# Ling 566
# Dec 1, 2022

Catch-up/review

# Overview

- Leftover RQs

- Midterm Q3

- Big picture

- Untangle this…

- Course evals

# Reading Questions

- It's a bit unclear to me how to determine which node to place a non-empty STOP-GAP on. In 35, a non-empty STOP-GAP is on S and on the same node as the GAP it fills. With adjectives like easy, the non-empty STOP-GAP is on the lexical entry for easy, and in 38 the word structure for easy has an empty GAP. The text says, "where a gap is associated with its filler, the feature [STOP-GAP] has a non-empty list as its value", but why is GAP empty then for easy? How is the association between gap and filler occuring?

- In which cases is the non-empty STOP-GAP on the same node as the gap it fills and in which cases is it not? And why?

# Reading Questions

- Is it possible to have ambiguities regarding which element on the GAP list is filled? And if so, how do we resolve those ambiguities? For example, if we have two NP's on the GAP list and a STOP-GAP list with NP on it, is there anything in our formalism that indicates which NP on the GAP list is filled?

- I want to ask whether STOP-GAP value purely comes from lexical entry. Do adjectives like easy and hard always have non-empty STOP-GAP values?

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# Reading Questions

- Other island constraints are mentioned in passing near the end of the chapter. Could you give us some examples of constraints not examined in the text?

- What are some other examples of long-distance dependencies beyond the four mentioned in the chapter?

- Can a 'gap' ever precede a 'filler', or must it always appear somewhere later in an utterance?

# Reading Questions

- From (55) a, it seems acceptable to also say "*his is the dancer that we bought a portrait and two photos of*. omitting the first preposition *of*. How does the grammar deal with this construction? Could we say *portrait* has the same GAP value as *of*?
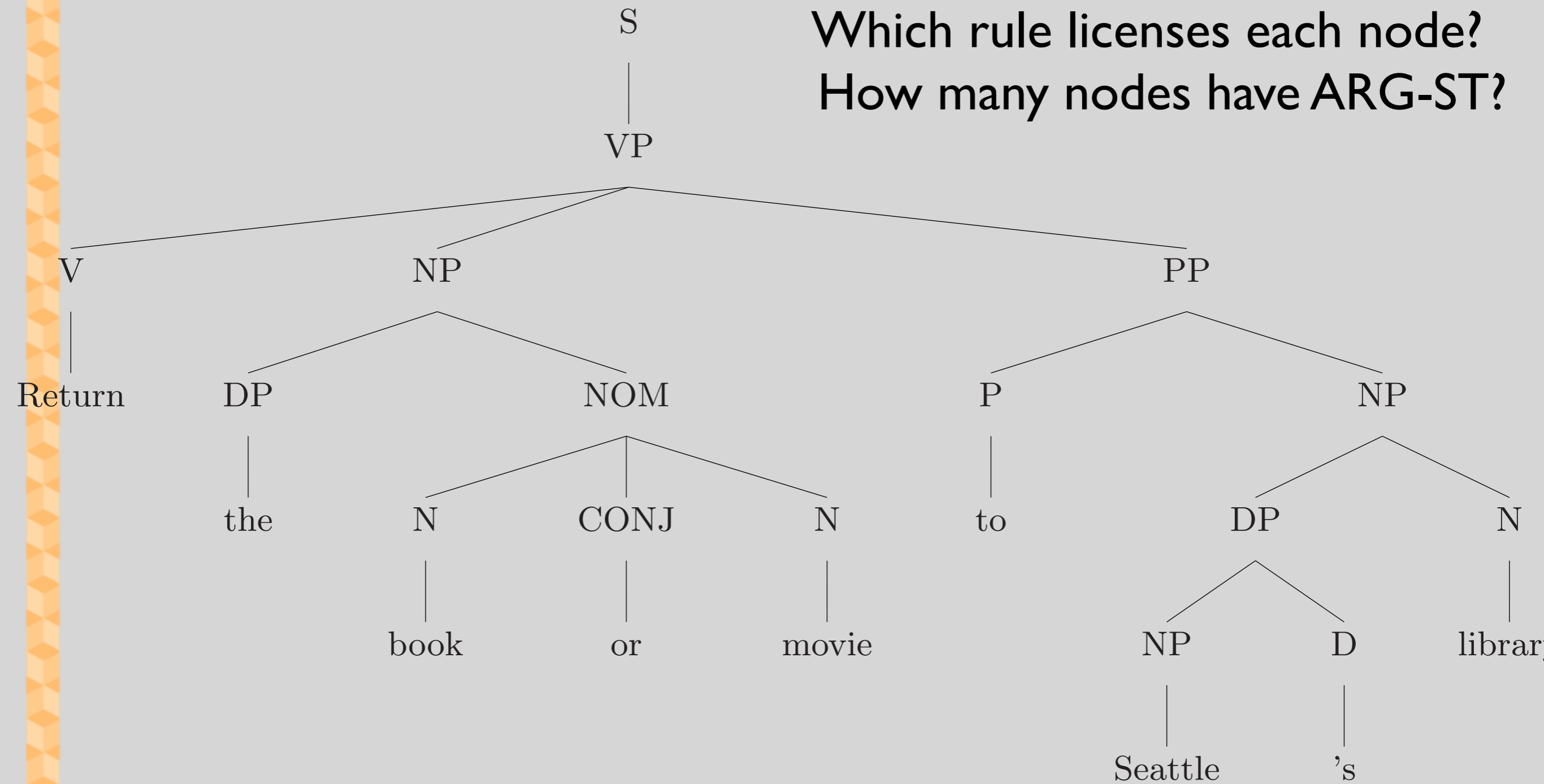
# Reading Questions

- In general, when is it appropriate to modify a preexisting principle or constraint (such as the ARP), and when is it preferable to formalize a new lexical rule (such as the Subject Extraction LR)?

# Reading Questions

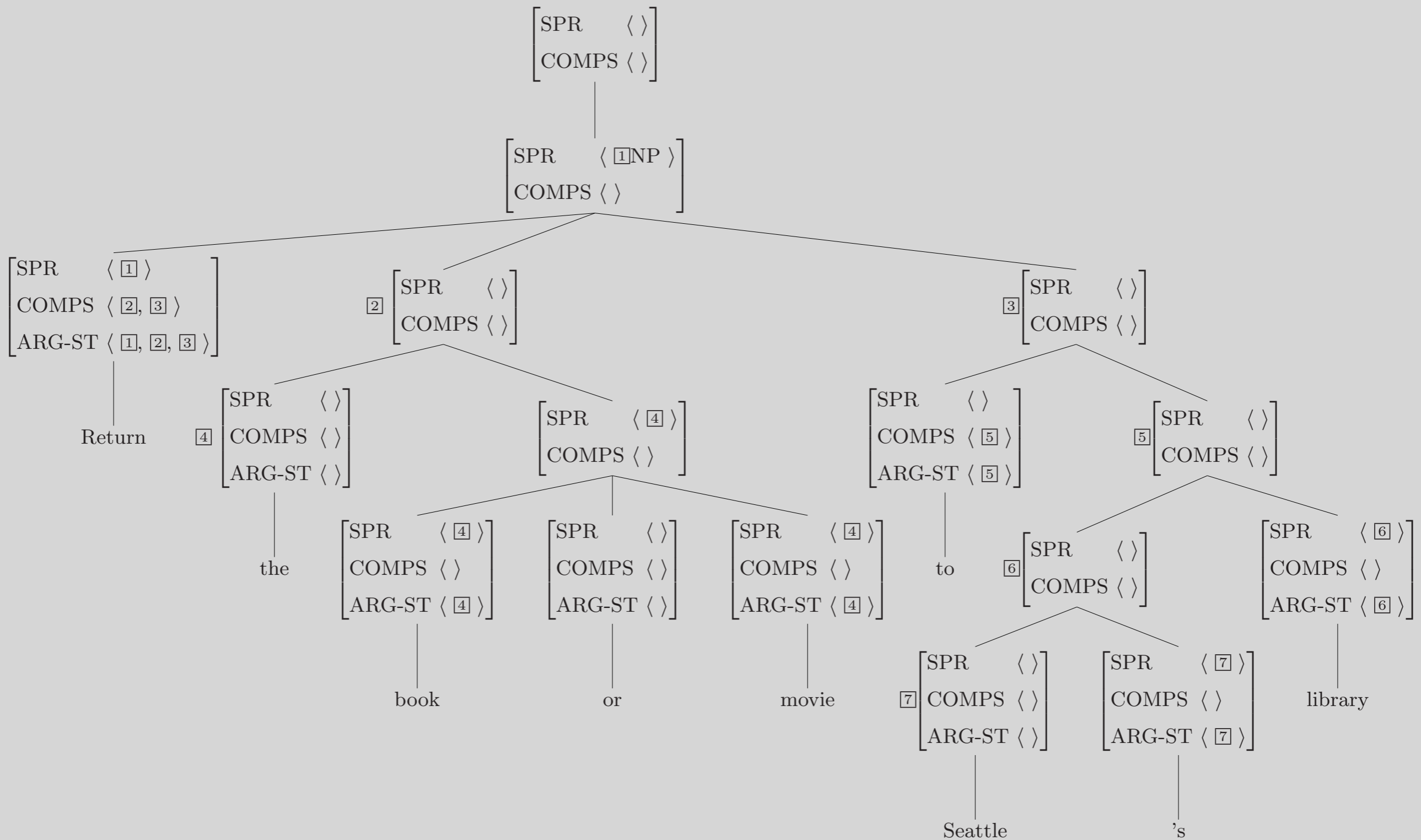- Are GAP and STOP-GAP features necessary in languages with markers that have more flexible word ordering? E.g. Japanese -wa or Korean -eun/-neun?

- Page 431 mentions that there are languages (for example several Slavic and Scandinavian languages) that allow multiple gaps more freely. What does this look like? Do gaps serve different purposes in different languages or are they similar to English?

# Midterm Q3 tree

Which rule licenses each node?
How many nodes have ARG-ST?

```
                        S
                        |
                        VP
         _____
        |            |                       |
        V            NP                       PP
        |      _____            _____
      Return  DP          NOM          P            NP
        |      |      _____        |        _____
       the   the     N  CONJ  N         to      DP         N
                     |    |   |             _____      |
                   book   or  movie        NP       D    library
                                            |       |
                                         Seattle    's
```

9

# NO EXTRA FEATURES

$$\begin{bmatrix} \text{SPR} & \langle\,\rangle \\ \text{COMPS} & \langle\,\rangle \end{bmatrix}$$

$$\begin{bmatrix} \text{SPR} & \langle\,\boxed{1}\text{NP}\,\rangle \\ \text{COMPS} & \langle\,\rangle \end{bmatrix}$$

$$\begin{bmatrix} \text{SPR} & \langle\,\boxed{1}\,\rangle \\ \text{COMPS} & \langle\,\boxed{2},\boxed{3}\,\rangle \\ \text{ARG-ST} & \langle\,\boxed{1},\boxed{2},\boxed{3}\,\rangle \end{bmatrix}$$

$\boxed{2}$
$$\begin{bmatrix} \text{SPR} & \langle\,\rangle \\ \text{COMPS} & \langle\,\rangle \end{bmatrix}$$

$\boxed{3}$
$$\begin{bmatrix} \text{SPR} & \langle\,\rangle \\ \text{COMPS} & \langle\,\rangle \end{bmatrix}$$

Return

$\boxed{4}$
$$\begin{bmatrix} \text{SPR} & \langle\,\rangle \\ \text{COMPS} & \langle\,\rangle \\ \text{ARG-ST} & \langle\,\rangle \end{bmatrix}$$

$$\begin{bmatrix} \text{SPR} & \langle\,\boxed{4}\,\rangle \\ \text{COMPS} & \langle\,\rangle \end{bmatrix}$$

$$\begin{bmatrix} \text{SPR} & \langle\,\rangle \\ \text{COMPS} & \langle\,\boxed{5}\,\rangle \\ \text{ARG-ST} & \langle\,\boxed{5}\,\rangle \end{bmatrix}$$

$\boxed{5}$
$$\begin{bmatrix} \text{SPR} & \langle\,\rangle \\ \text{COMPS} & \langle\,\rangle \end{bmatrix}$$

the

$$\begin{bmatrix} \text{SPR} & \langle\,\boxed{4}\,\rangle \\ \text{COMPS} & \langle\,\rangle \\ \text{ARG-ST} & \langle\,\boxed{4}\,\rangle \end{bmatrix}$$

$$\begin{bmatrix} \text{SPR} & \langle\,\rangle \\ \text{COMPS} & \langle\,\rangle \\ \text{ARG-ST} & \langle\,\rangle \end{bmatrix}$$

$$\begin{bmatrix} \text{SPR} & \langle\,\boxed{4}\,\rangle \\ \text{COMPS} & \langle\,\rangle \\ \text{ARG-ST} & \langle\,\boxed{4}\,\rangle \end{bmatrix}$$

to

$\boxed{6}$
$$\begin{bmatrix} \text{SPR} & \langle\,\rangle \\ \text{COMPS} & \langle\,\rangle \end{bmatrix}$$

$$\begin{bmatrix} \text{SPR} & \langle\,\boxed{6}\,\rangle \\ \text{COMPS} & \langle\,\rangle \\ \text{ARG-ST} & \langle\,\boxed{6}\,\rangle \end{bmatrix}$$

book

or

movie

$\boxed{7}$
$$\begin{bmatrix} \text{SPR} & \langle\,\rangle \\ \text{COMPS} & \langle\,\rangle \\ \text{ARG-ST} & \langle\,\rangle \end{bmatrix}$$

$$\begin{bmatrix} \text{SPR} & \langle\,\boxed{7}\,\rangle \\ \text{COMPS} & \langle\,\rangle \\ \text{ARG-ST} & \langle\,\boxed{7}\,\rangle \end{bmatrix}$$
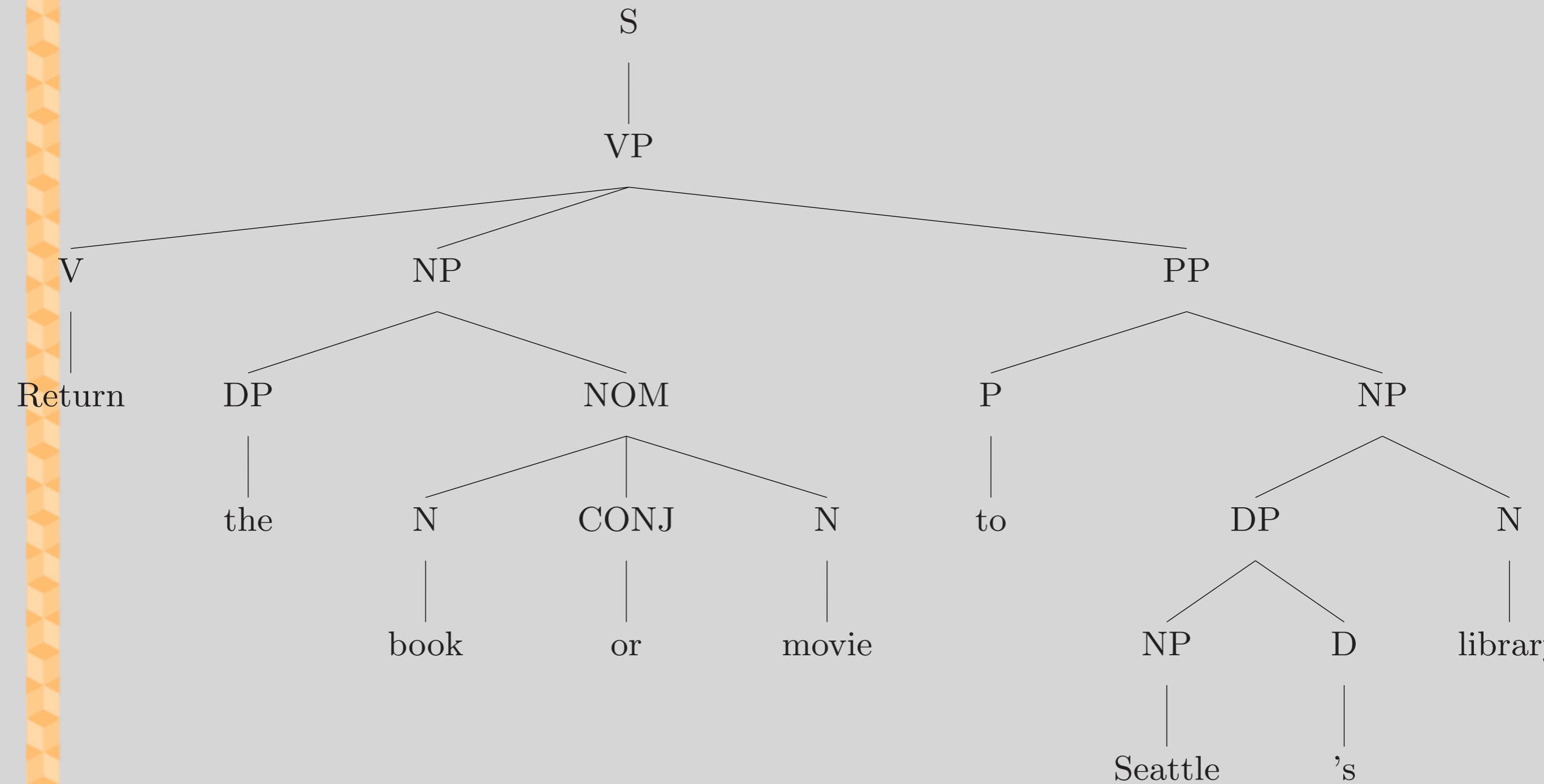
library

Seattle

's

# 9 step chain:
## return.DESTINATION to library.INST

1. Lex entry for *return*

2. ARP (+SHAC)

3. HCR

4. SIP

But not:
SCP

5. Lex entry for *to*

6. ARP

7. HCR

8. SIP

9. Lex entry for *library*

# Midterm Q3 tree

```
                              S
                              |
                              VP
            ┌─────────────────┼──────────────────────────┐
            V                 NP                          PP
            |          ┌──────┴──────┐            ┌───────┴────────┐
          Return       DP           NOM           P                NP
                       |      ┌──────┼──────┐     |         ┌───────┴──────┐
                      the     N     CONJ     N    to        DP             N
                              |      |       |         ┌─────┴─────┐        |
                            book     or    movie       NP          D      library
                                                       |           |
                                                     Seattle       's
```

# Parts of our model

- Type hierarchy (lexical types, other types)

- Phrase structure rules

- Lexical rules

- Lexical entries

- Grammatical principles

- Initial symbol

# Pause for reflection

- What have you learned about the nature of human language?

- What have you learned about how linguists think about language?

- How does this model/type of model differ from CFG (with atomic categories)?

- In what applications might (atomic category) CFG be sufficient?

- What applications might benefit from something linguistically more motivated?

# In three words or less, what did you find most surprising in this class?

# Reality v. expectations: Now that you're almost done with 566, how does it compare to what you expected?

Syntax is cool and I always knew that

Way more nitty gritty details than expected

Way more work than expected

Less work than feared

Actually, I'm more interested in the P side

# Complicated example #1

- What phenomena are illustrated by this sentence?

- What rules or interesting lexical types are involved in our analysis of it?

- What tree structure does our grammar assign?

*It was explained to me that Kim left.*
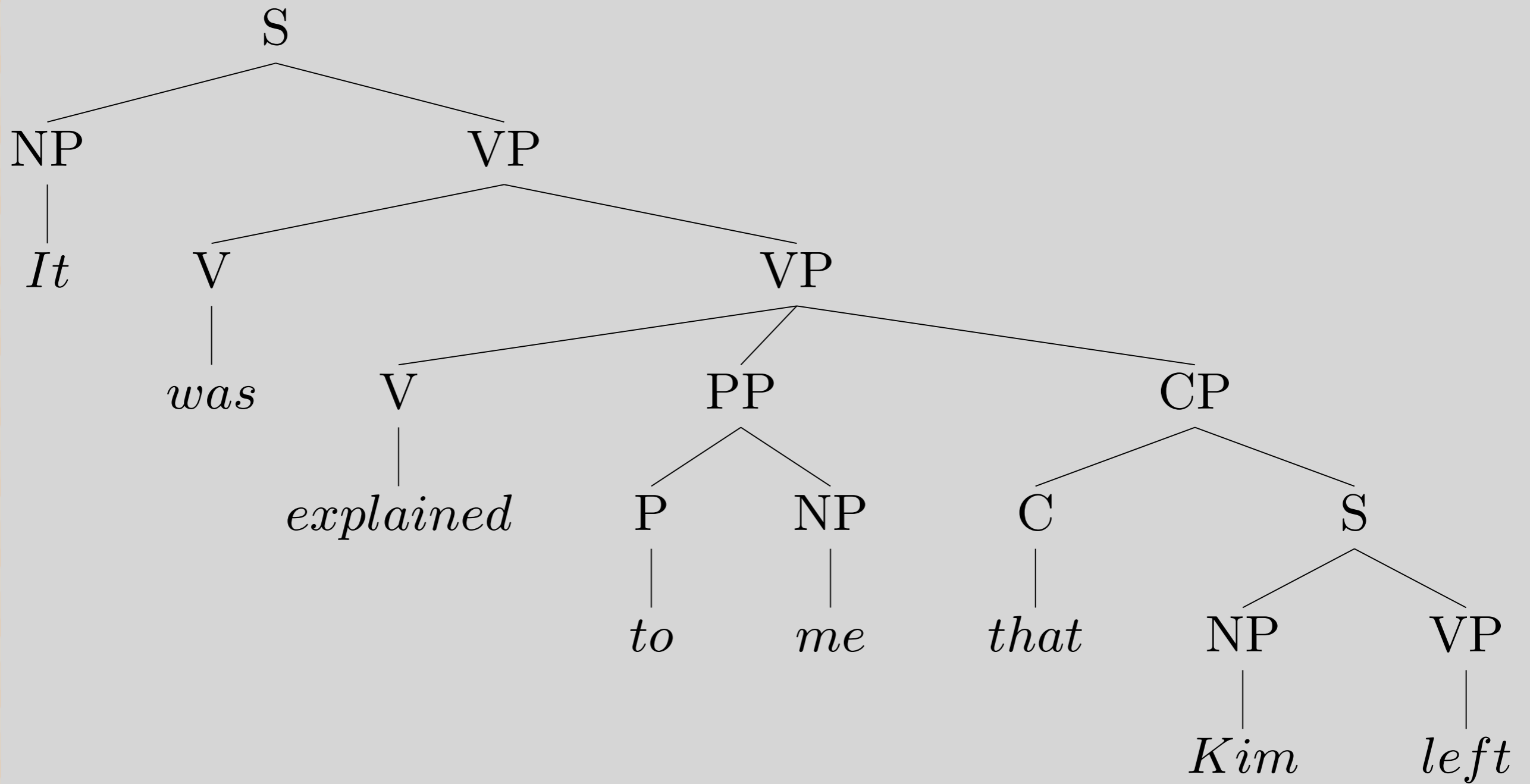
# Complicated example #2

*I expect it to continue to surprise Kim that Sandy laughed.*
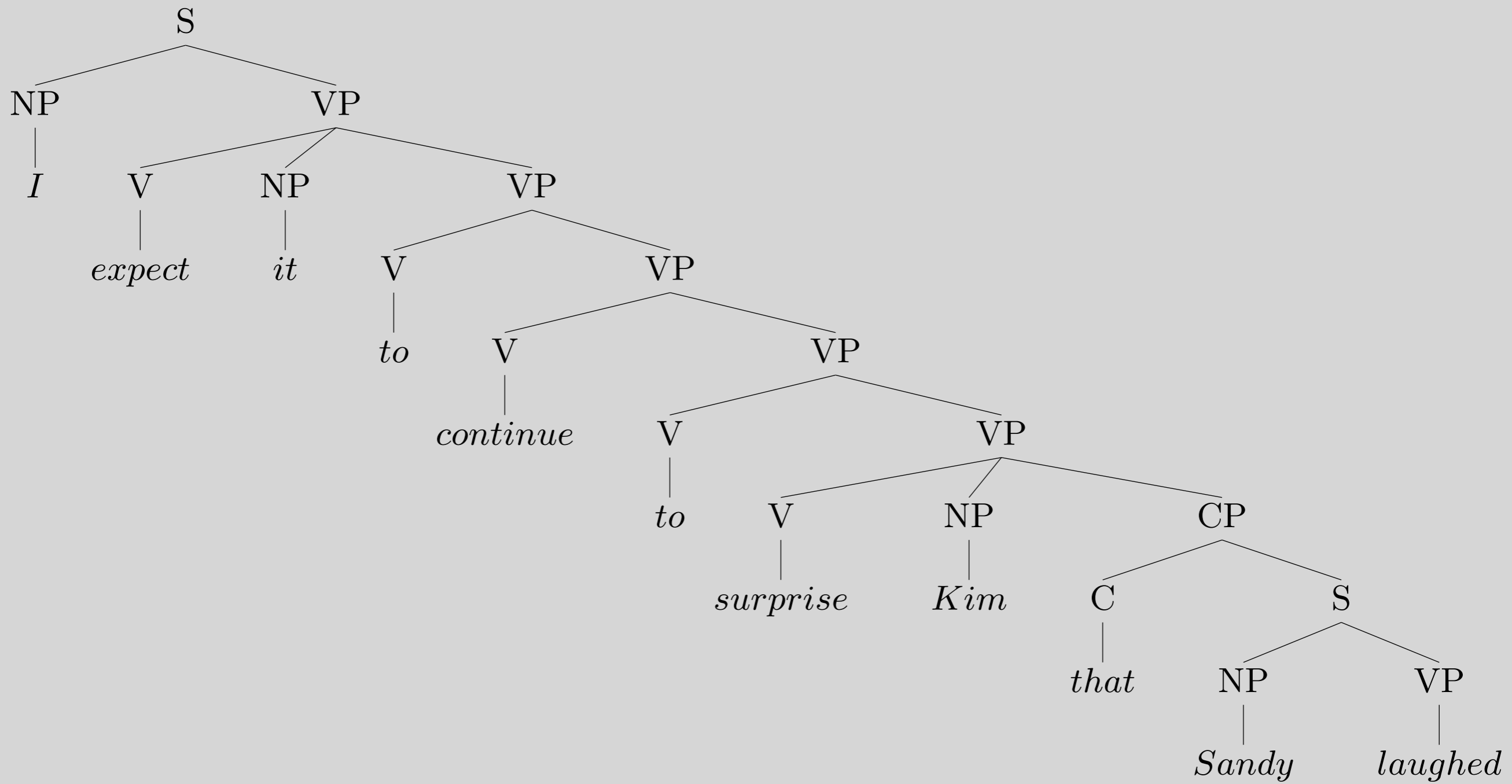
# Why not these?

*I expect it to continue to surprise Kim Sandy laughed.

*I expect there to continue to surprise Kim that Sandy laughed.

*I expect that Sandy laughed to Kim be surprised.

# Complicated example #4

*This book, Sandy said that Kim wrote and Pat read.*
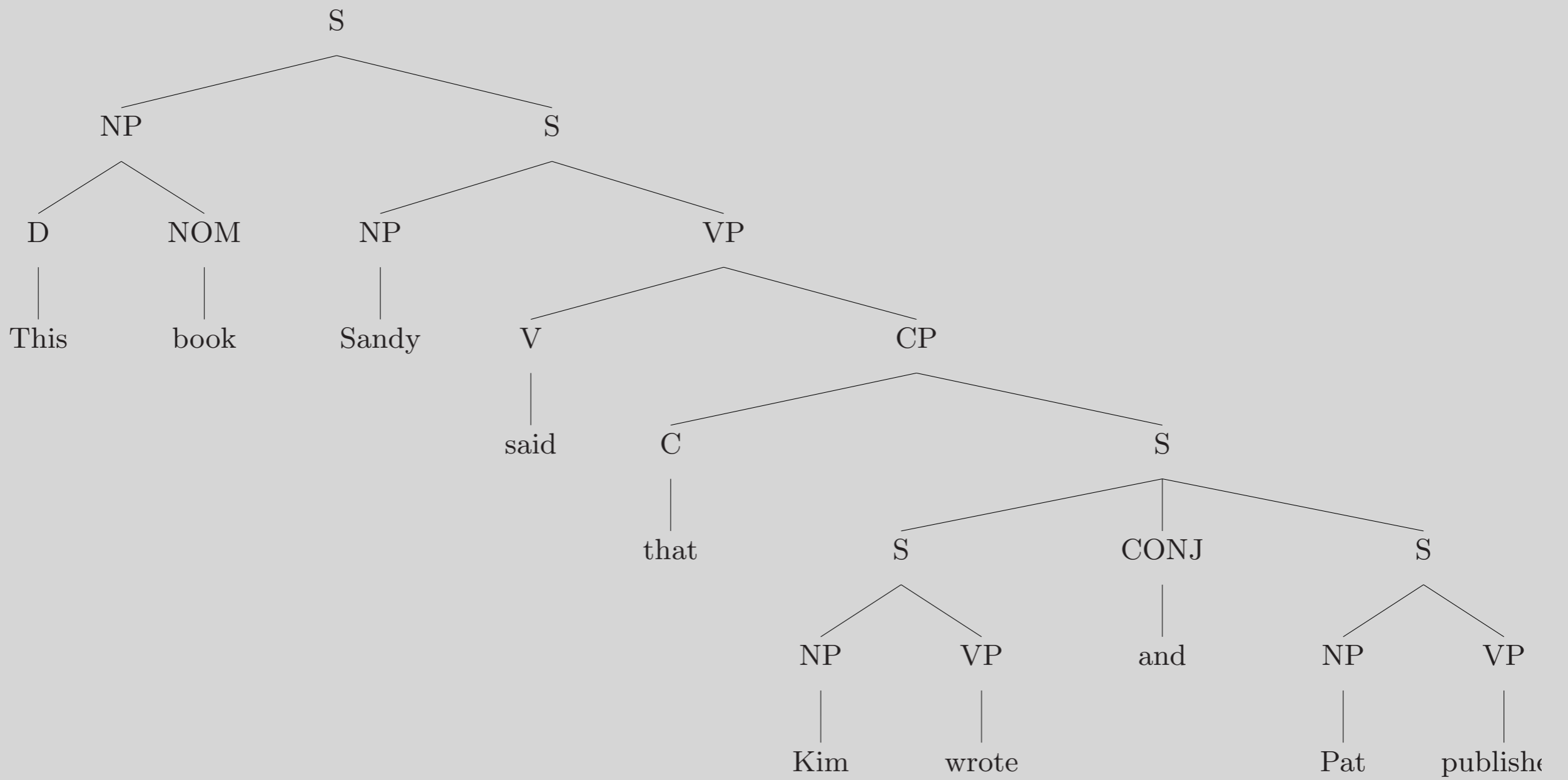
# Complicated example #5

*That Sandy could laugh (so hard), Kim did not realize.*

*\*That Sandy could laugh (so hard), Kim realized not.*

*\*Sandy could laugh (so hard), Kim did not realize.*

*\*That Sandy could laugh (so hard), Kim did not realize it.*
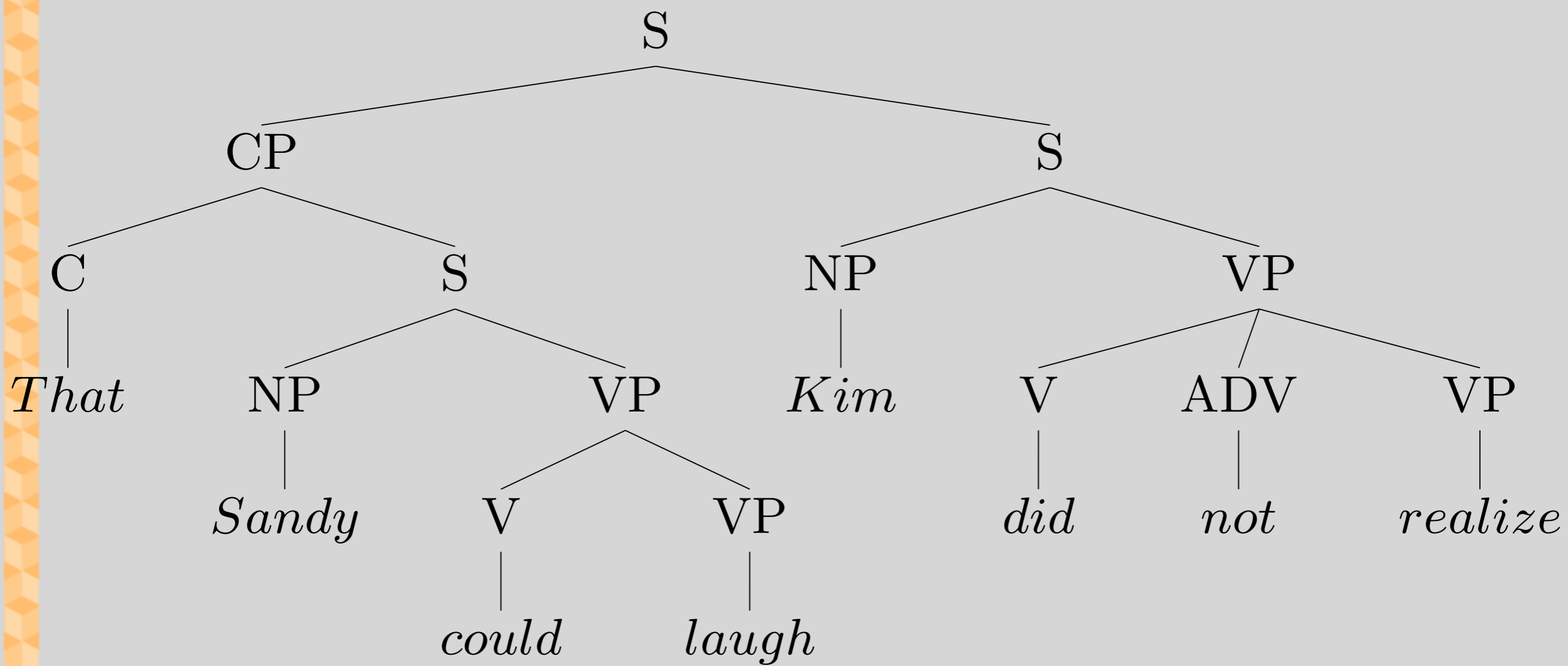
# Complicated example #6

*Kim continues to be likely to be easy to talk to.*

*\*Kim continue to be likely to be easy to talk to.*
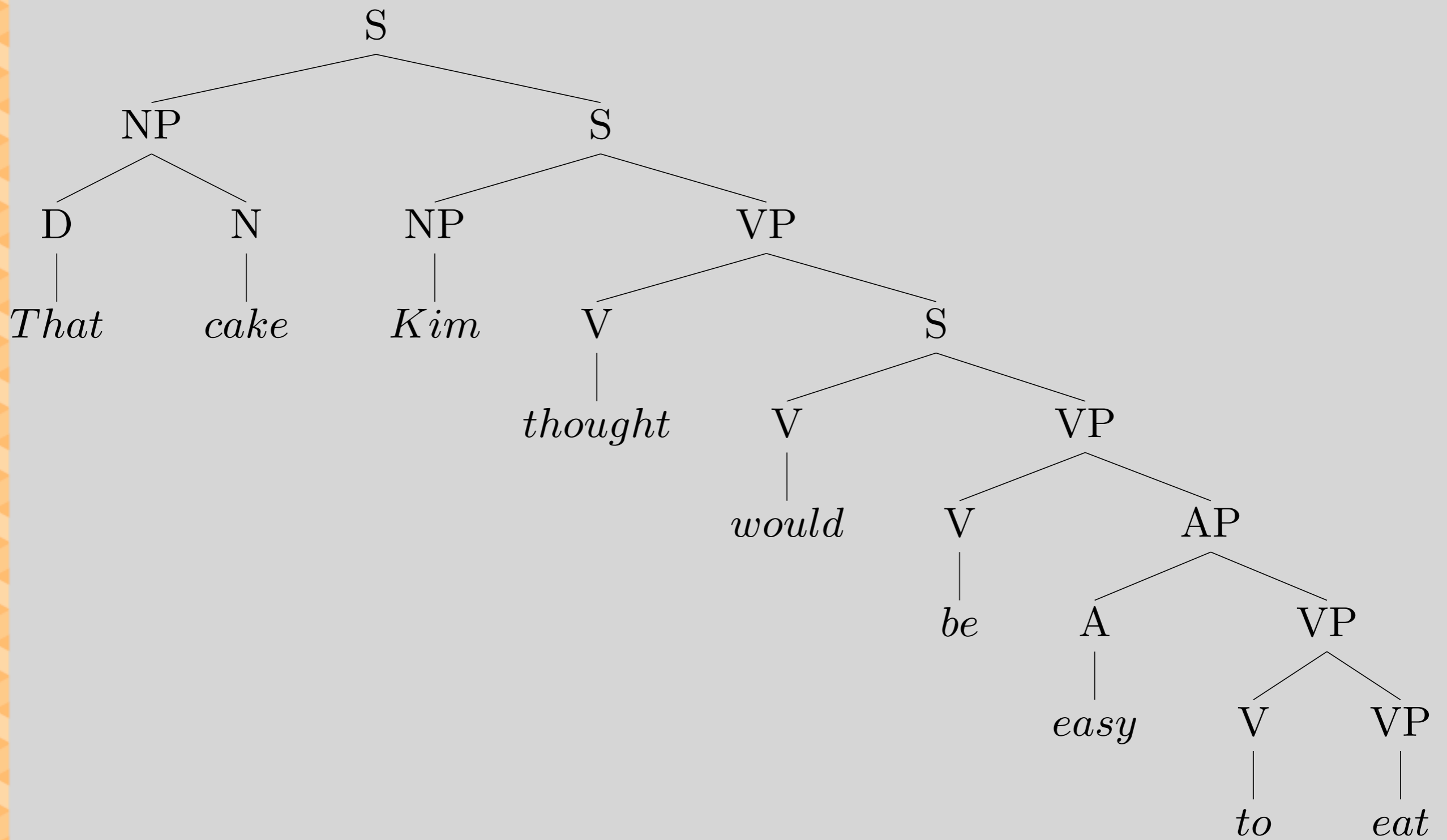
*\*Kim continues to be likely to is easy to talk to.*

*\*Kim continues to Kim be likely to be easy to talk to.*
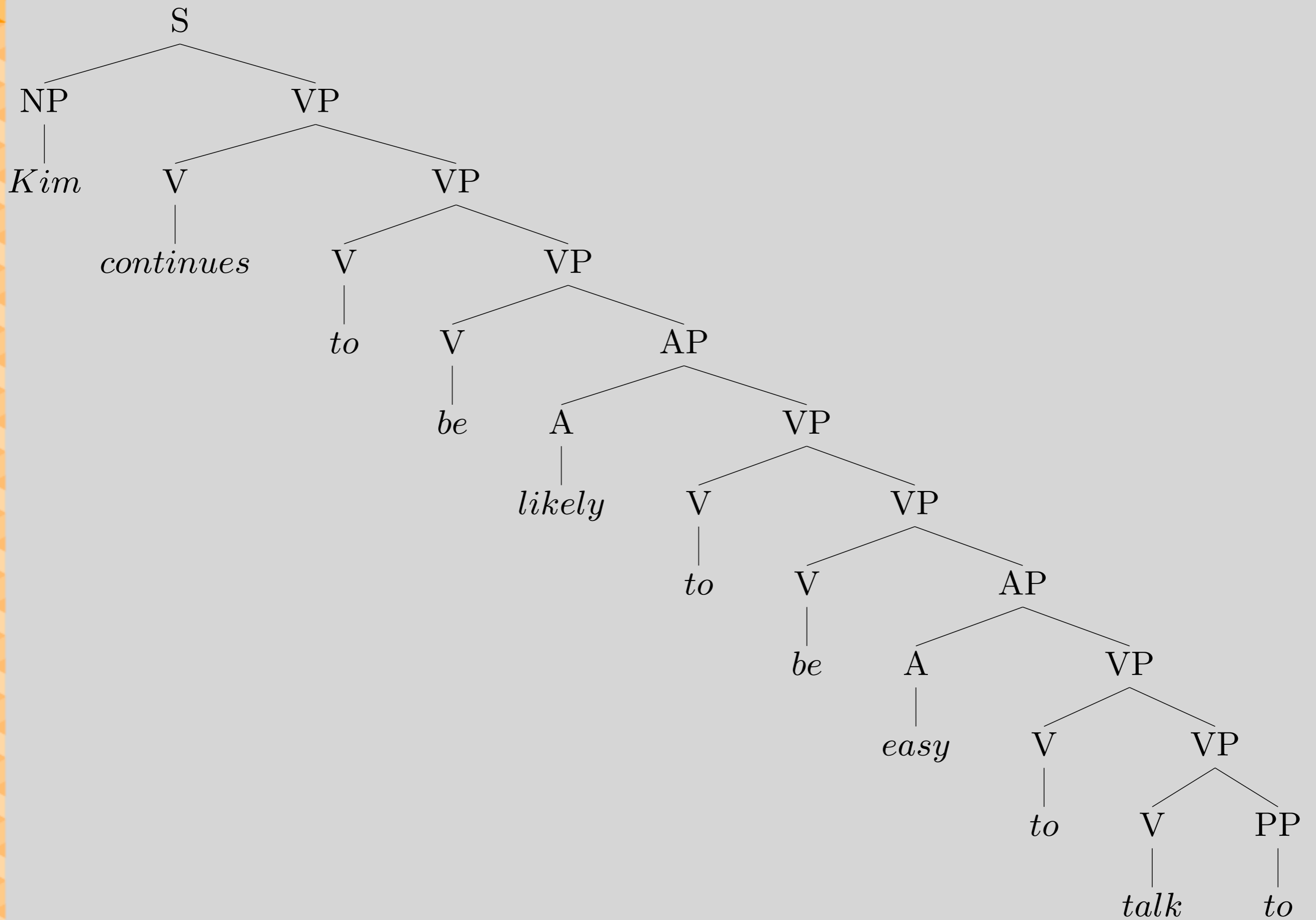
# Complicated example #7

*That cake, Kim thought would be easy to eat.*

*\*That cake, Kim thought would be easy to eat pie.*

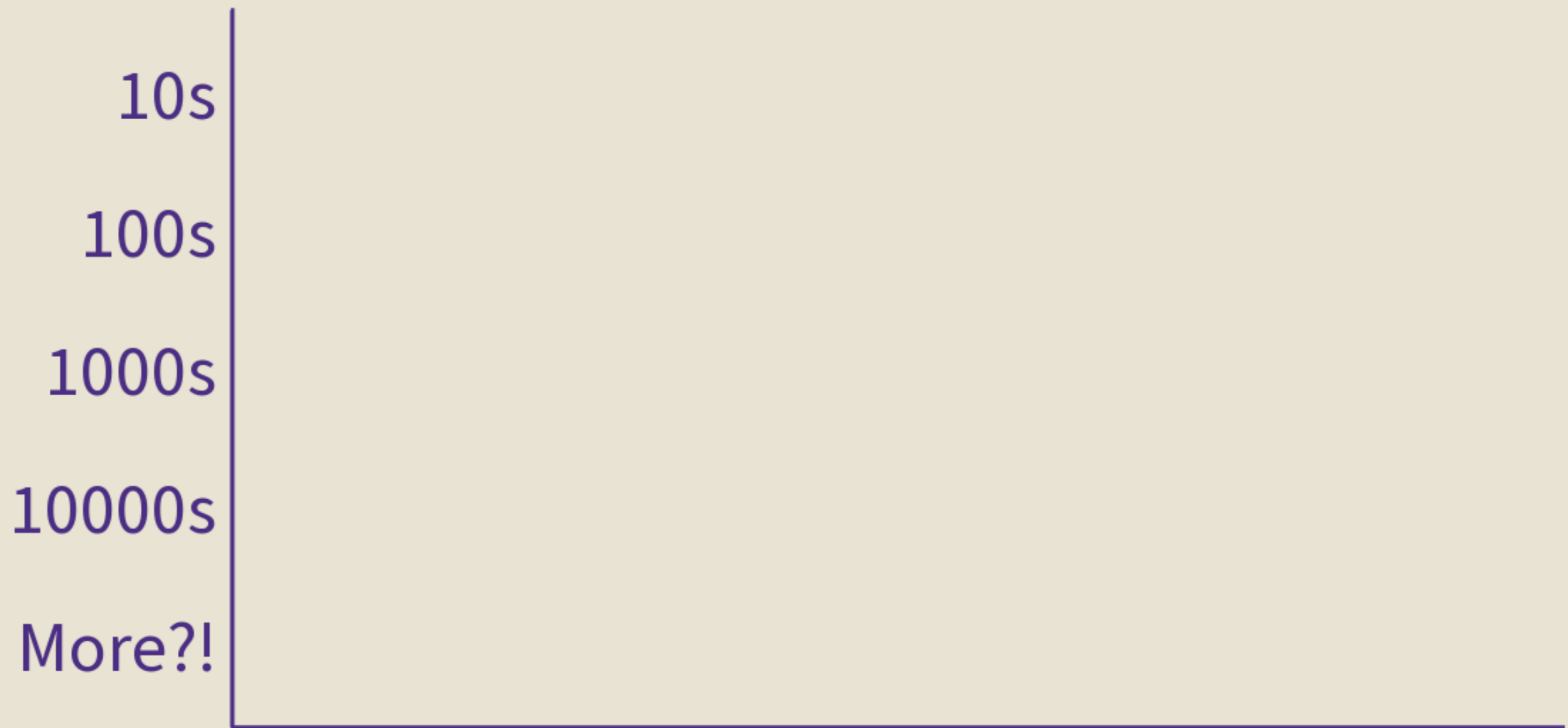*\*That cake, Kim thought would be easy to eaten.*

*\*Cupcake, Kim thought would be easy to eat.*

*\*That cake, Kim thought that would be easy to eat.*

# How many more analyses of interacting phenomena do you think we'd need to get to broad coverage of English?

10s

100s

1000s

10000s

More?!

# Overview

- Midterm Q3

- Big picture

- Untangle this…

- Course evals