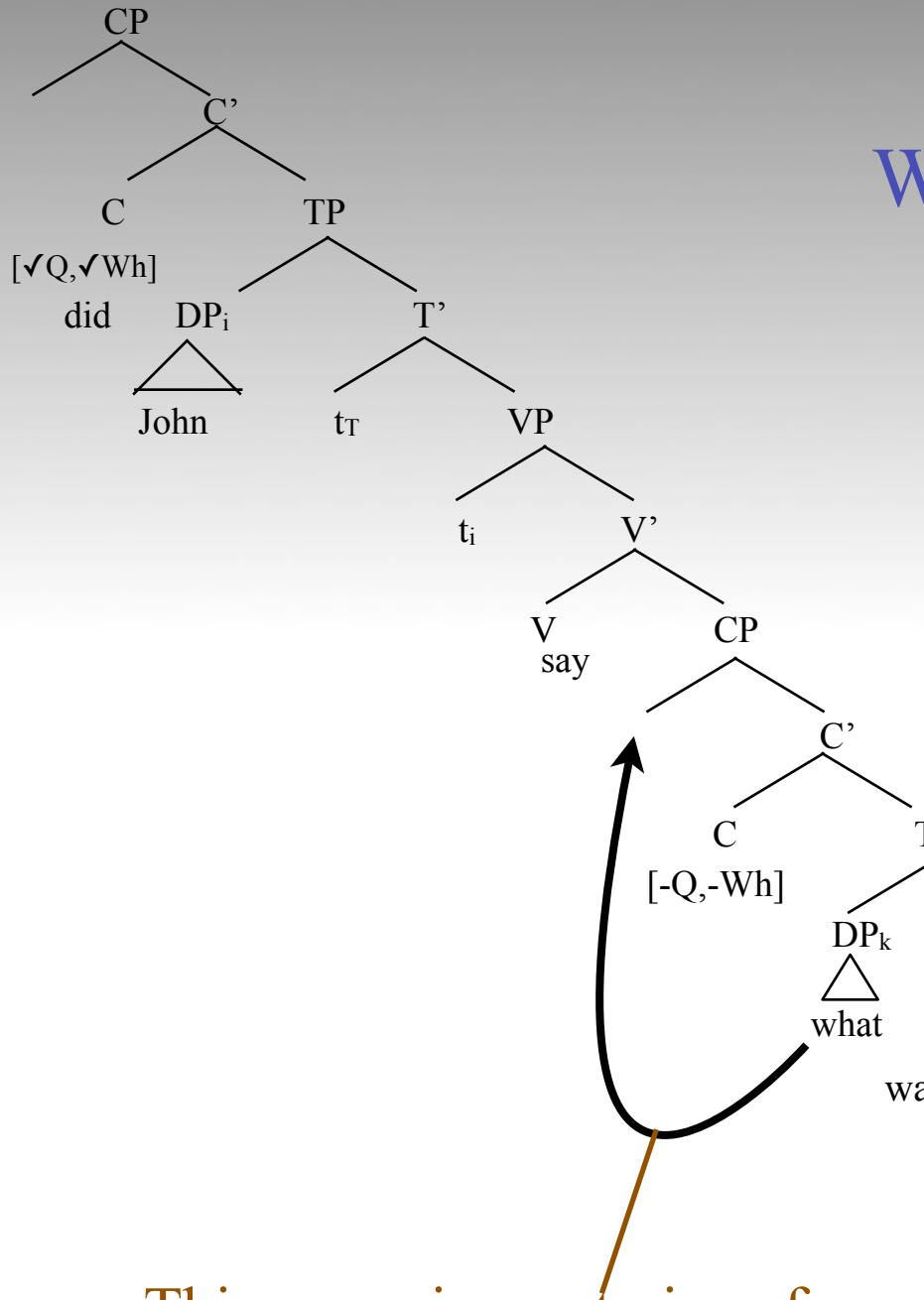
• EPP



Wh-movement

Constraints to be met

- ✓ •Theta Criterion
- ✓ •Case Filter
- ✓ •Requirement that suffixes are attached
- Requirement that features are checked
 - ✓ •[past]
 - ✓ •[+Q]
 - [+Wh]
- EPP



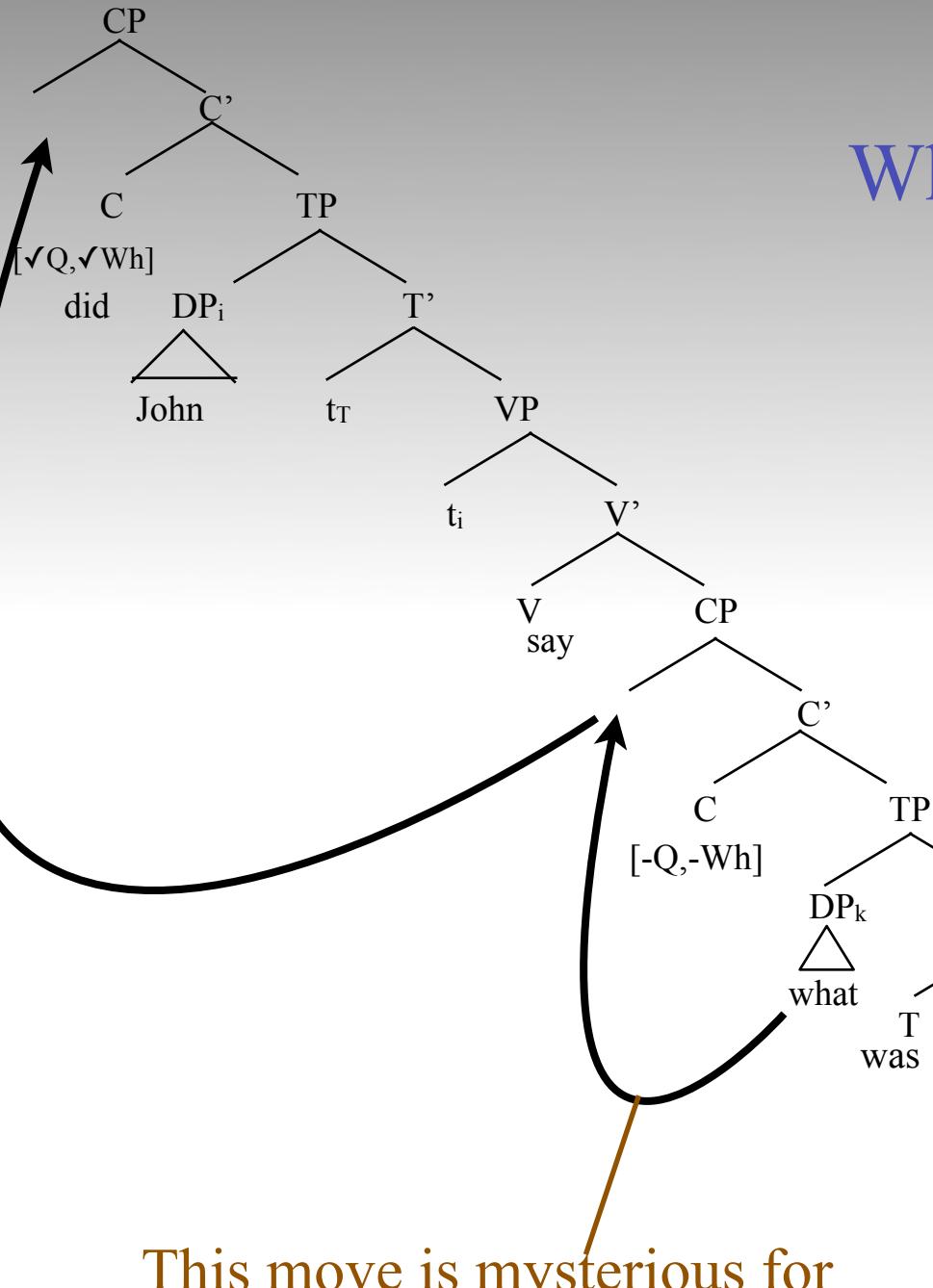
Wh-movement

Constraints to be met

- ✓ •Theta Criterion
- ✓ •Case Filter
- ✓ •Requirement that suffixes are attached
- Requirement that features are checked
 - ✓ •[past]
 - ✓ •[+Q]
 - [+Wh]
- EPP

This move is mysterious for the moment, but will be explained shortly

Wh-movement

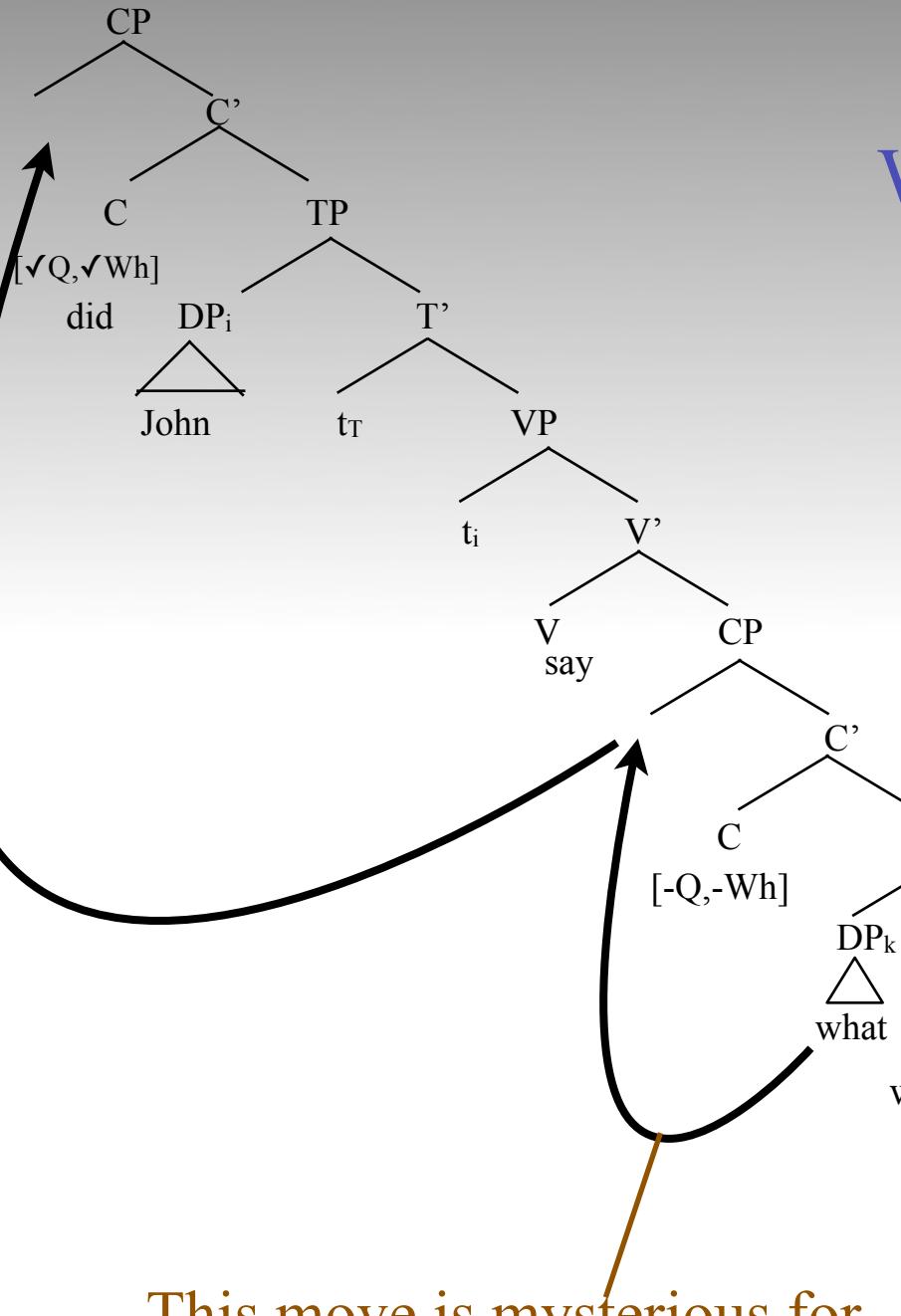


This move is mysterious for the moment, but will be explained shortly

Constraints to be met

- ✓ • Theta Criterion
- ✓ • Case Filter
- ✓ • Requirement that suffixes are attached
- Requirement that features are checked
 - ✓ • [past]
 - ✓ • [+Q]
 - [+Wh]
- EPP

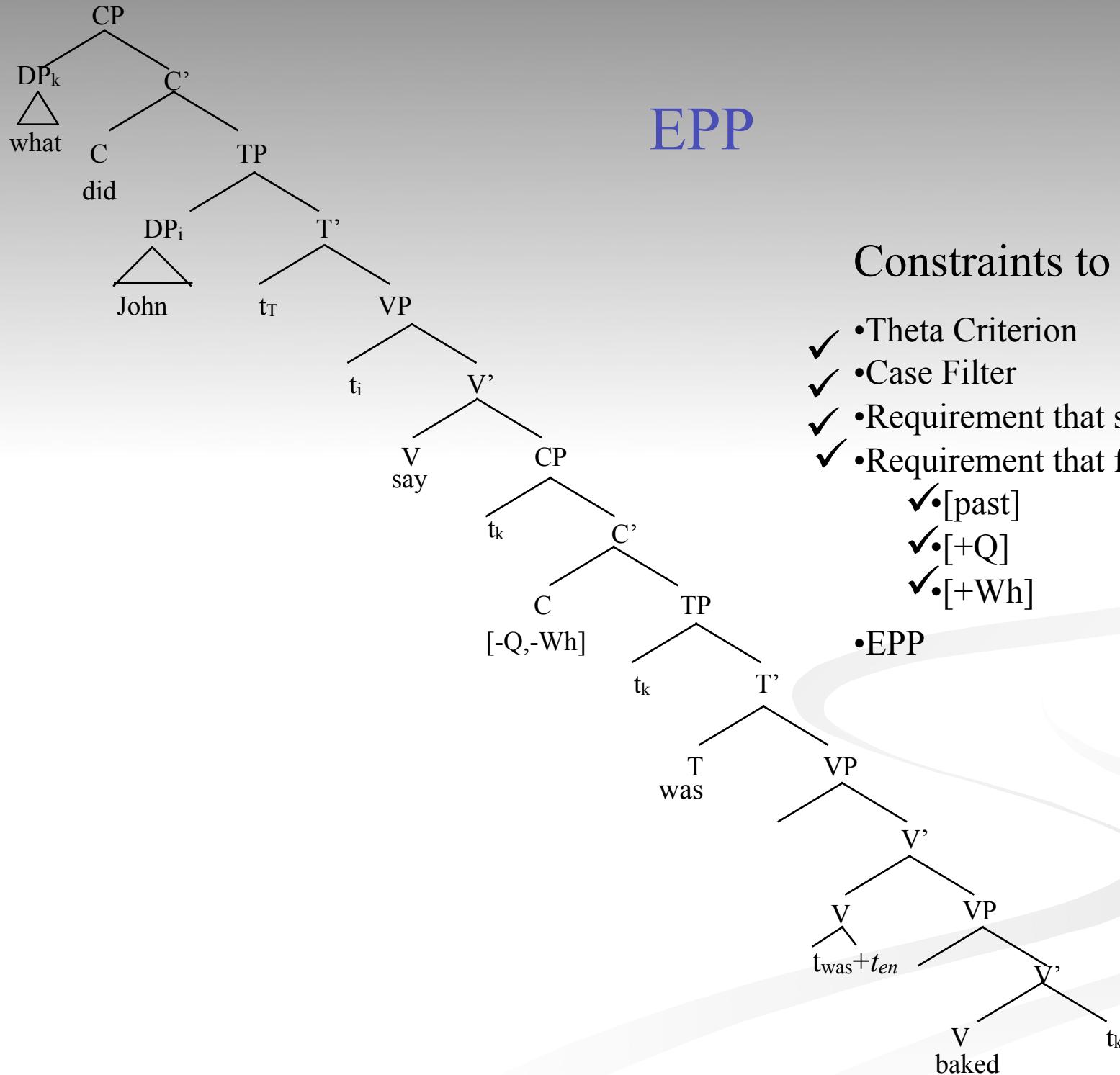
Wh-movement



This move is mysterious for the moment, but will be explained shortly

Constraints to be met

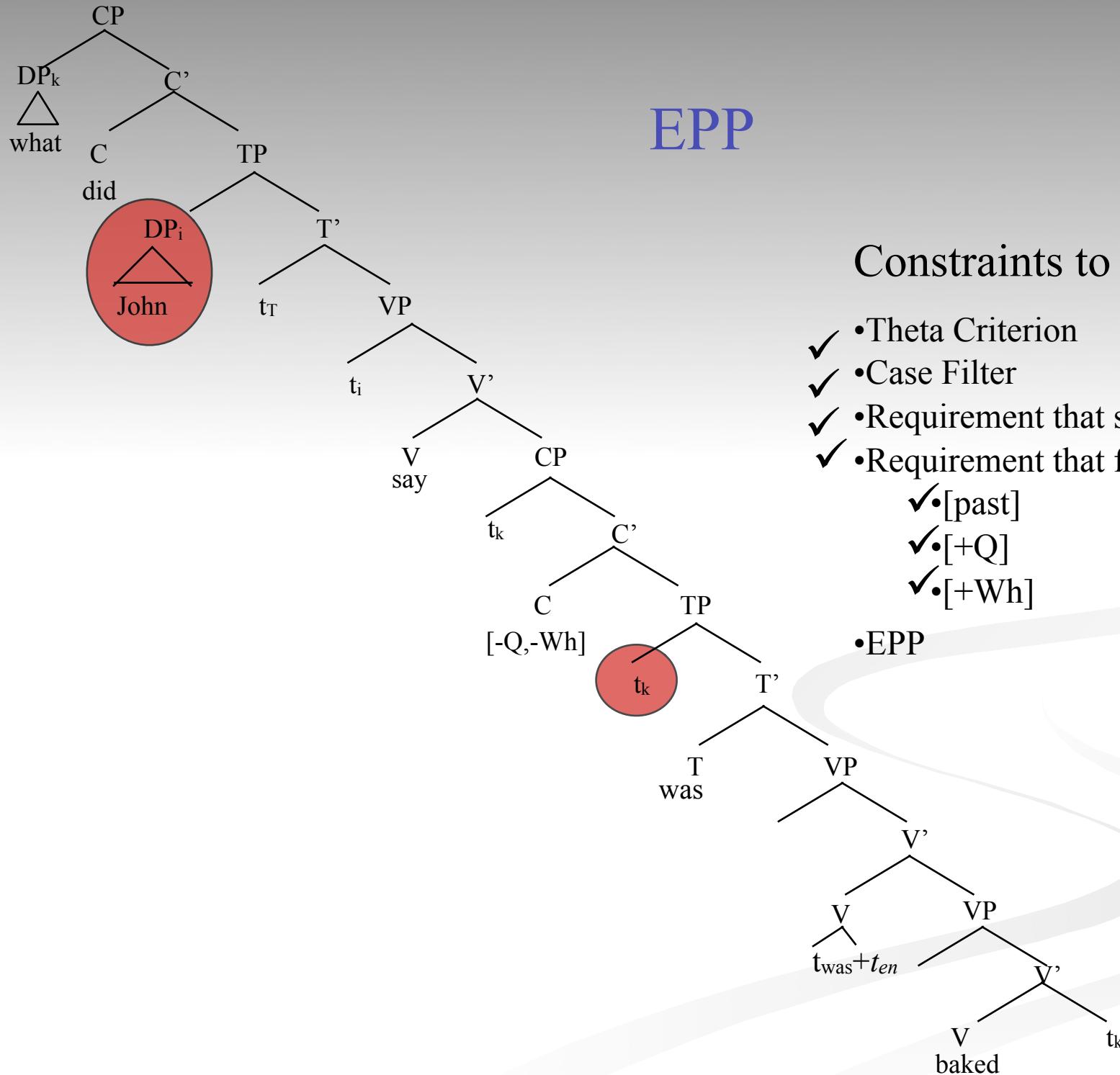
- ✓ • Theta Criterion
- ✓ • Case Filter
- ✓ • Requirement that suffixes are attached
- ✓ • Requirement that features are checked
 - ✓•[past]
 - ✓•[+Q]
 - ✓•[+Wh]
- EPP



Constraints to be met

- ✓ •Theta Criterion
- ✓ •Case Filter
- ✓ •Requirement that suffixes are attached
- ✓ •Requirement that features are checked
 - ✓•[past]
 - ✓•[+Q]
 - ✓•[+Wh]

•EPP

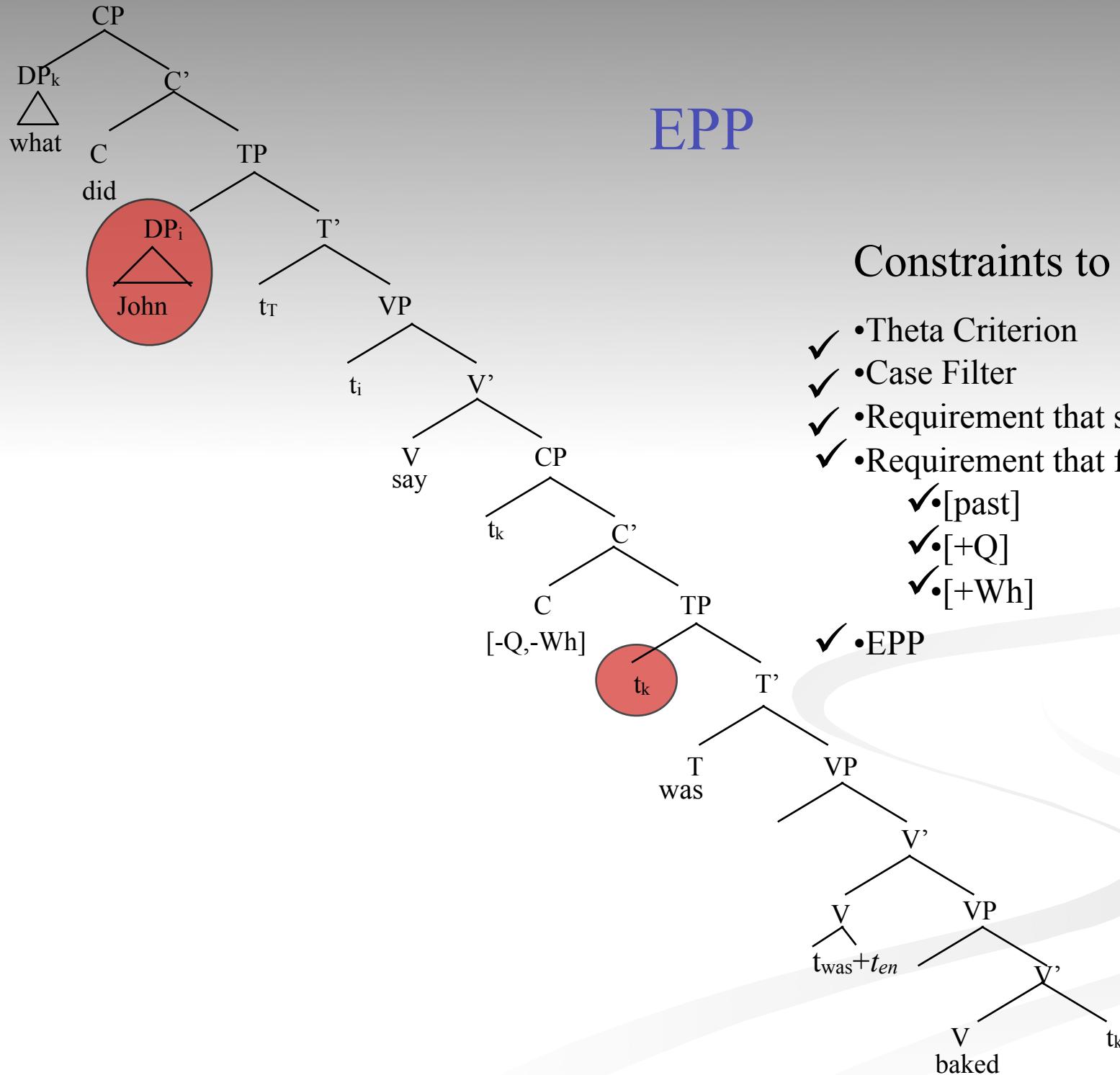


Constraints to be met

- ✓ • Theta Criterion
- ✓ • Case Filter
- ✓ • Requirement that suffixes are attached
- ✓ • Requirement that features are checked
 - ✓ • [past]
 - ✓ • [+Q]
 - ✓ • [+Wh]

• EPP

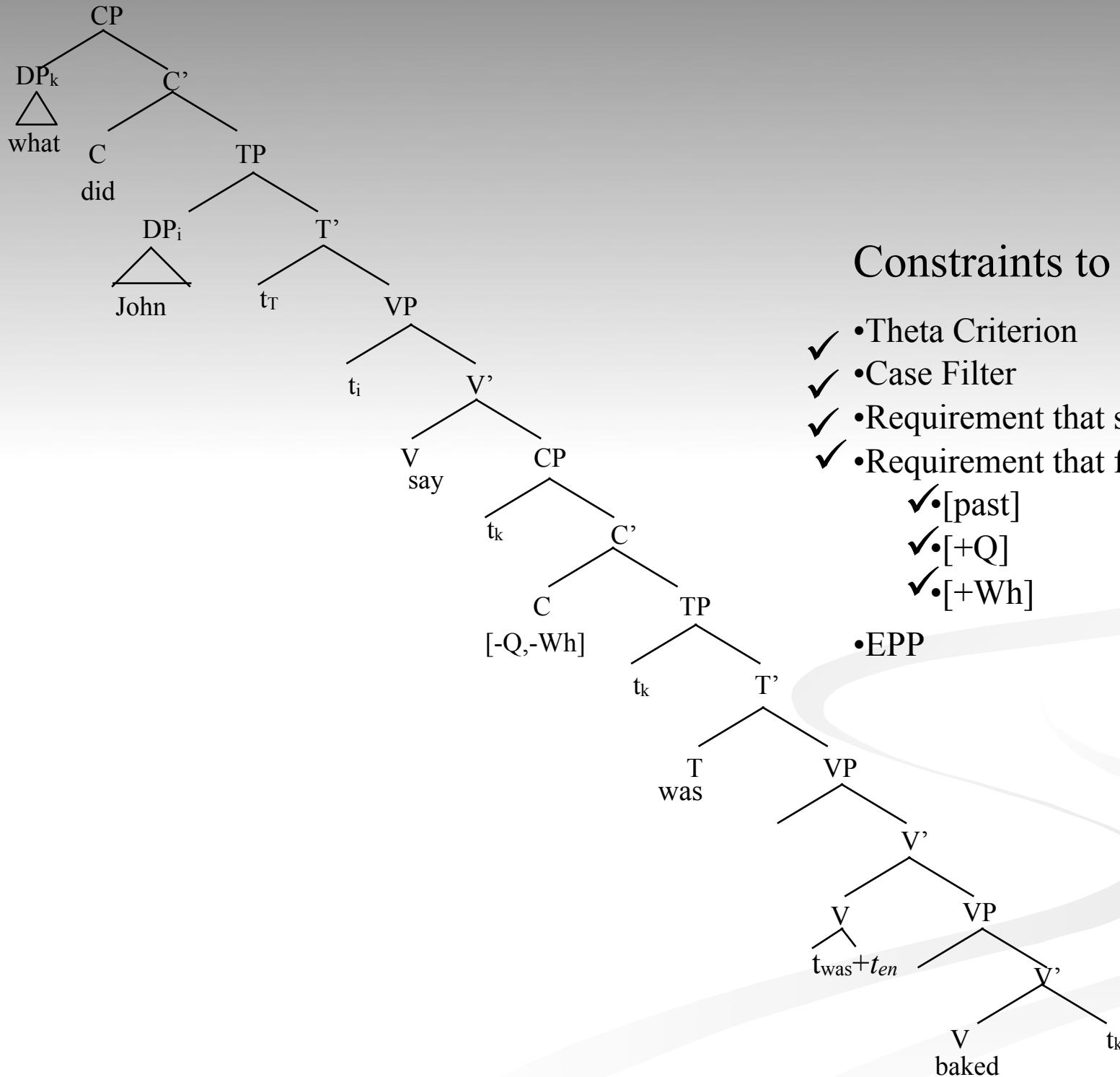
t_k



EPP

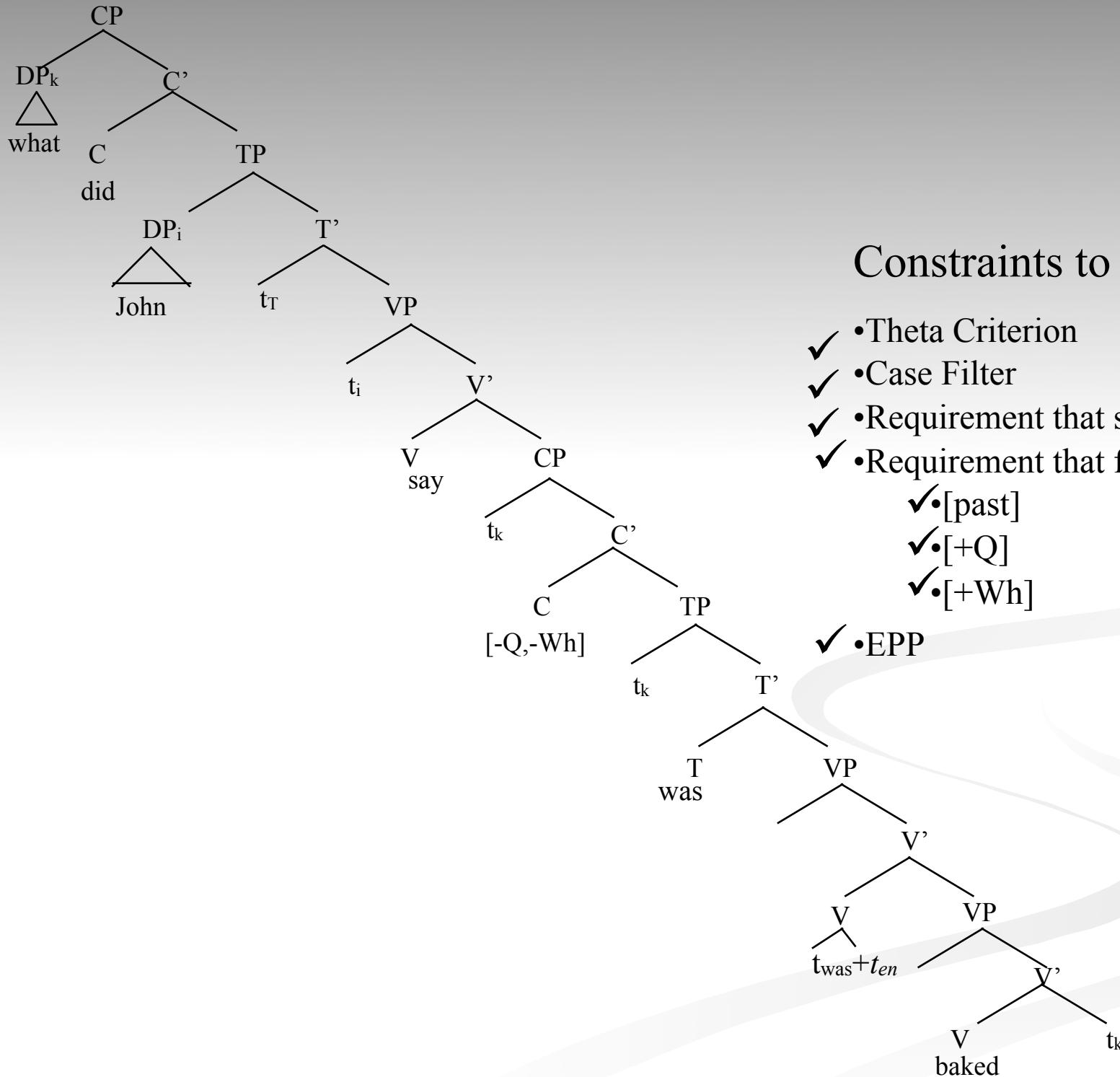
Constraints to be met

- ✓ • Theta Criterion
- ✓ • Case Filter
- ✓ • Requirement that suffixes are attached
- ✓ • Requirement that features are checked
 - ✓ • [past]
 - ✓ • [+Q]
 - ✓ • [+Wh]
- ✓ • EPP



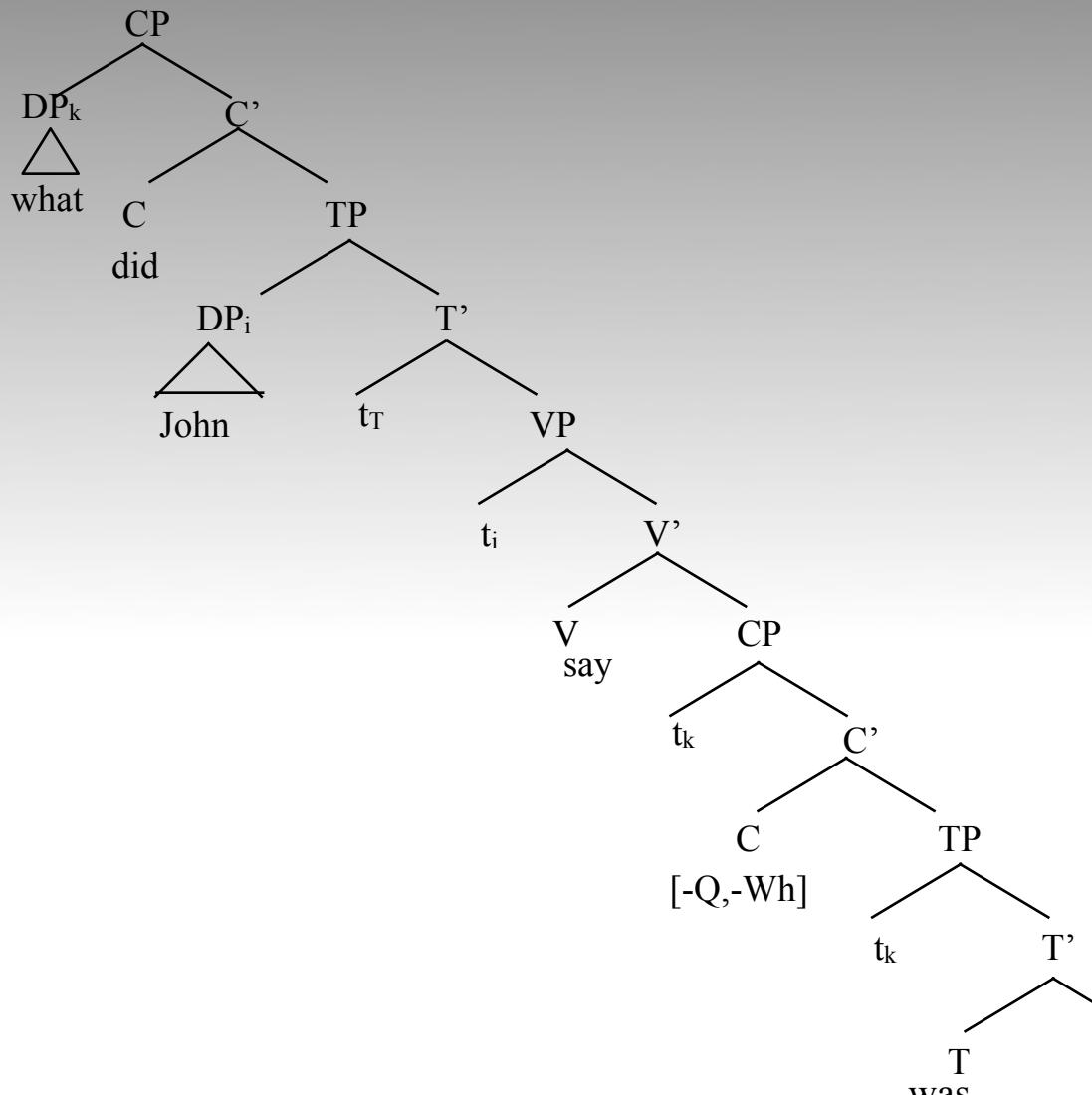
Constraints to be met

- ✓ •Theta Criterion
- ✓ •Case Filter
- ✓ •Requirement that suffixes are attached
- ✓ •Requirement that features are checked
 - ✓•[past]
 - ✓•[+Q]
 - ✓•[+Wh]
- EPP



Constraints to be met

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- ✓ • Case Filter
- ✓ • Requirement that suffixes are attached
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 - ✓ • [past]
 - ✓ • [+Q]
 - ✓ • [+Wh]
- ✓ • EPP

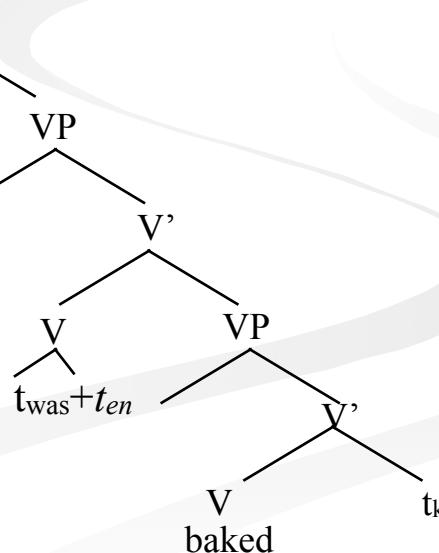


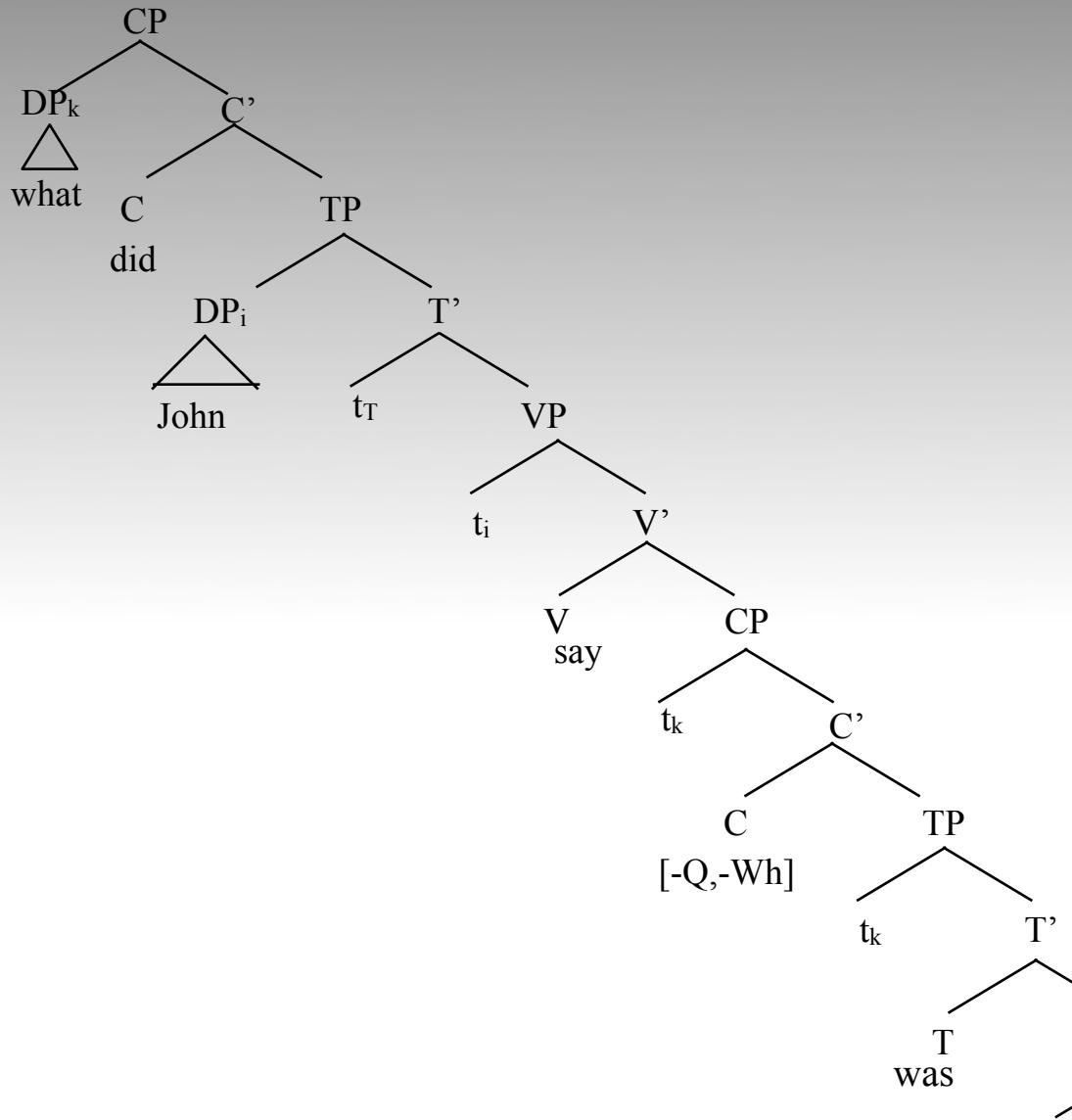
Constraints to be met

- ✓ • Theta Criterion
- ✓ • Case Filter
- ✓ • Requirement that suffixes are attached
- ✓ • Requirement that features are checked
 - ✓•[past]
 - ✓•[+Q]
 - ✓•[+Wh]
- ✓ • EPP

English-specific Constraints to be met

- *That trace filter* - cf. What did John say that t was baked
- *Doubly filled CP* cf. John said what that was baked



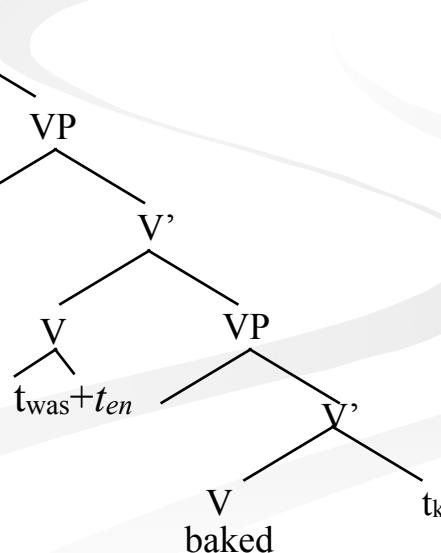


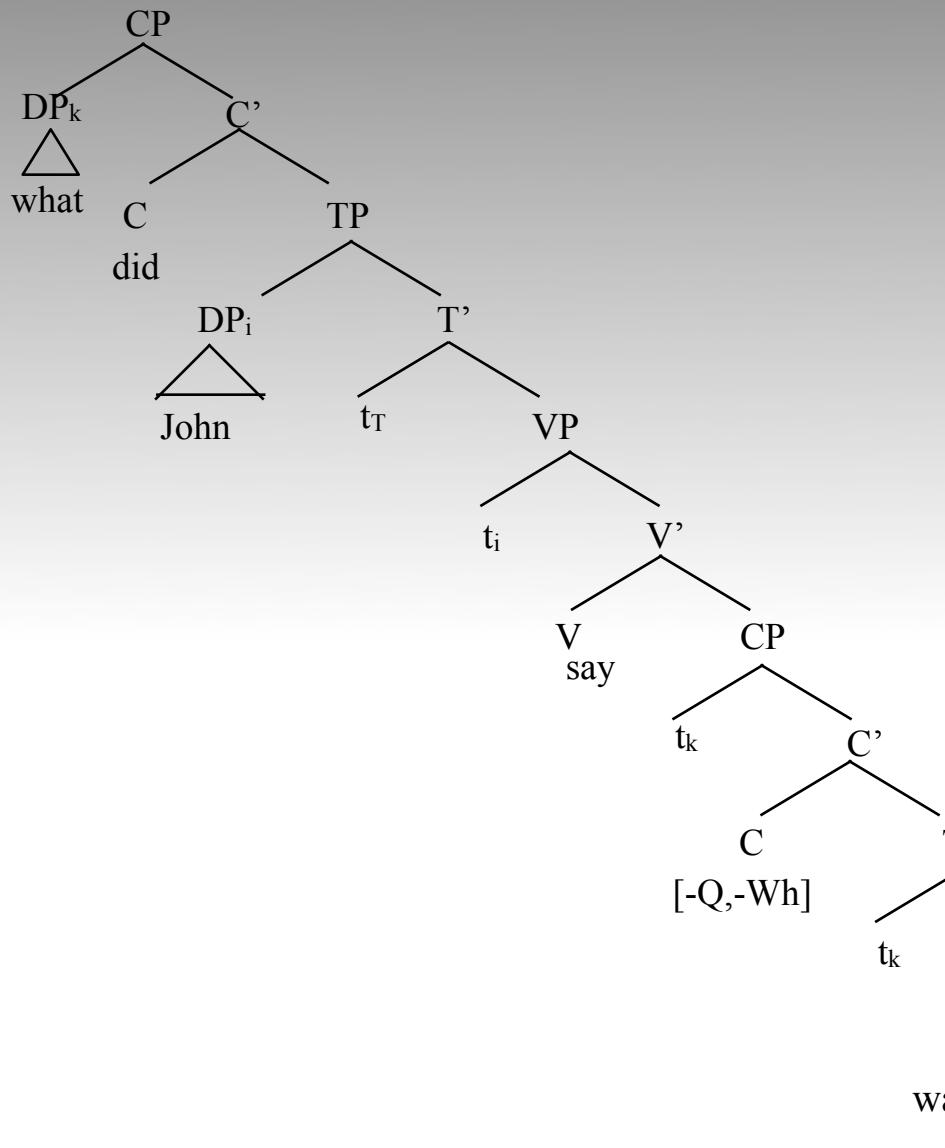
Constraints to be met

- ✓ • Theta Criterion
- ✓ • Case Filter
- ✓ • Requirement that suffixes are attached
- ✓ • Requirement that features are checked
 - ✓ • [past]
 - ✓ • [+Q]
 - ✓ • [+Wh]
- ✓ • EPP

English-specific Constraints to be met

- ✓ • *That trace filter* - cf. What did John say that t was baked
- *Doubly filled CP* cf. John said what that was baked



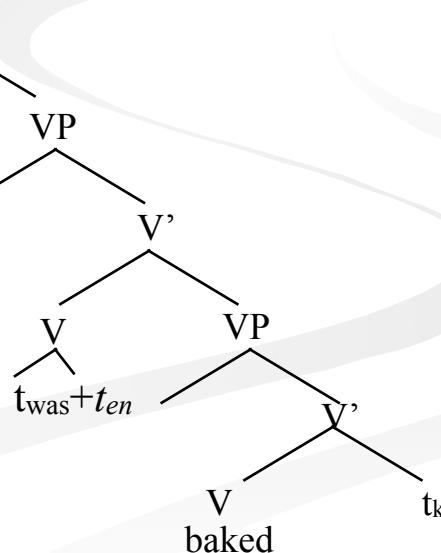


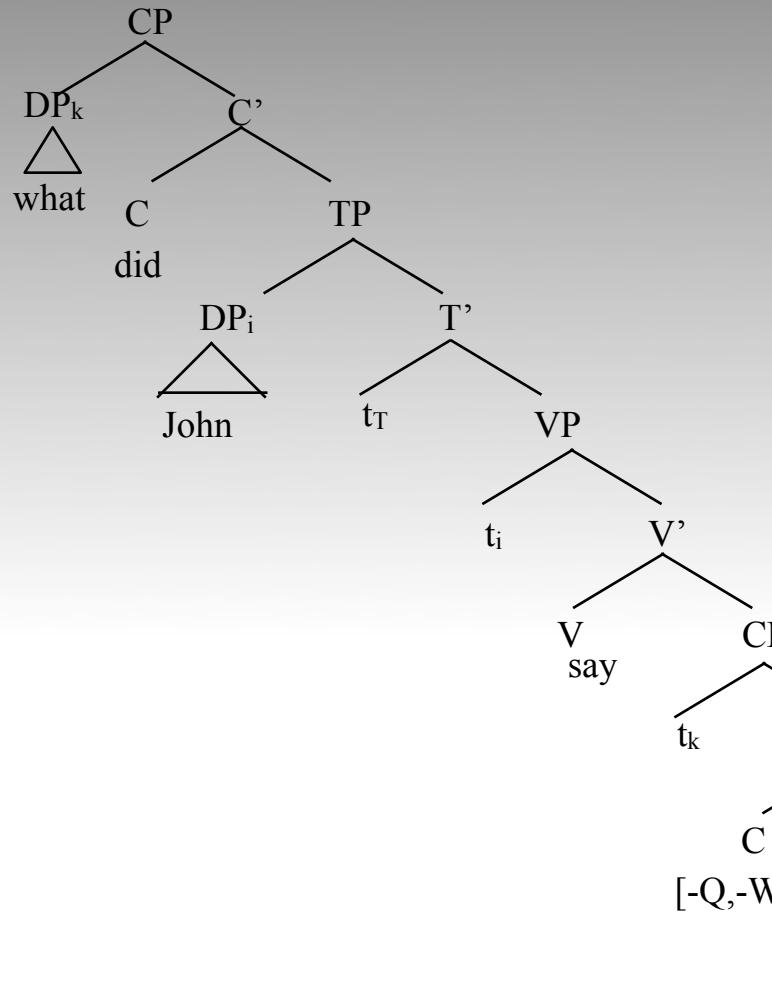
Constraints to be met

- ✓ •Theta Criterion
- ✓ •Case Filter
- ✓ •Requirement that suffixes are attached
- ✓ •Requirement that features are checked
 - ✓•[past]
 - ✓•[+Q]
 - ✓•[+Wh]
- ✓ •EPP

English-specific Constraints to be met

- ✓ •*That trace filter*- cf. What did John say that t was baked
- ✓ •*Doubly filled CP* cf. John said what that was baked





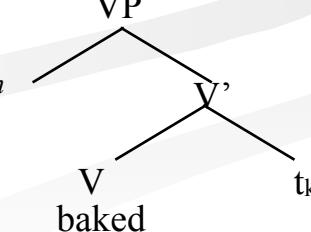
A Well-formed S-structure

Constraints to be met

- ✓ •Theta Criterion
- ✓ •Case Filter
- ✓ •Requirement that suffixes are attached
- ✓ •Requirement that features are checked
 - ✓•[past]
 - ✓•[+Q]
 - ✓•[+Wh]
- ✓ •EPP

English-specific Constraints to be met

- ✓ •*That trace filter*- cf. What did John say that t was baked
- ✓ •*Doubly filled CP* cf. John said what that was baked



Traces?

- want + to → wanna
 - Who_i do you wanna kiss t_i ?
 - *Who do you wanna kiss the puppy?
 - Who_i do you want t_i to kiss the puppy?

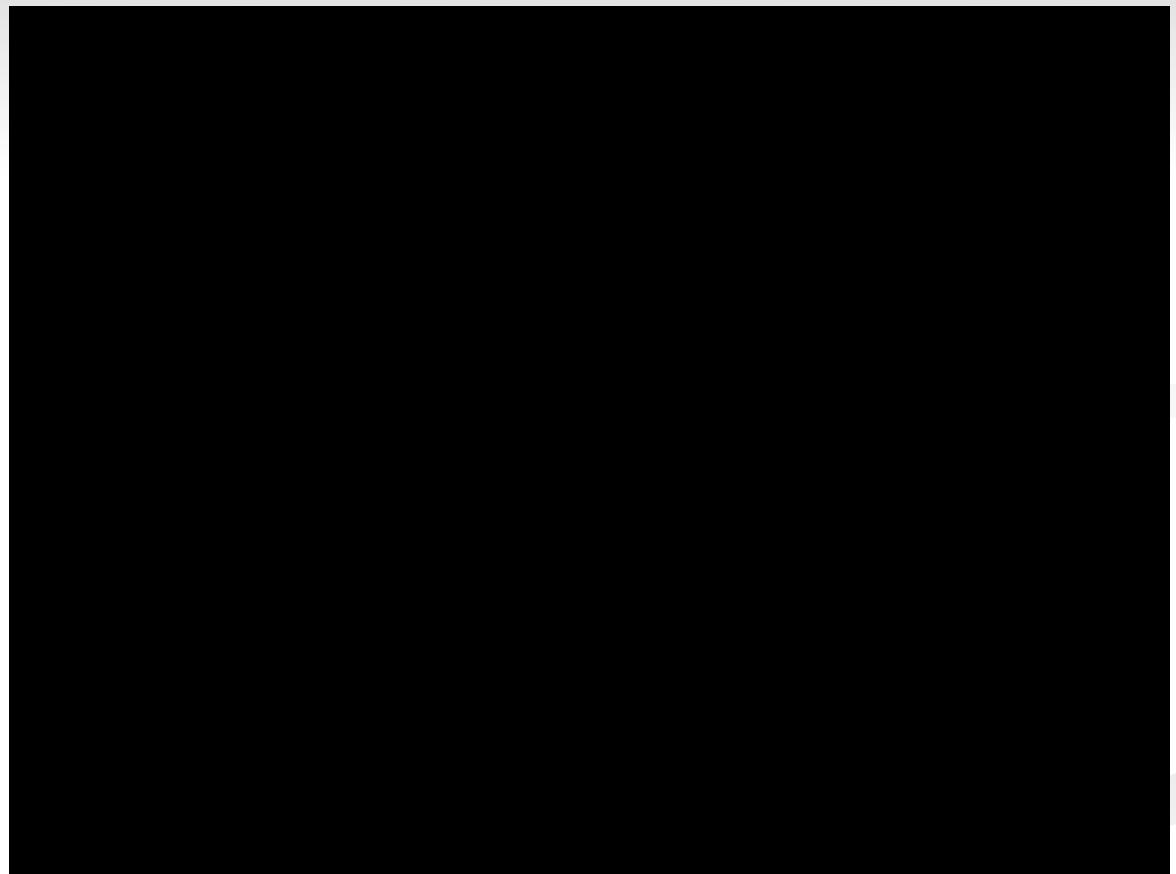
Traces?

■ want + to → wanna

- Who_i do you wanna kiss t_i ?
- *Who do you wanna kiss the puppy?
- Who_i do you want t_i to kiss the puppy?

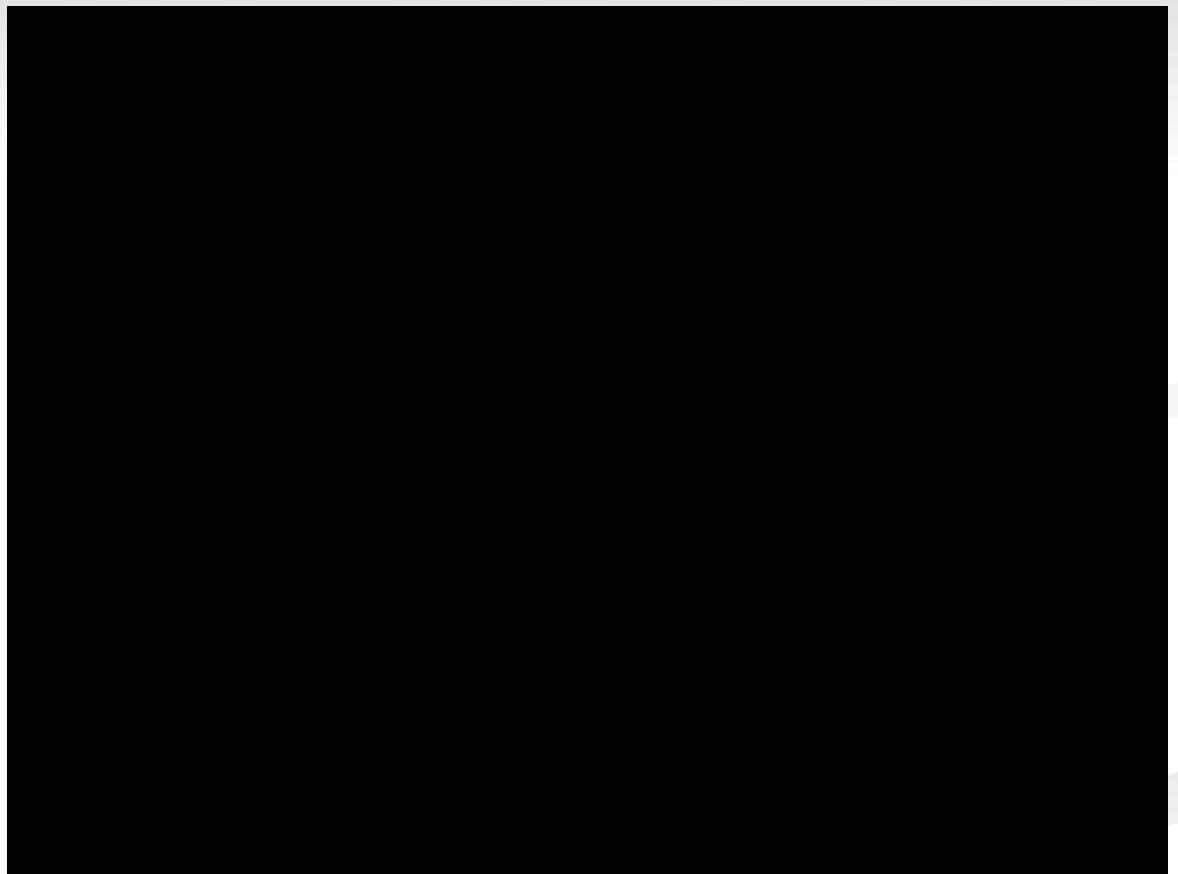
↑
intervenes, so blocks wanna
contraction

Children and Traces



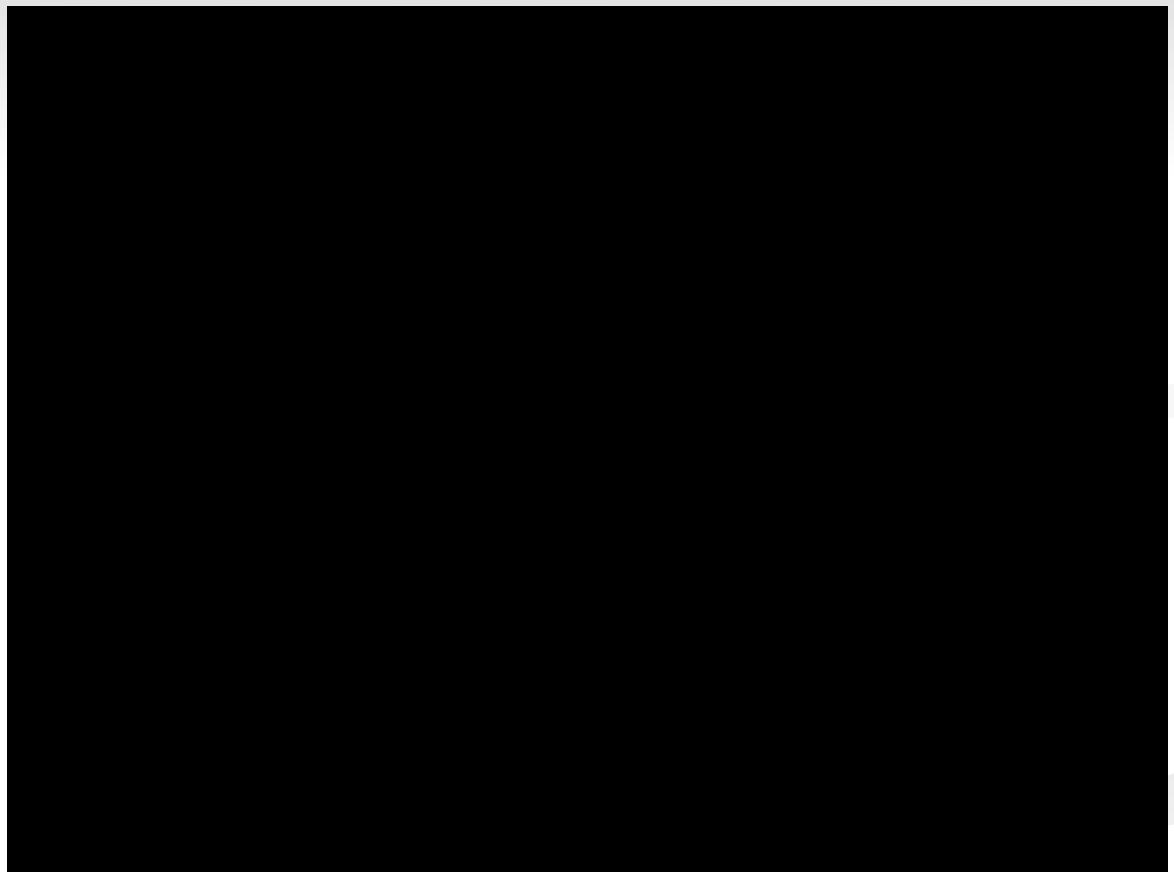
Children and Traces

- This movie shows three things:



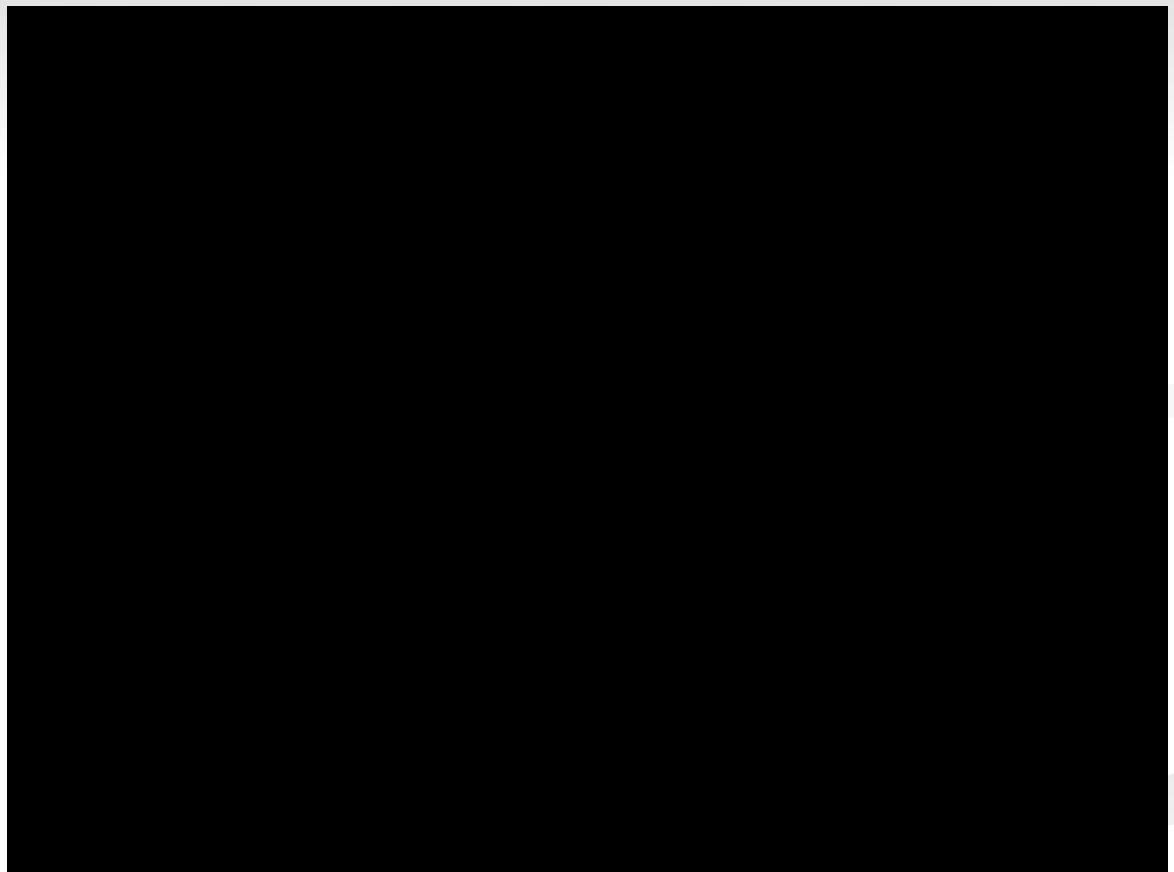
Children and Traces

- This movie shows three things:
- -Children exhibiting *overt* traces (saying the word in both its D-structure and S-structure position)



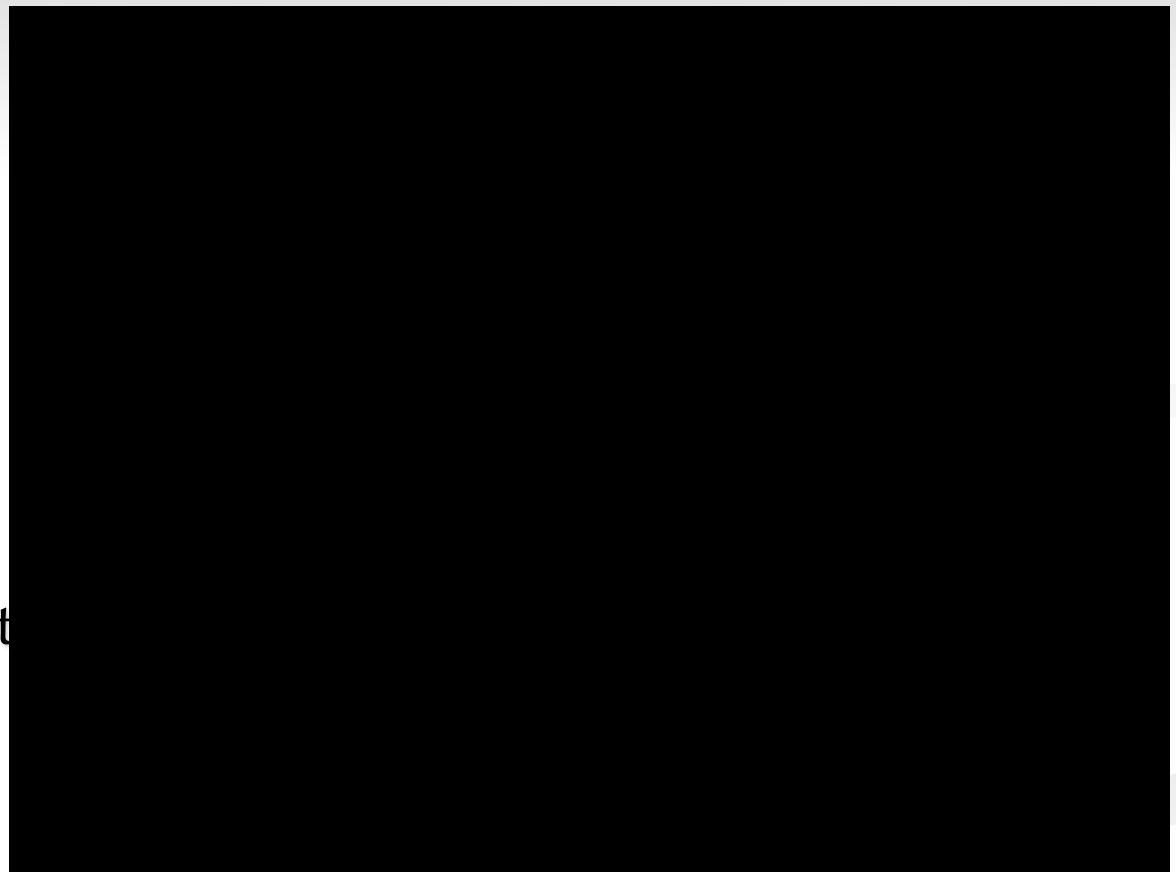
Children and Traces

- This movie shows three things:
- -Children exhibiting *overt* traces (saying the word in both its D-structure and S-structure position)
- Children never pronounce a wh-word in a *wanna* contraction environment



Children and Traces

- This movie shows three things:
- -Children exhibiting *overt* traces (saying the word in both its D-structure and S-structure position)
- Children never pronounce a wh-word in a *wanna* contraction environment
- Children don't *wanna* contract across a wh-trace.



What summary?

- Wh-movement moves Wh-phrase to specifier of CP
- Motivated by need to get Wh-phrase near [+WH] complementizer
- Two English Specific constraints
 - Doubly filled Comp Filter
 - That-trace filter