Islands

LING 20: Introduction to Linguistic Analysis

UCLA · Spring 2021

Overview

- Movement is very powerful and can be unboundedly long.
- In some cases, though, movement is impossible.
- That is, certain structures simply do not allow movement out of them.
- Such structures are called **ISLANDS**.

The unboundedness of movement

Movement can be **unboundedly long**:

(1) I know …

a. **which suitor** the witch cursed ___ .

The unboundedness of movement

Movement can be **unboundedly long**:

(1) I know …

a. **which suitor** the witch cursed ___ .

b. **which suitor** Mary said that the witch cursed ___ .

The unboundedness of movement

Movement can be **unboundedly long**:

(1) I know …

a. **which suitor** the witch cursed ___ .

b. **which suitor** Mary said that the witch cursed ___ .

c. **which suitor** Alex thinks that Mary said that the witch had cursed ___ .

The unboundedness of movement

Movement can be **unboundedly long**:

(1) I know …

a. **which suitor** the witch cursed ___ .

b. **which suitor** Mary said that the witch cursed ___ .

c. **which suitor** Alex thinks that Mary said that the witch had cursed ___ .

d. **which suitor** Zora mentioned that Alex thinks that Mary said that the witch had cursed ___ .

Constraints on movement

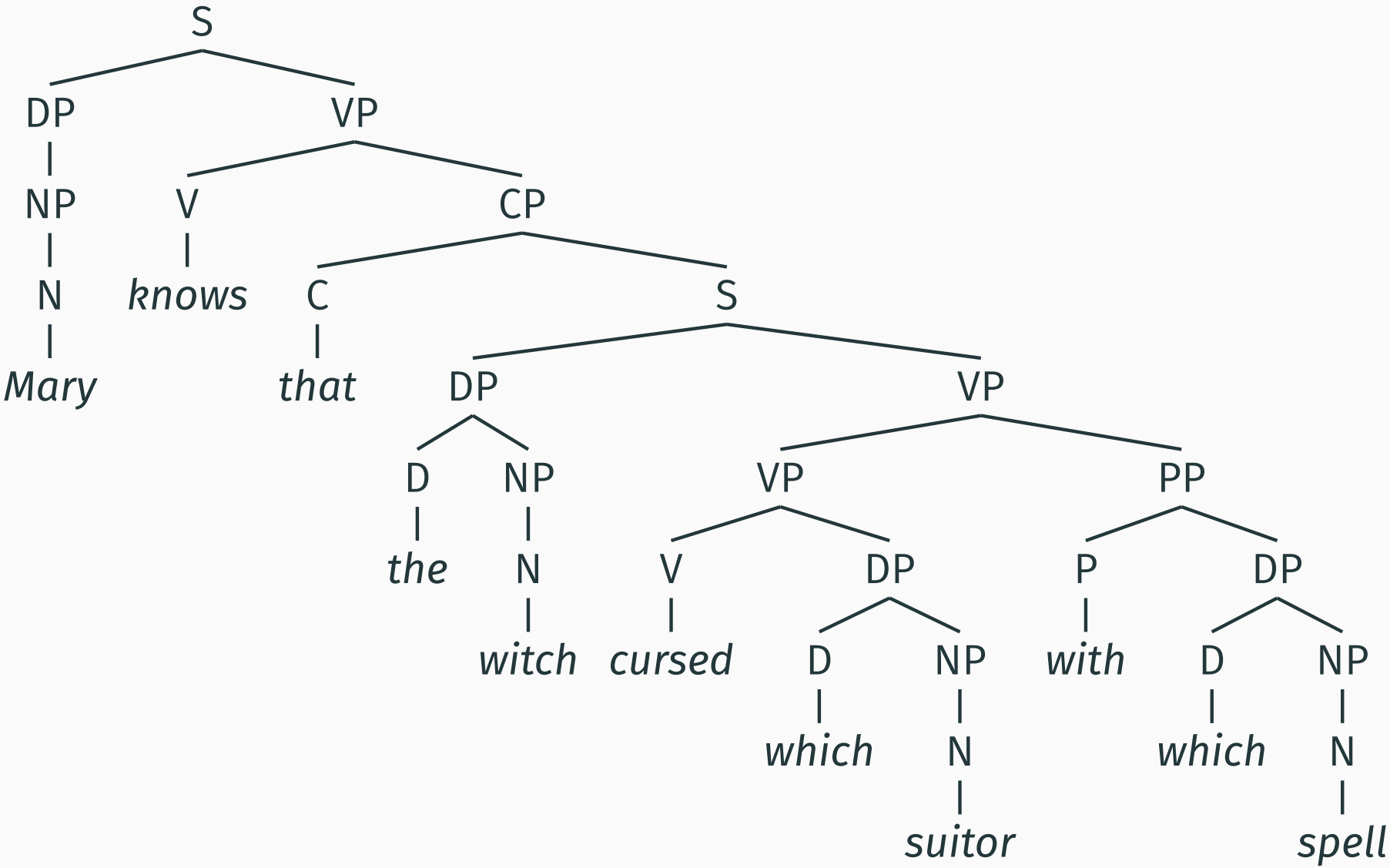
- Nevertheless, movement is not completely free.
- There are **constraints** on movements.

Constraint 1: Number of movements

- **Movement rule:**
  A constituent containing a question word moves to a C, replacing *that* or *if*.

- **Consequence:**
  If there is only one C, then only one element should be able to move.

Example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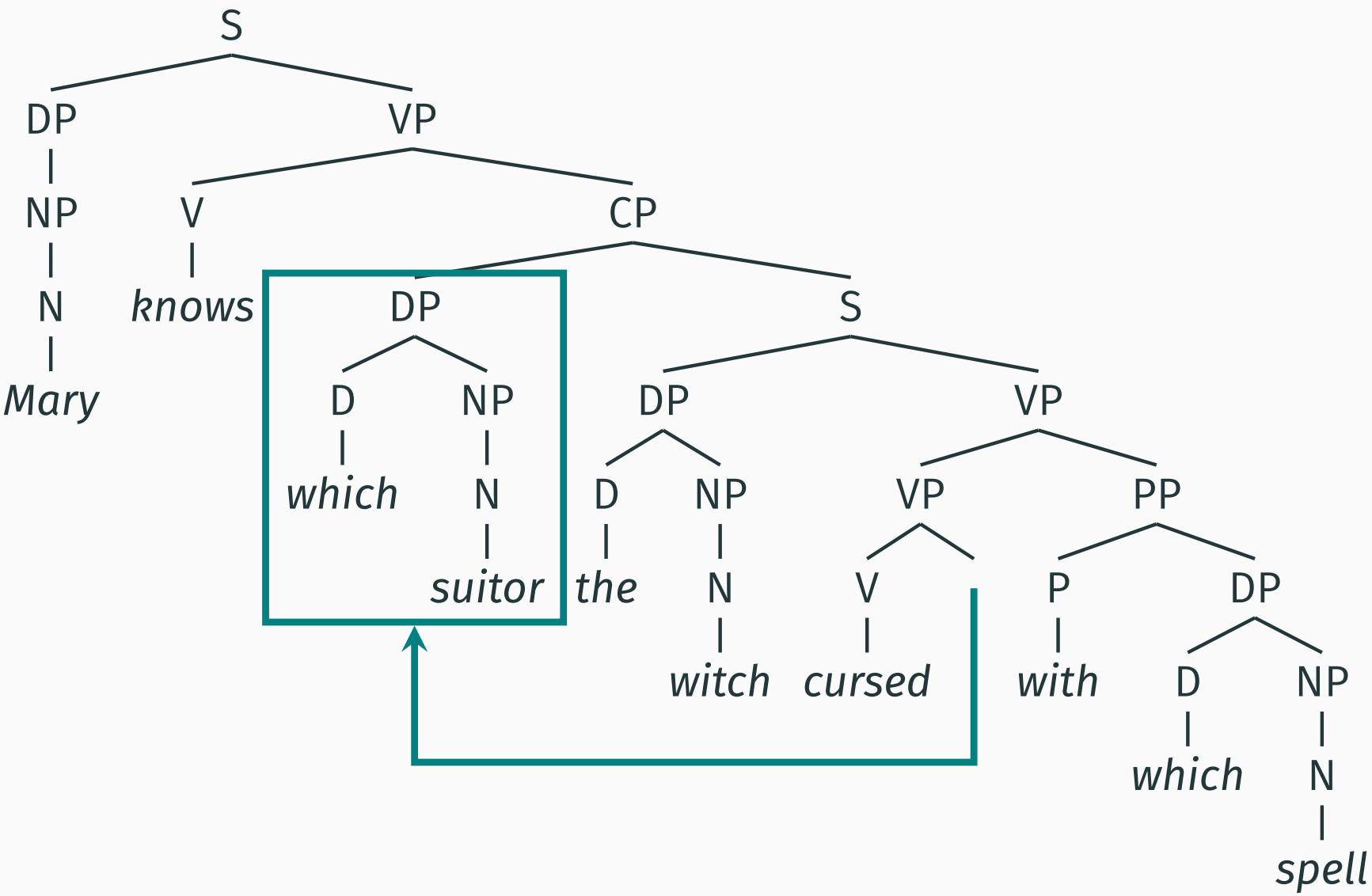
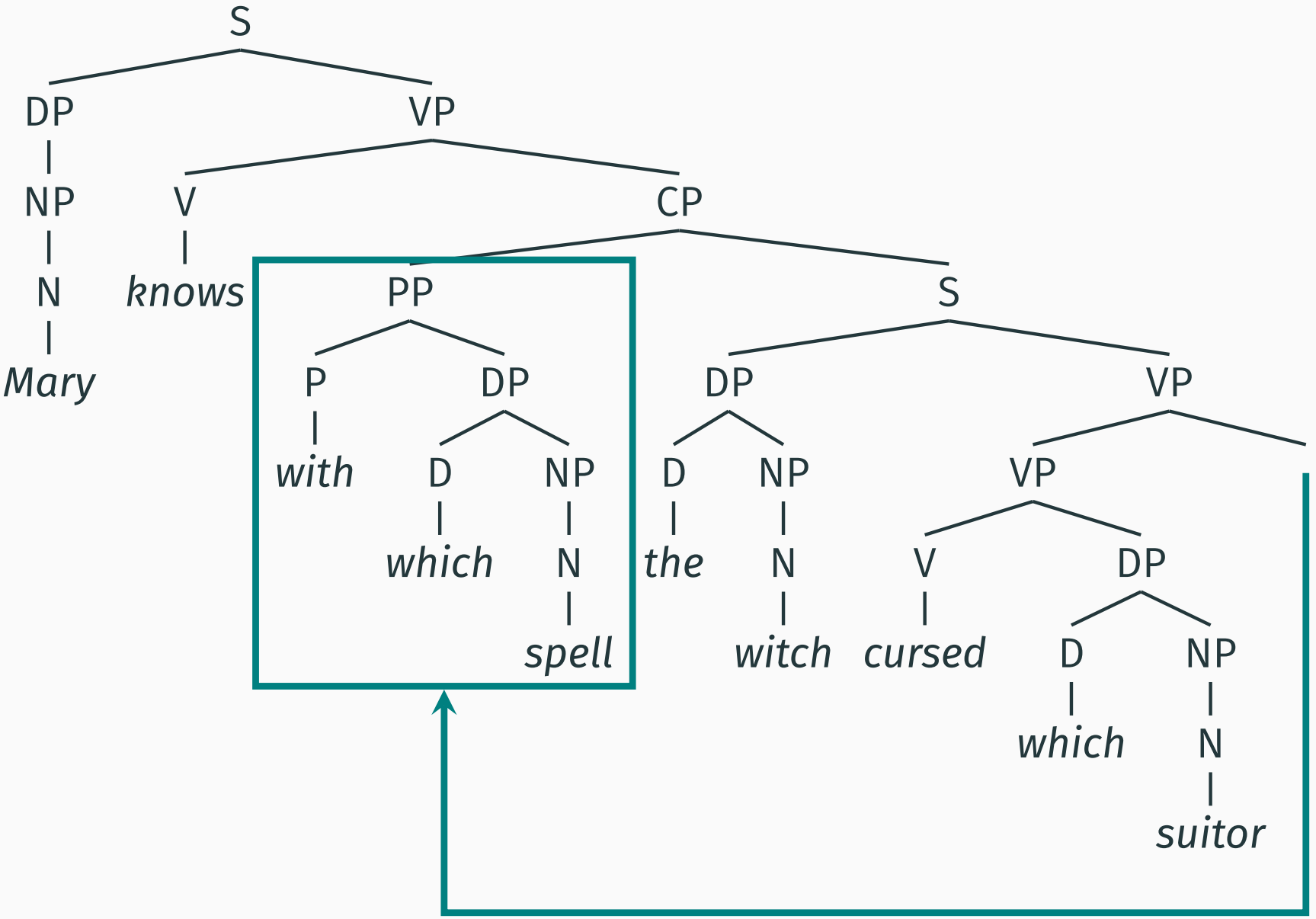
Moving the DP



Moving the PP

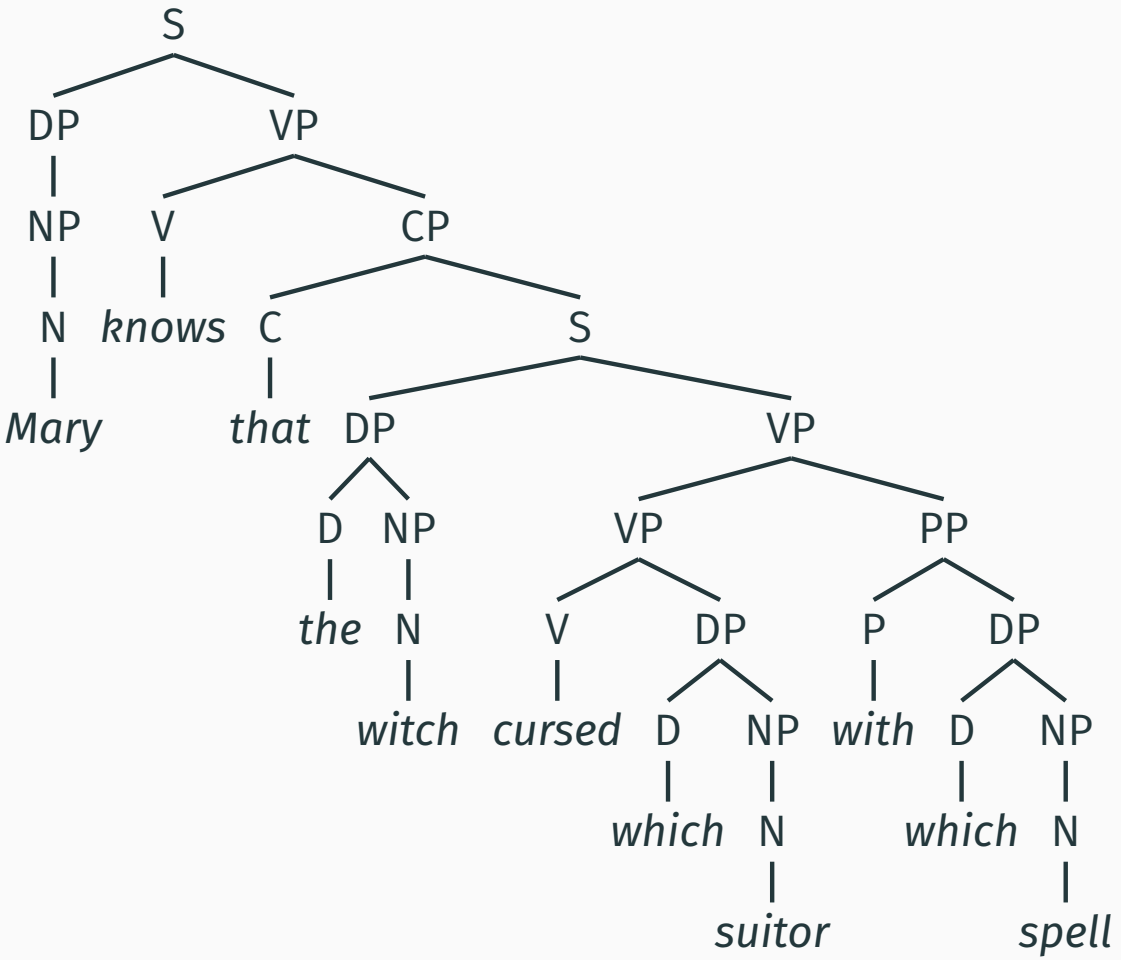


Moving both

*Mary knows
    which suitor
    with which spell
        the witch cursed ___ ___.

*Mary knows
    with which spell
    which suitor
        the witch cursed ___ ___.

Explanation



- There is only one *that* per clause.
- Because movement puts an element into the spot of a *that*, you can only move one element per clause.

→ This restriction already follows from our movement rule.

More constraints on movement

- There are also other constraints on movement, which are more mysterious.
- In some cases, it is not possible to move an element to a C, even if that C is empty.

Constraint #2

(2) a. I know that Alex likes pizza.

b. I know **what** Alex likes ___.

Constraint #2

(2) a. I know that Alex likes pizza.

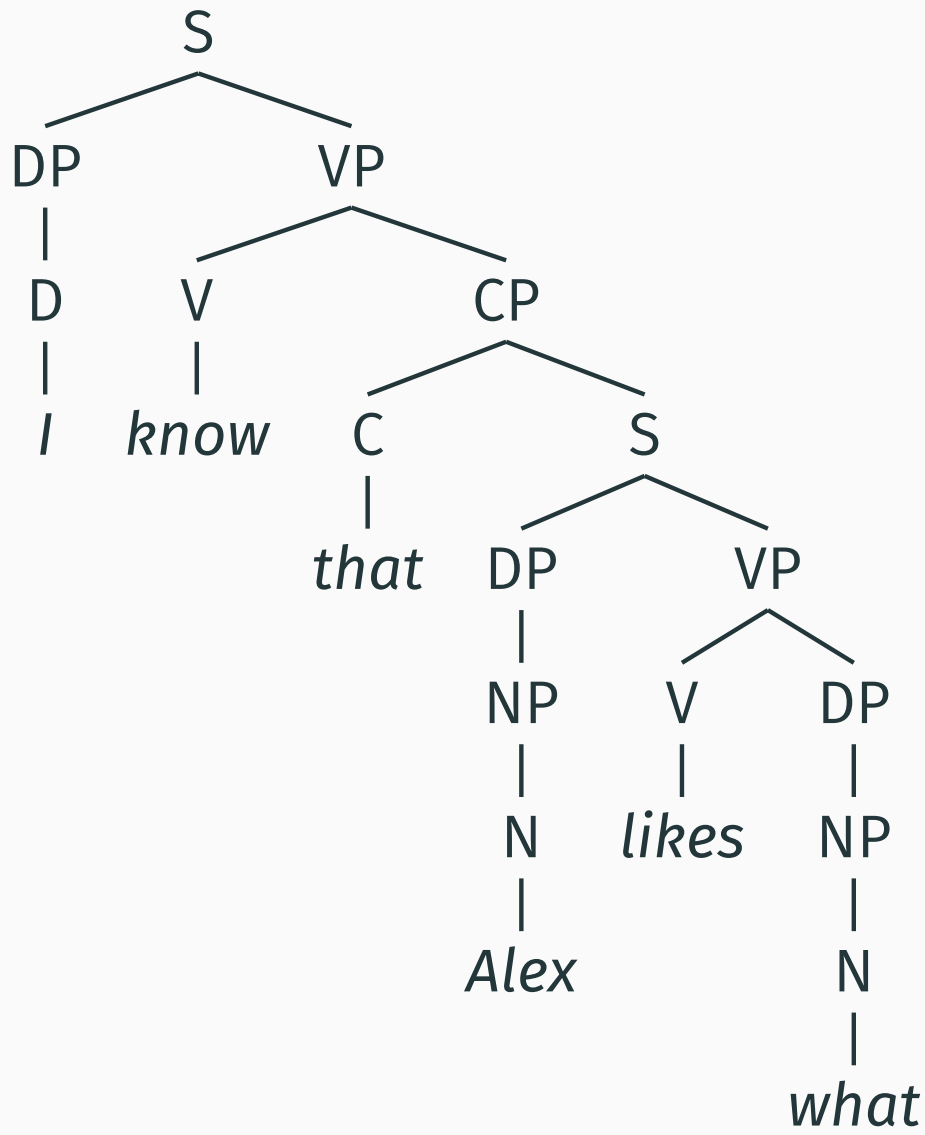
b. I know **what** Alex likes ___.

(3) a. I know that Alex likes pizza and ice-cream.

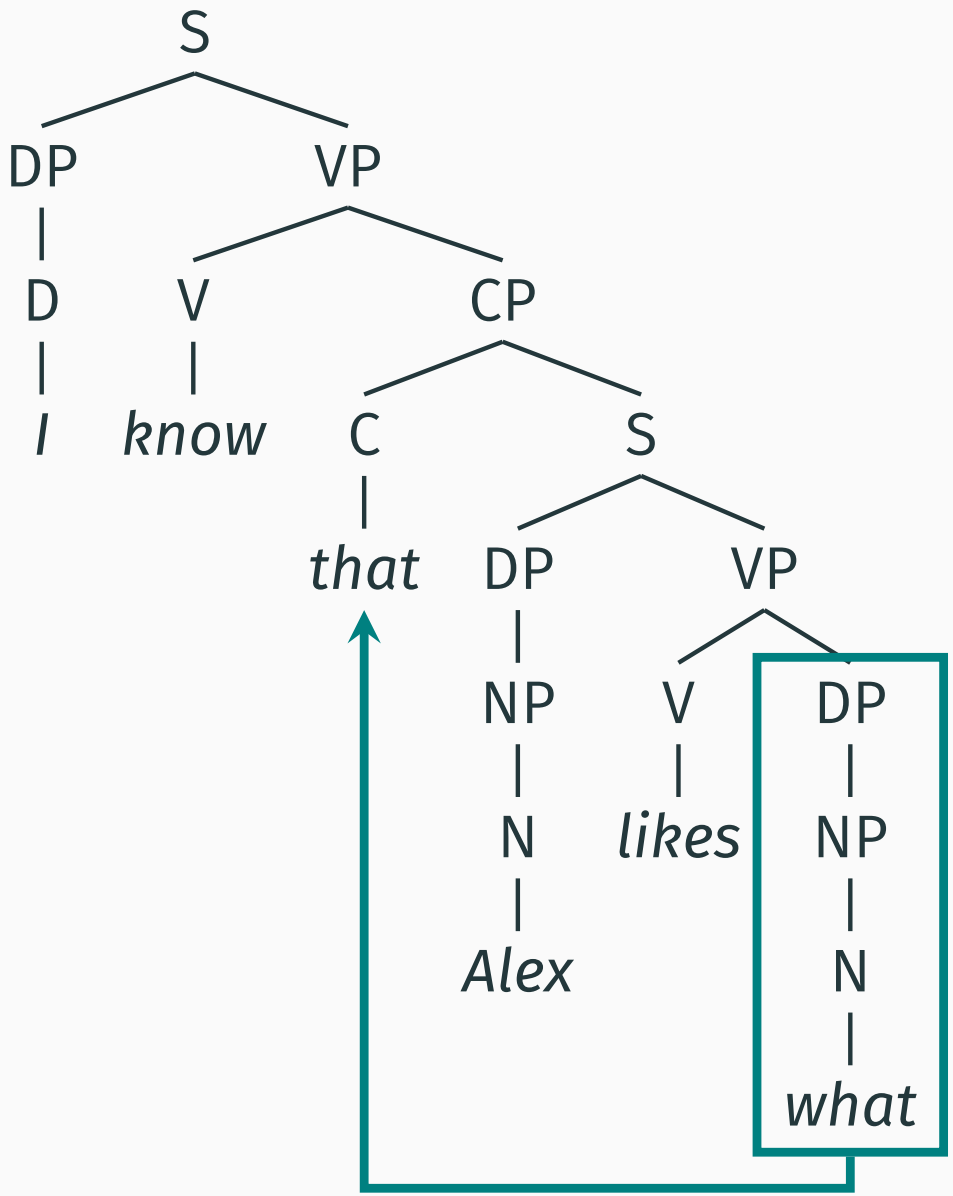
b. *I know **what** Alex likes ___ and ice-cream.

c. *I know **what** Alex likes pizza and ___.

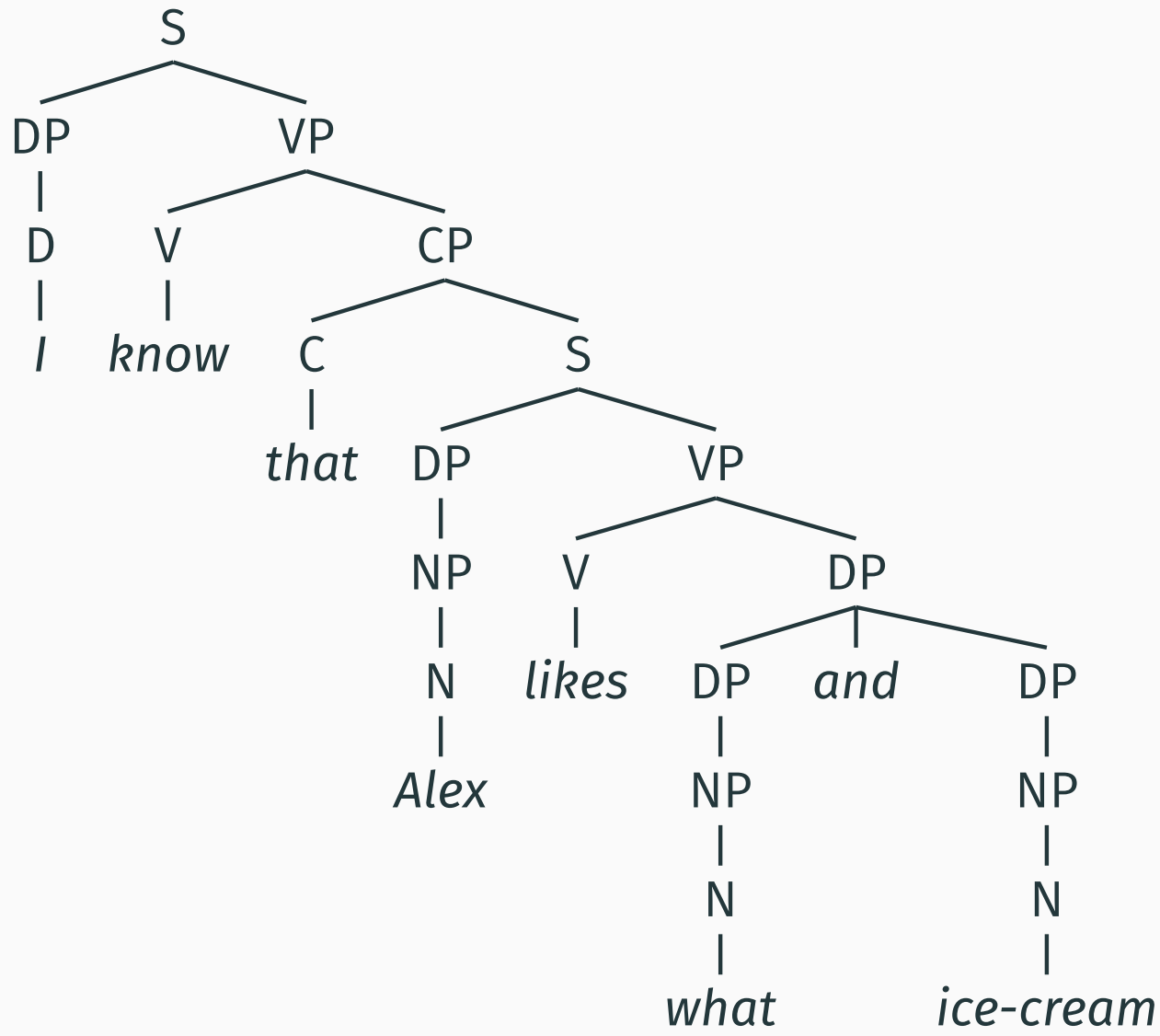
Possible movement



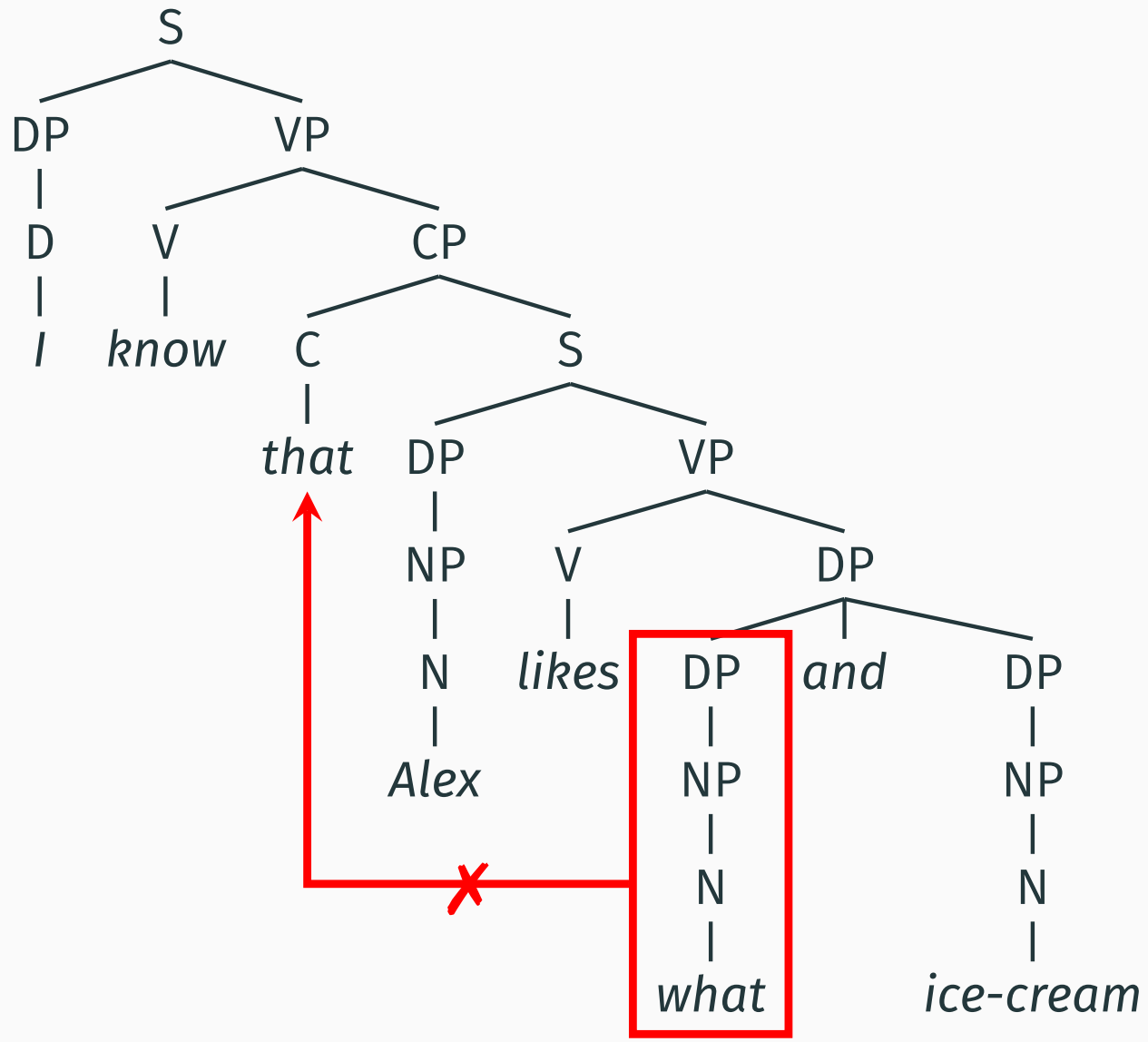
Possible movement



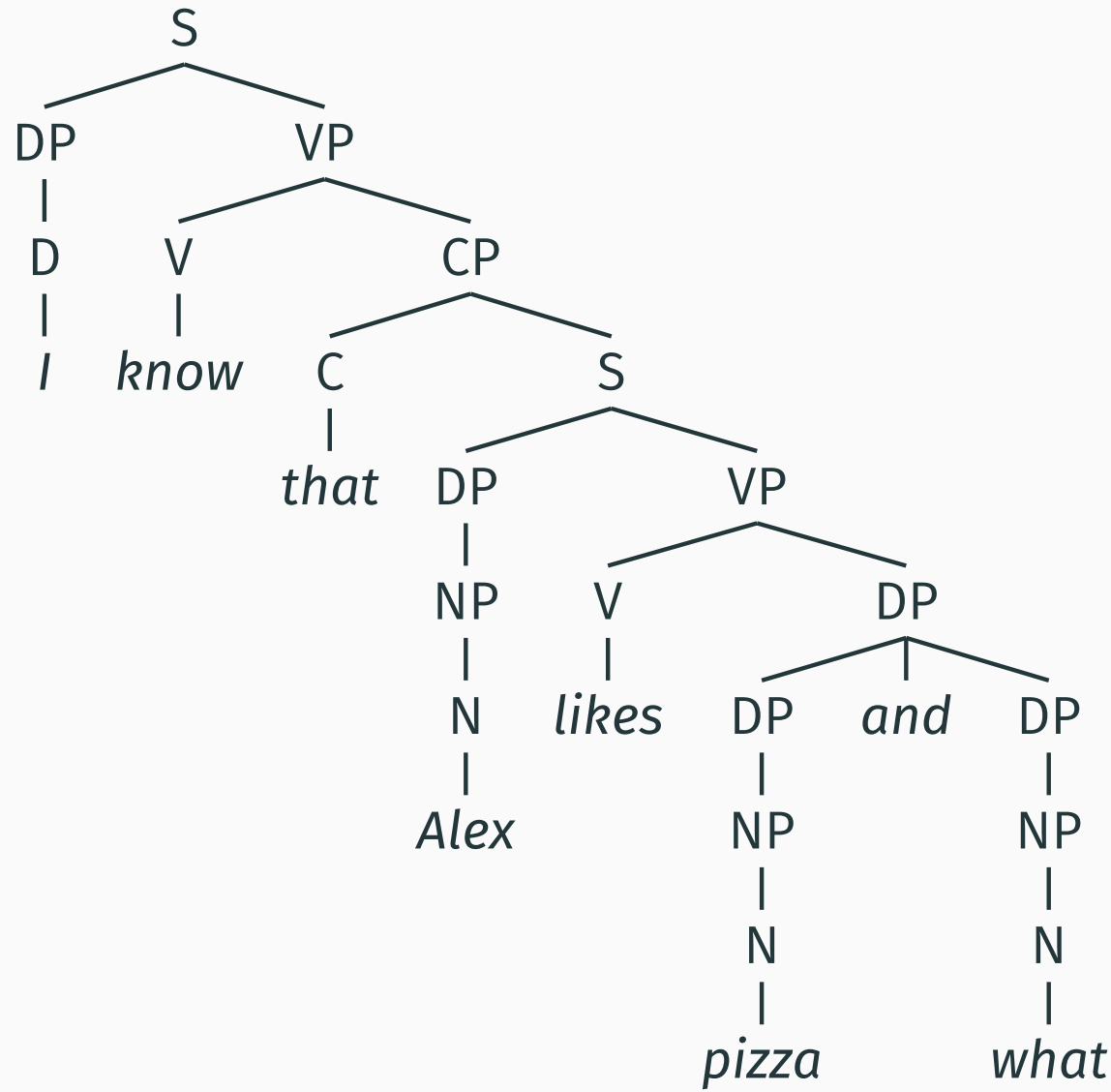
Impossible movement



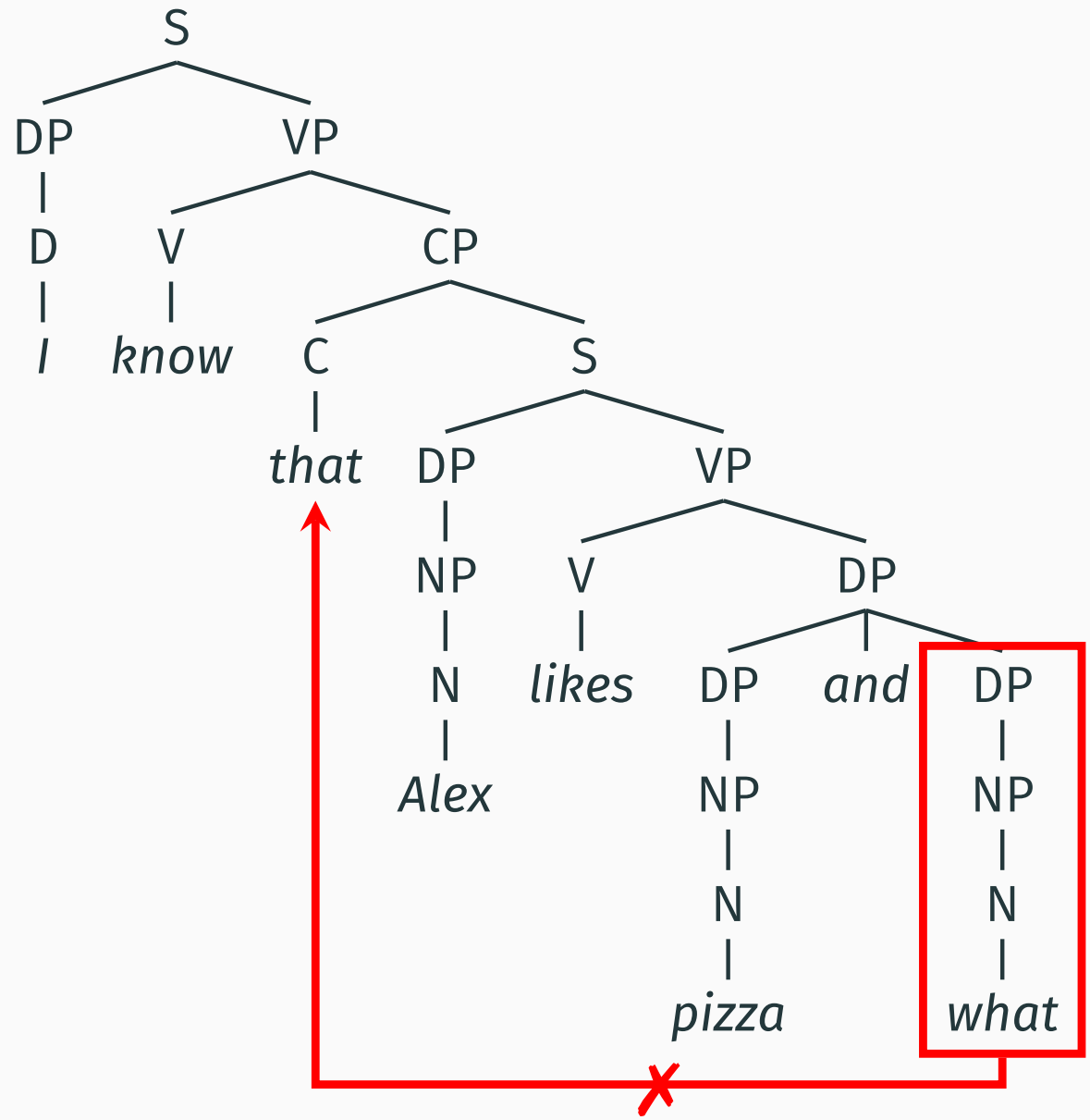
Impossible movement



Another impossible movement



Another impossible movement



Coordination

- What is the difference between the structure that allows the movement and the structures that disallow it?
- **Coordination:** $\alpha \rightarrow \alpha$ *and* α
- As far as our movement rule is concerned, everything should be fine.
- And yet movement is completely impossible.

A first stab

First stab:

Elements that are connected by *and* cannot be moved.

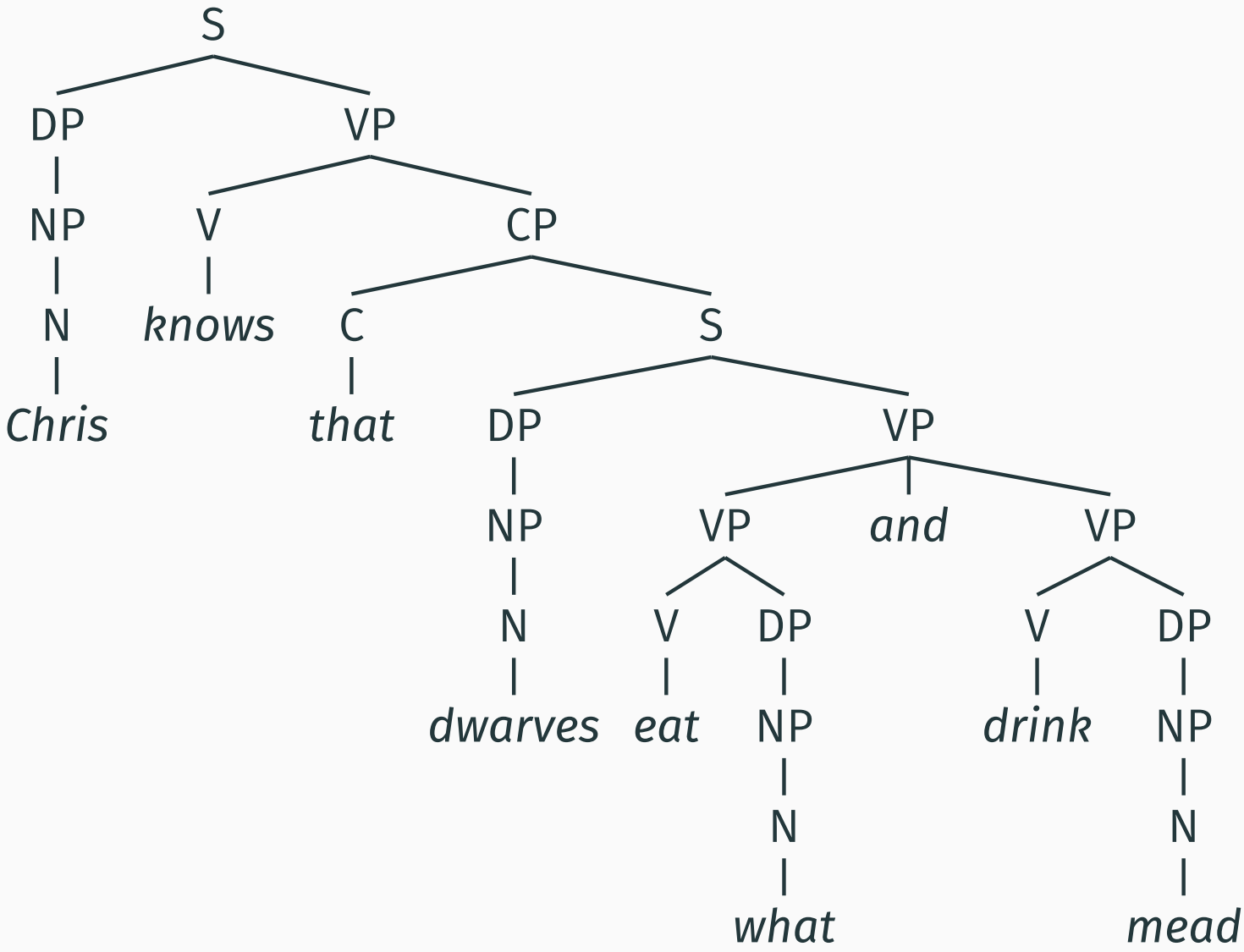
More coordination

(4) a. Chris knows that dwarves eat steak and drink mead.

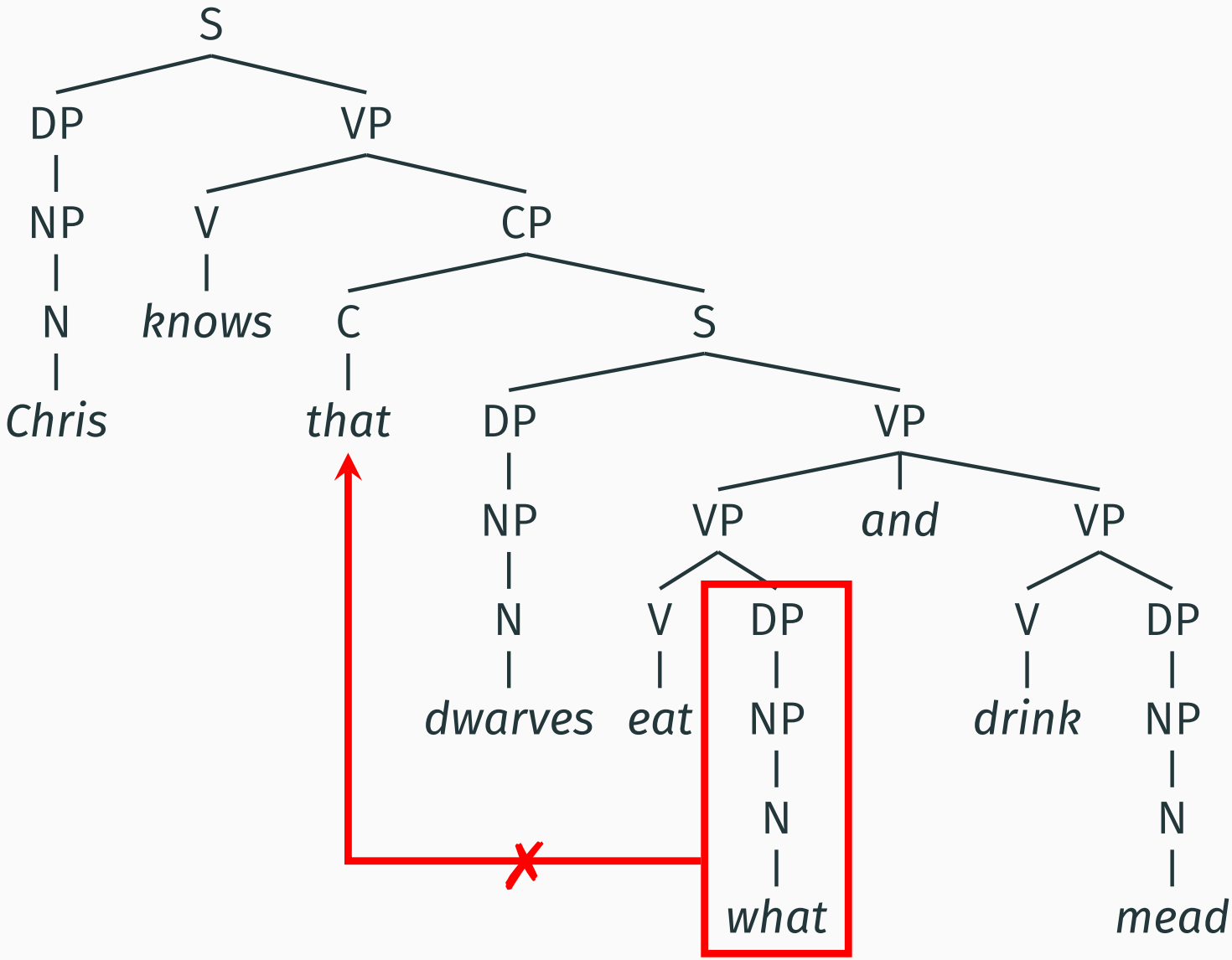
b. *Chris knows **what** dwarves eat ___ and drink mead.

c. *Chris knows **what** dwarves eat steak and drink ___.

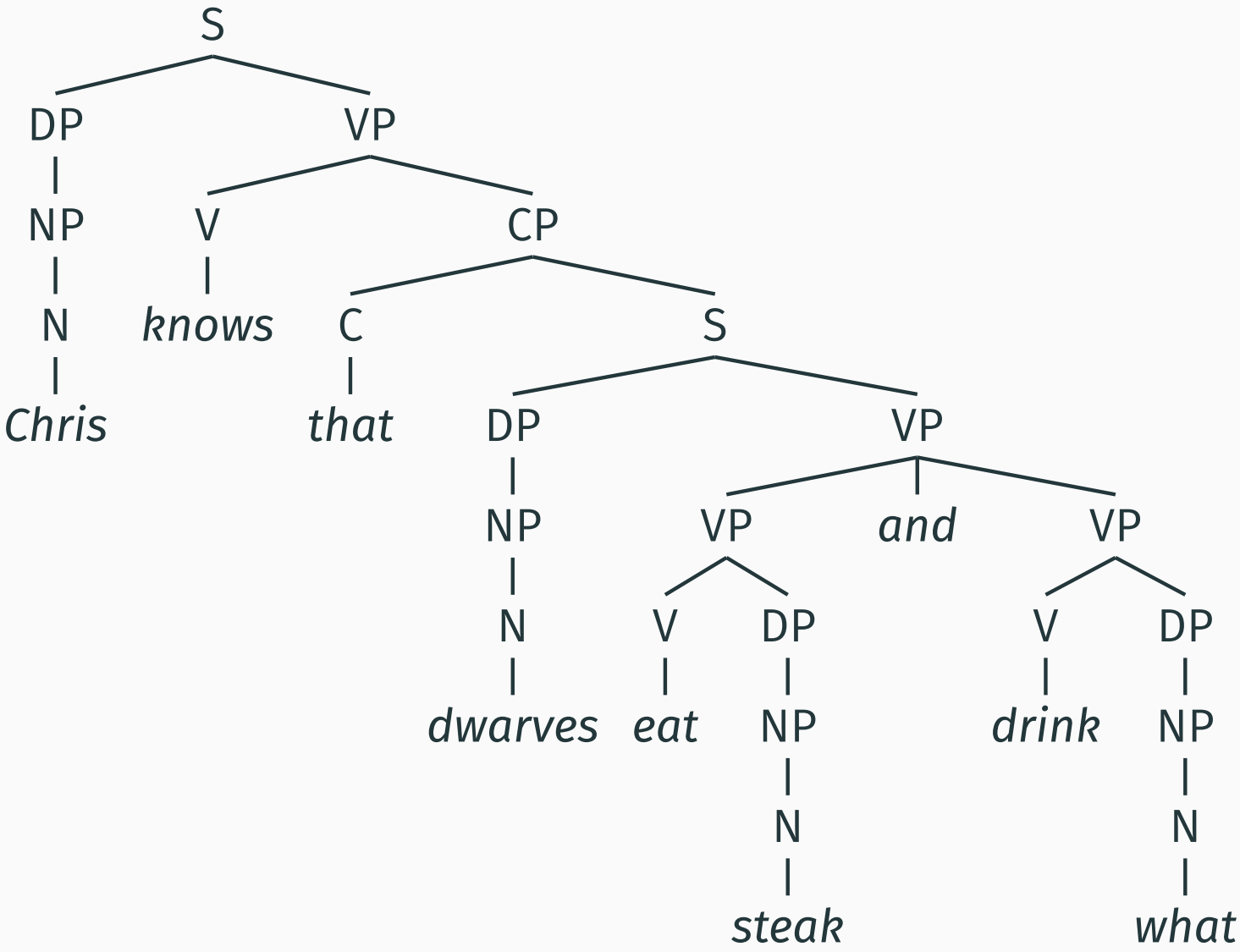
Impossible movement



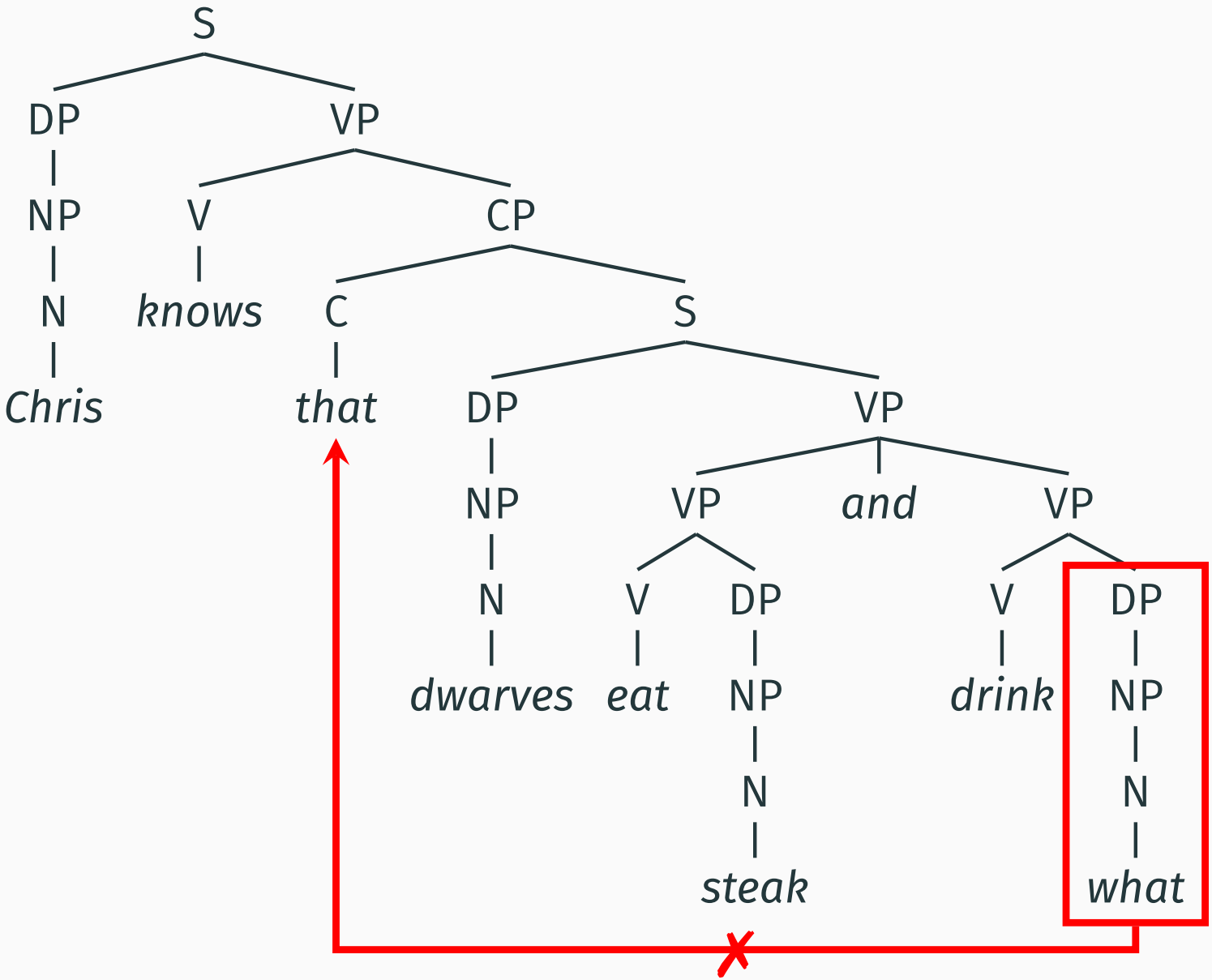
Impossible movement



Impossible movement



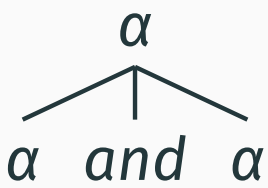
Impossible movement



Coordinate Structure Constraint

- **Coordinate Structure Constraint:**
  No element may be moved over a coordinate structure.

- **Coordinate structure:**



- Nothing can be moved from a position inside this structure to a position outside of it.

→ Coordinate structures are an **insurmountable barrier** to movement.

Islands

Terminology: Island

Parts of a syntactic structure that movement cannot leave are called **ISLANDS**.

The reasoning

- **Question:**
  Why is the following sentence ungrammatical?

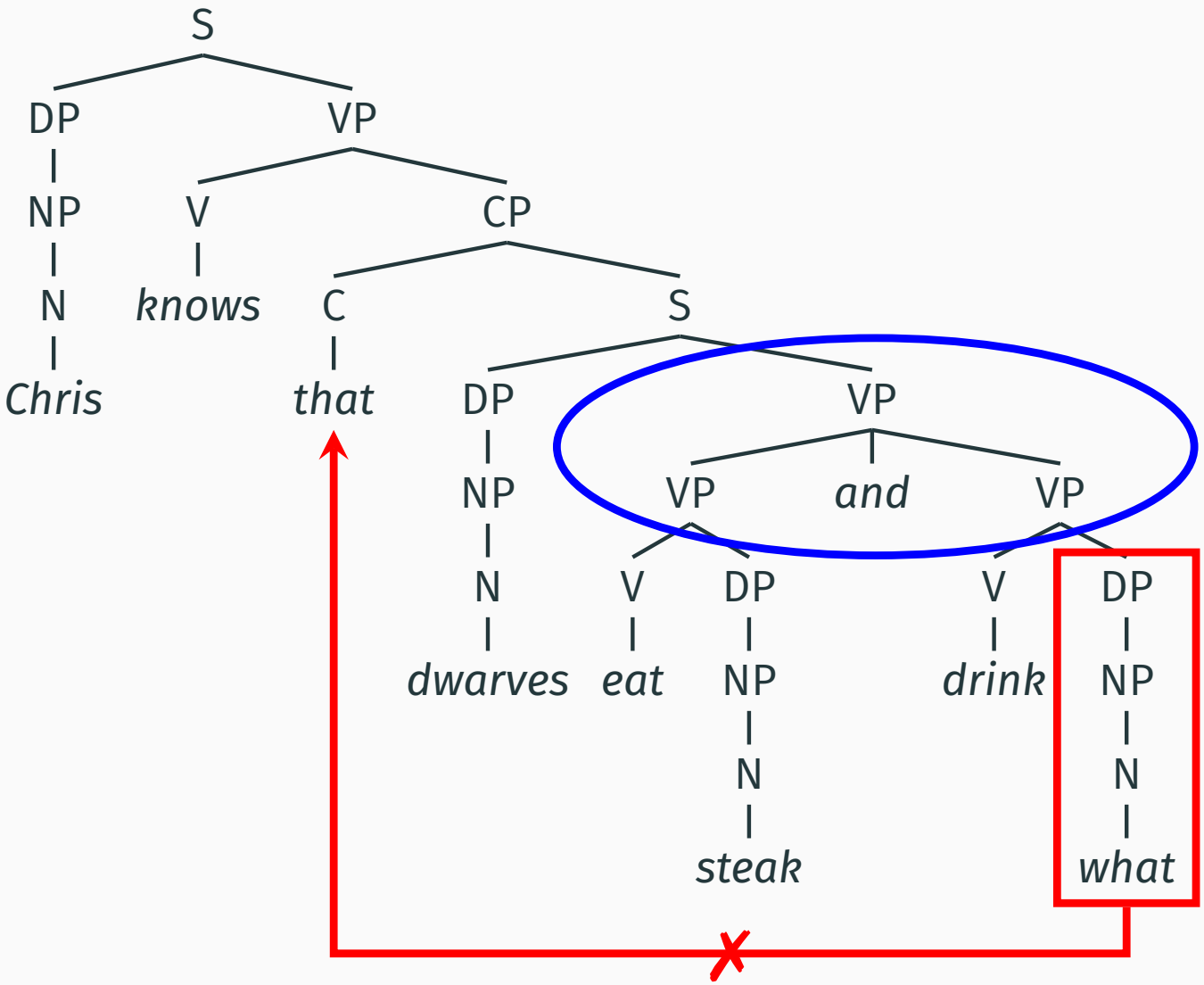
  (5) *Chris knows **what** dwarves eat steak and drink ___.

- **Answer:**
  The sentence before movement is:

  (6) Chris knows that dwarves eat steak and drink **what**.

- *What* would have to move out of a coordinate structure
  → **impossible**

The reasoning



- The coordinate structure is an island → nothing can leave it.
- There is no way of getting *what* to C.
- Therefore, the sentence is impossible.

Reasoning about ungrammatical sentences

- **Question:**
  Why is a given sentence ungrammatical?

- **Schematic answer:**
  To generate this sentence, an element would need to move from A to B. However, this movement is impossible because of constraint X.

↠ Therefore, the sentence is ungrammatical.

Consequences

- There are certain things you simply cannot say unless you use a different construction altogether.
- Not moving out of the island violates the movement rule:

  (7) *Chris knows that dwarves eat steak and drink **what**.

- Moving out of the island is also impossible:

  (8) *Chris knows **what** dwarves eat steak and drink ___.

Constraint #3

(9) a. Sue knows that Mary claimed that zombies eat brains.

b. Sue knows that Mary made the claim that zombies eat brains.

Constraint #3

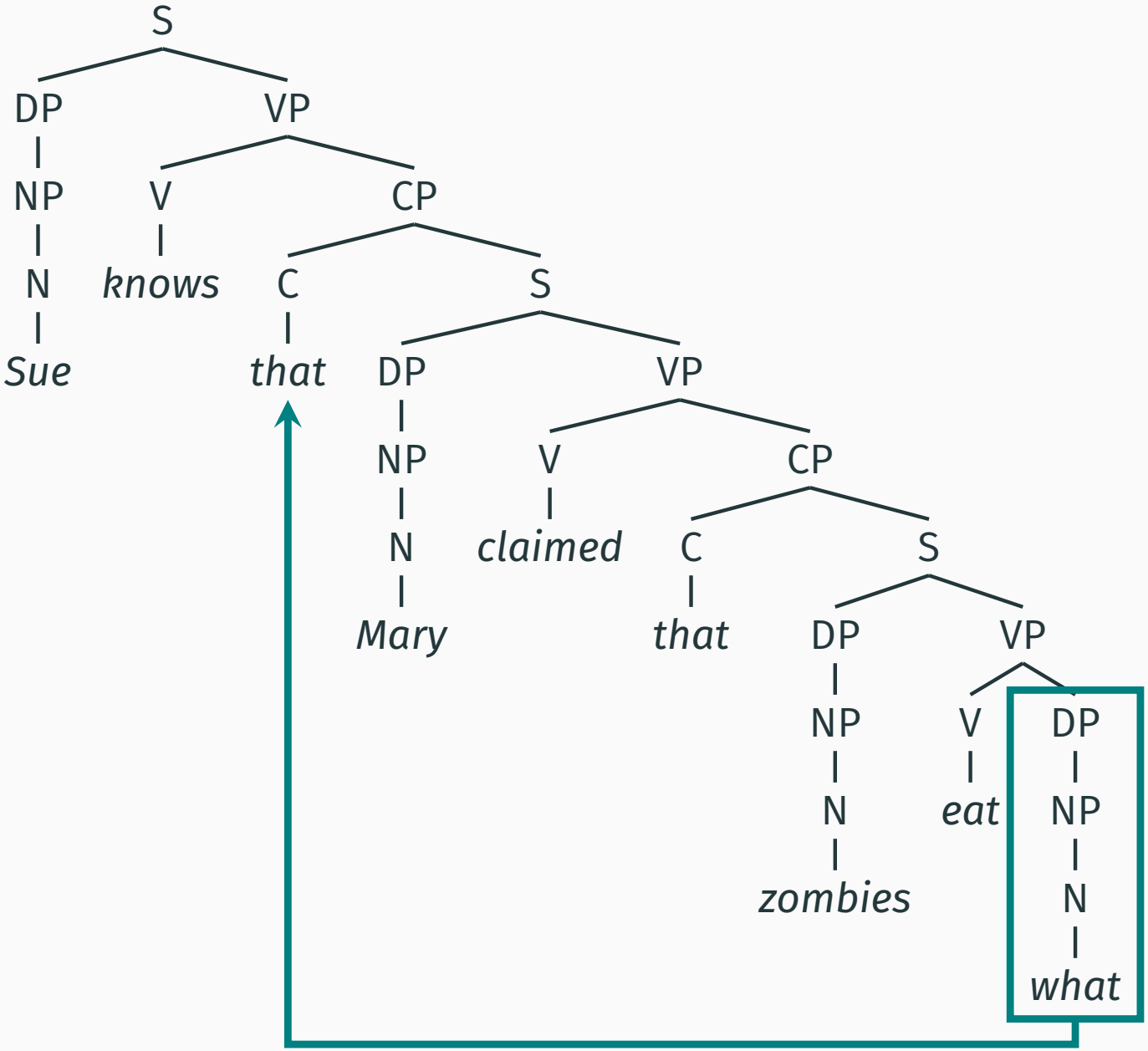
(9) a. Sue knows that Mary claimed that zombies eat brains.

b. Sue knows that Mary made the claim that zombies eat brains.

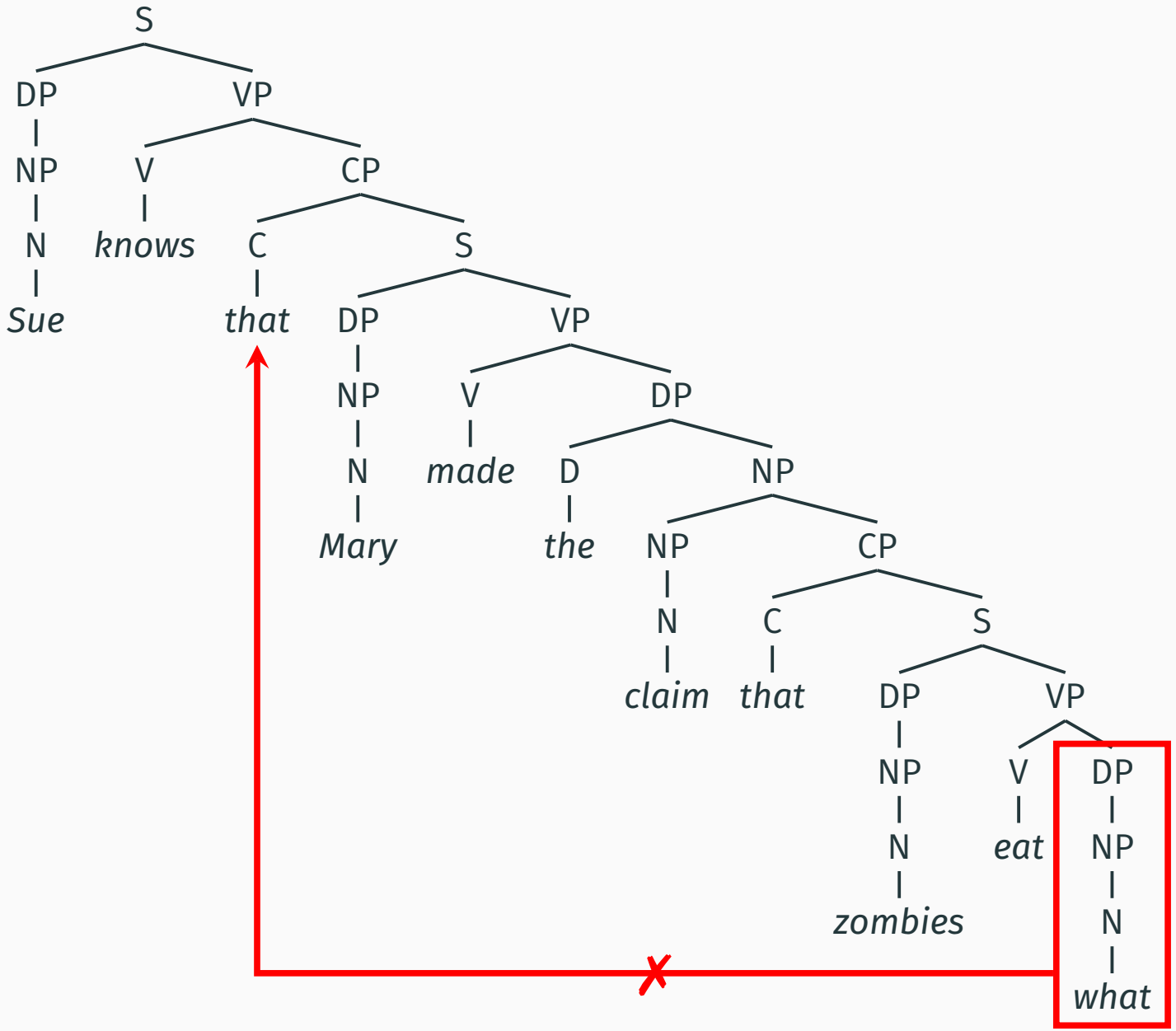
c. Sue knows **what** Mary claimed that zombies eat ___.

d. *Sue knows **what** Mary made the claim that zombies eat ___.

Possible movement

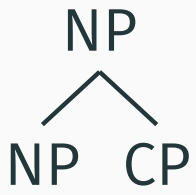


Impossible movement



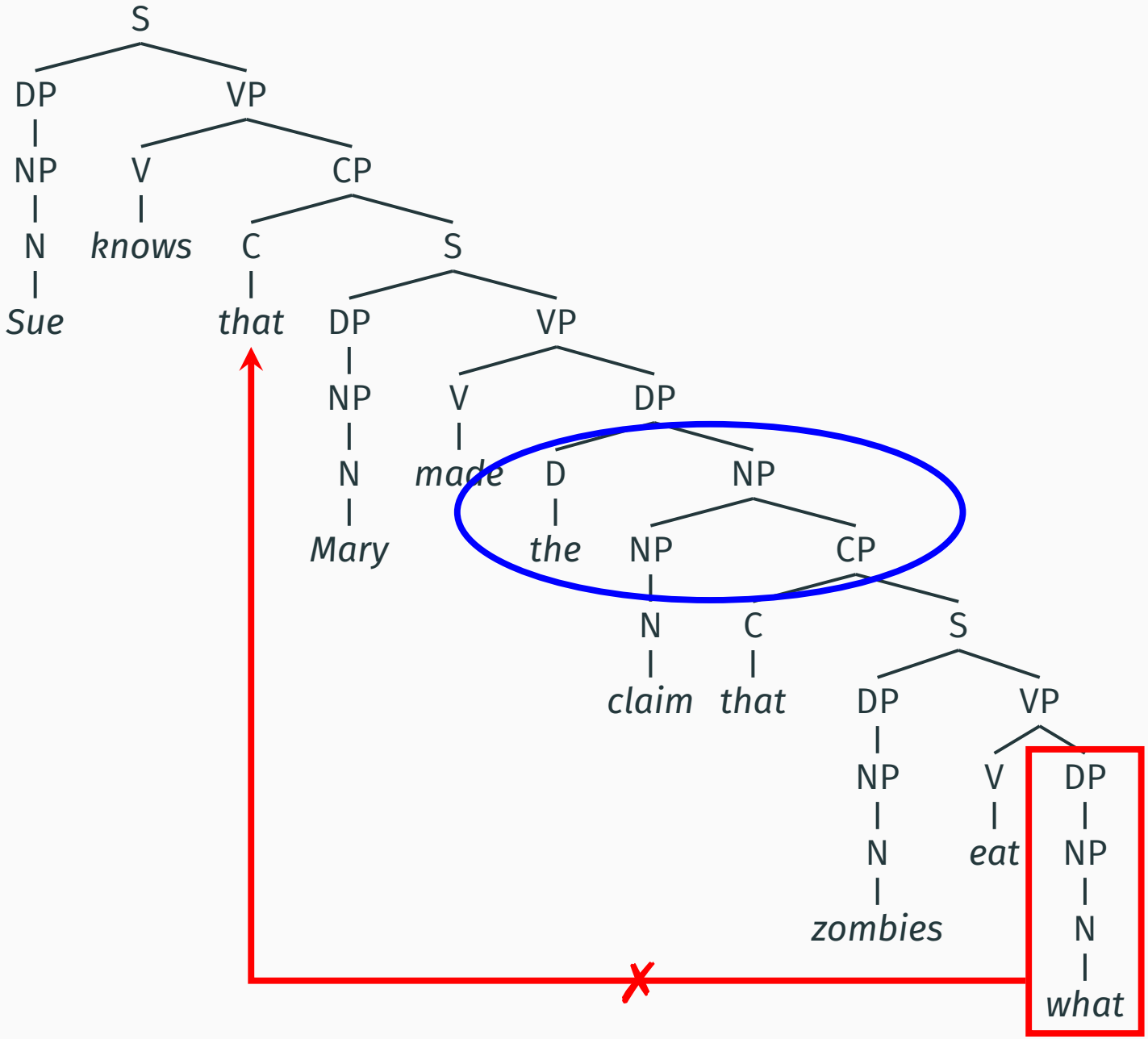
Complex NP Constraint

- Movement cannot move an element out of a CP that is directly under an NP (a so-called **COMPLEX NP**).
- **Complex NP:**



- **Complex NP Constraint:**
  Nothing can be moved from a position inside a complex NP to a position outside of it.

Impossible movement



Constraint #4

(10) a. I know that Sue took a picture of a potato.

b. I know **what** Sue took a picture of ___.

Constraint #4

(10) a. I know that Sue took a picture of a potato.

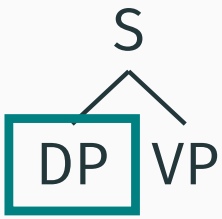
b. I know **what** Sue took a picture of ___.

c. I know that a picture of a potato mesmerized Sue.

d. *I know **what** a picture of ___ mesmerized Sue.

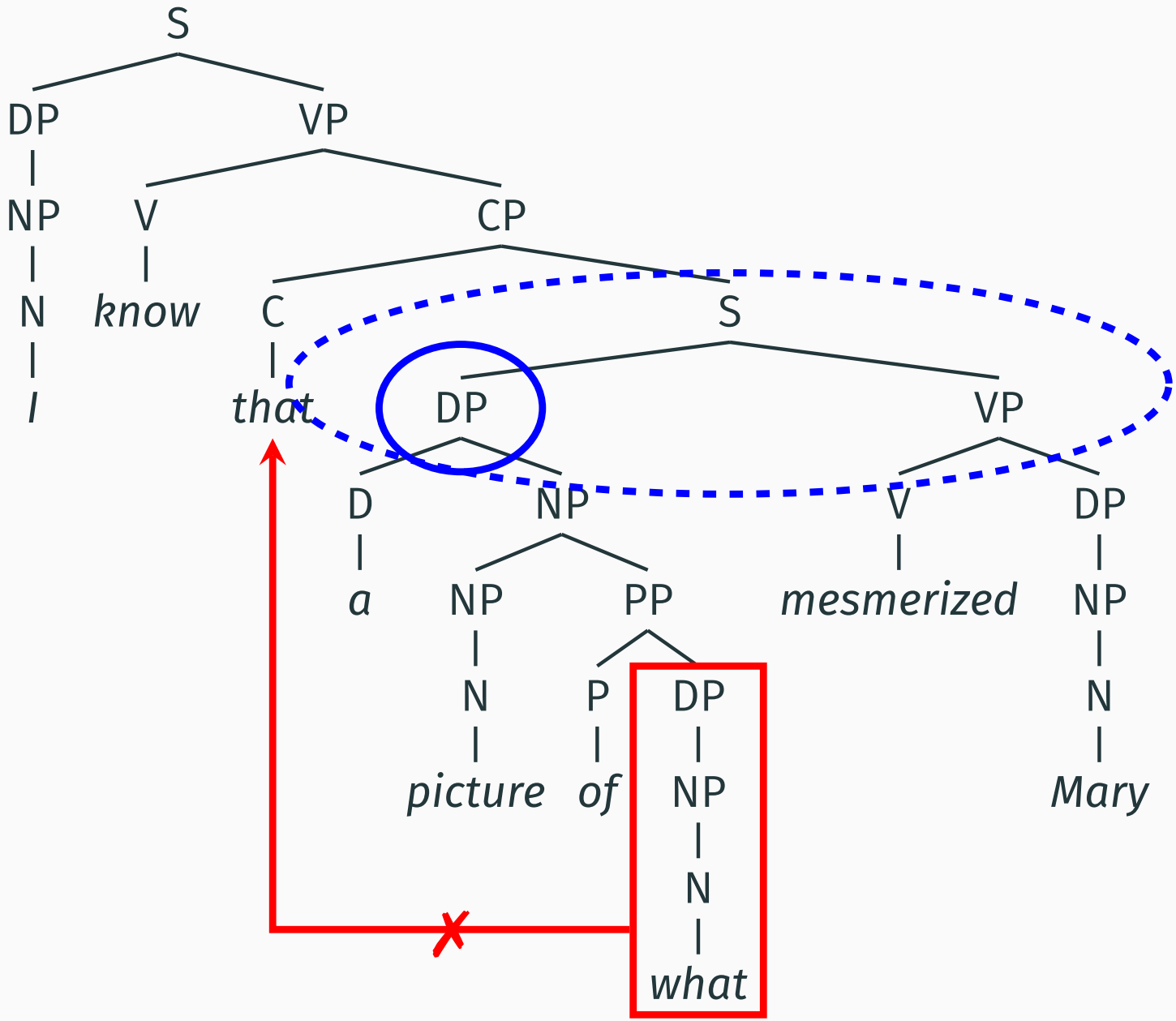
Subject Islands

- Movement cannot move an element out of a subject.



- **Subject Constraint:**
  Nothing can be moved from inside a subject to a position outside of it.

Example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Summary:

- Constituents can move over very large distances.
- But there are certain structures that completely block movement over them.
- These structures are called **islands**:
  1. Coordinate Structure Constraint
  2. Complex NP Constraint
  3. Subject Constraint