Ling 566
Nov 29, 2007

Catch-up/review

Overview

- Big picture

- Untangle this...

- More on Bouma, Malouf, & Sag

- Course evals

Big picture: Our model

- Describes a set of strings

- Associates semantic representations (and trees) with well-formed strings

- Is stated in terms of declarative constraints

- ... which are order-independent

- Locates most constraints 'in the lexicon'

- Is stated in a precise fashion

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?

- In what applications might CFG be sufficient?

- What applications might benefit from something linguistically more motivated?

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.
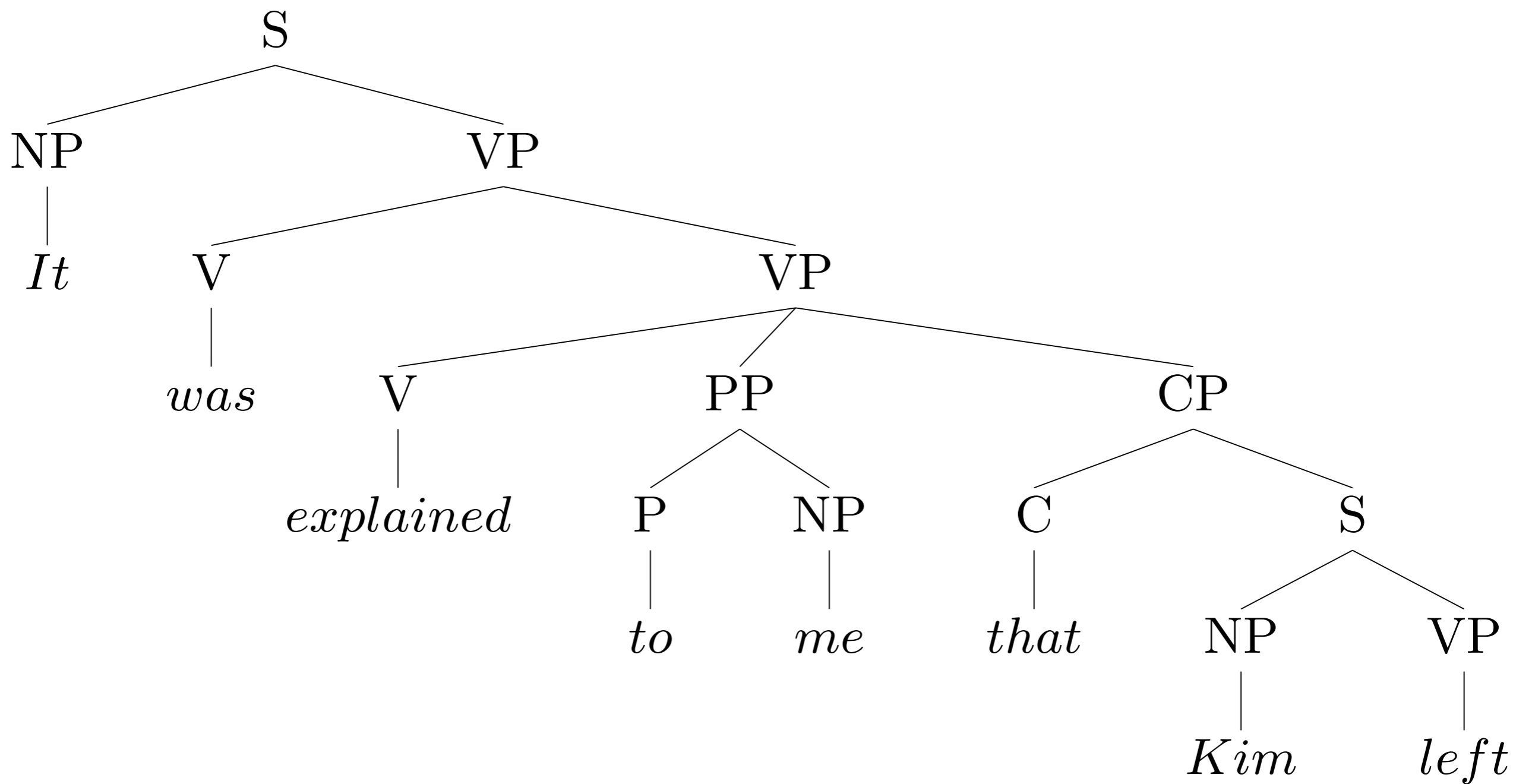
Complicated examples #2&3

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

I expect Kim to continue to be surprised that Sandy laughed.
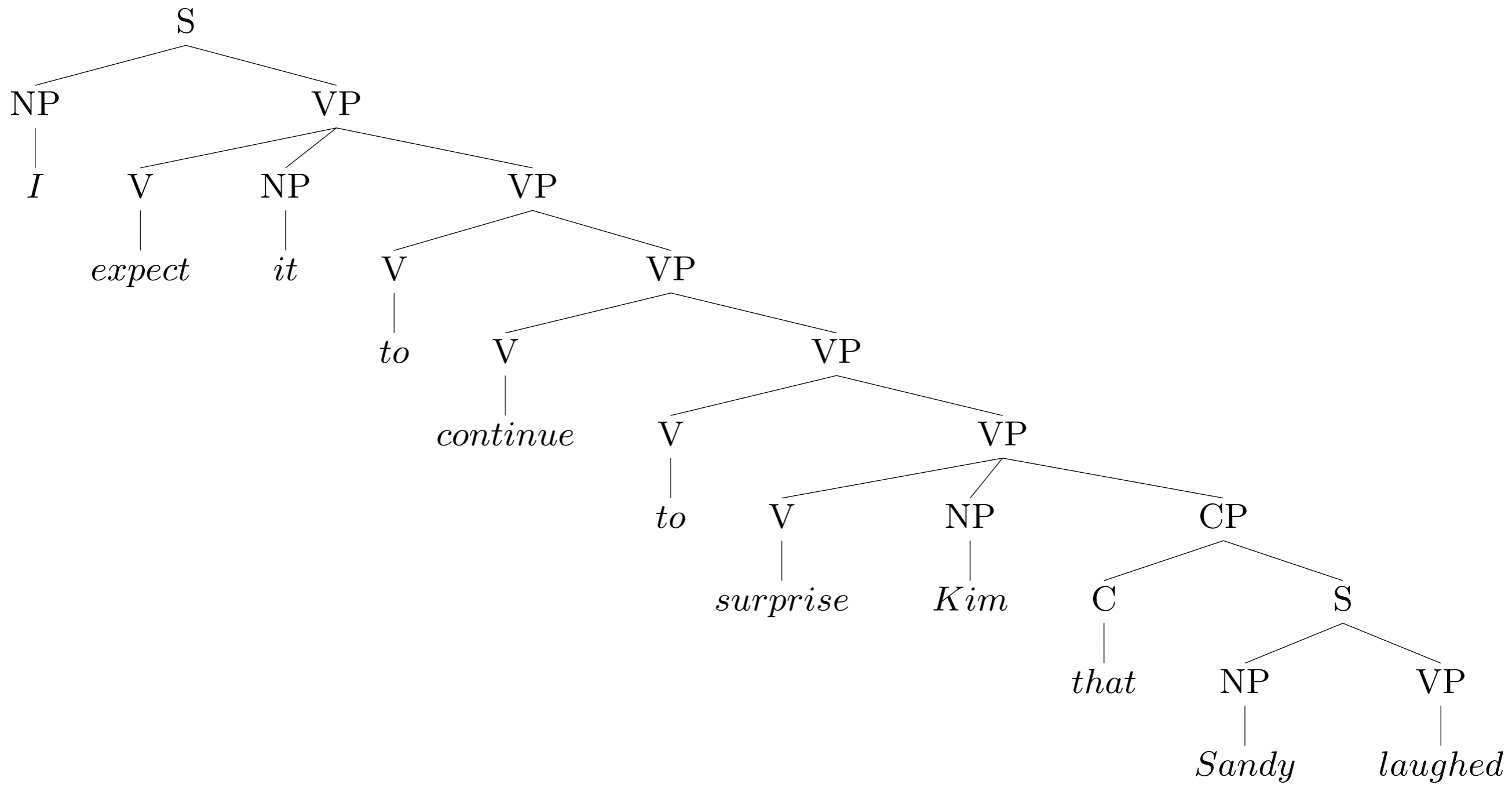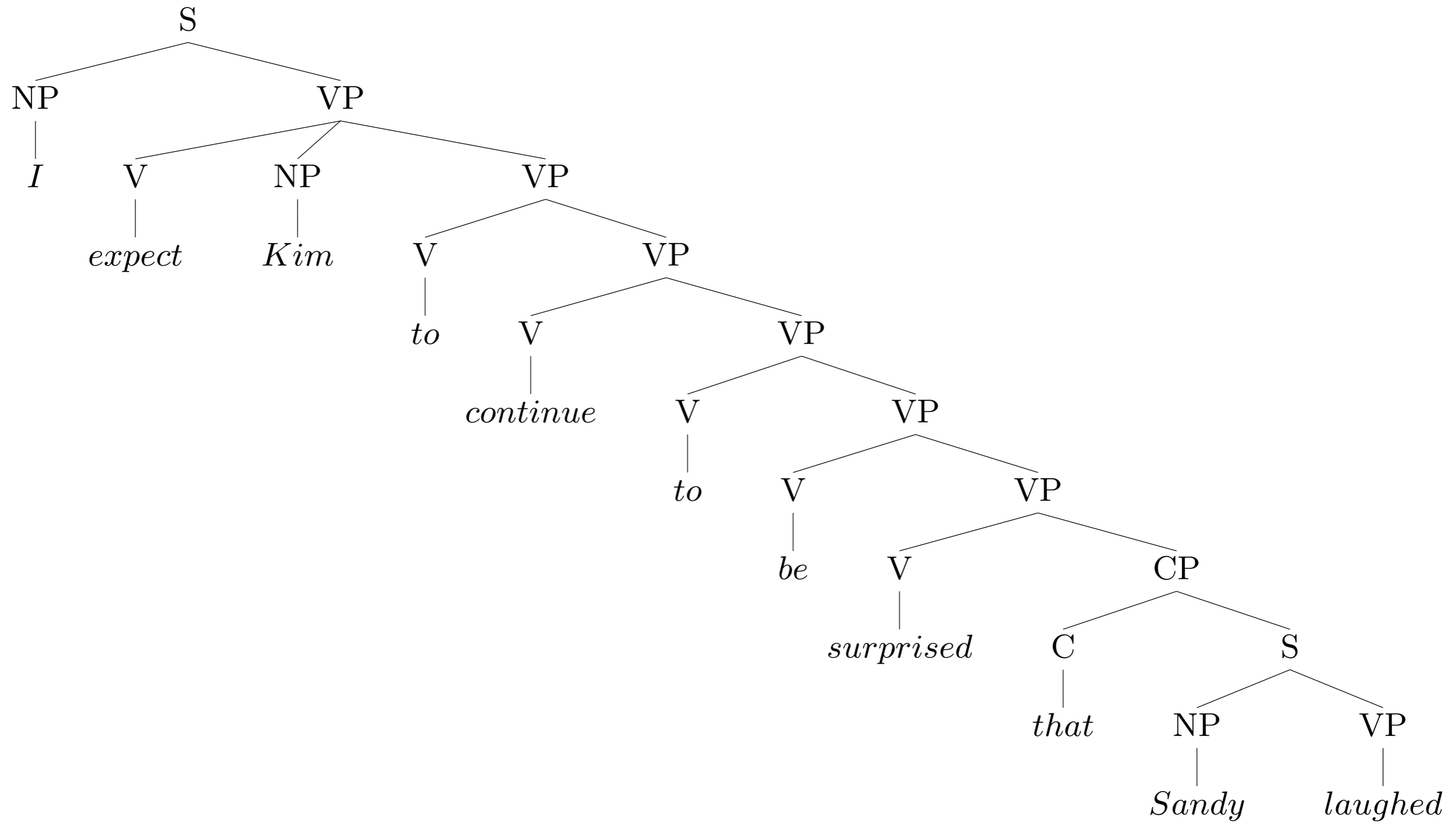
Why not these?

*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

You all laughed, did you not?

*You all laughed, did not you?

You all laughed, didn't you?
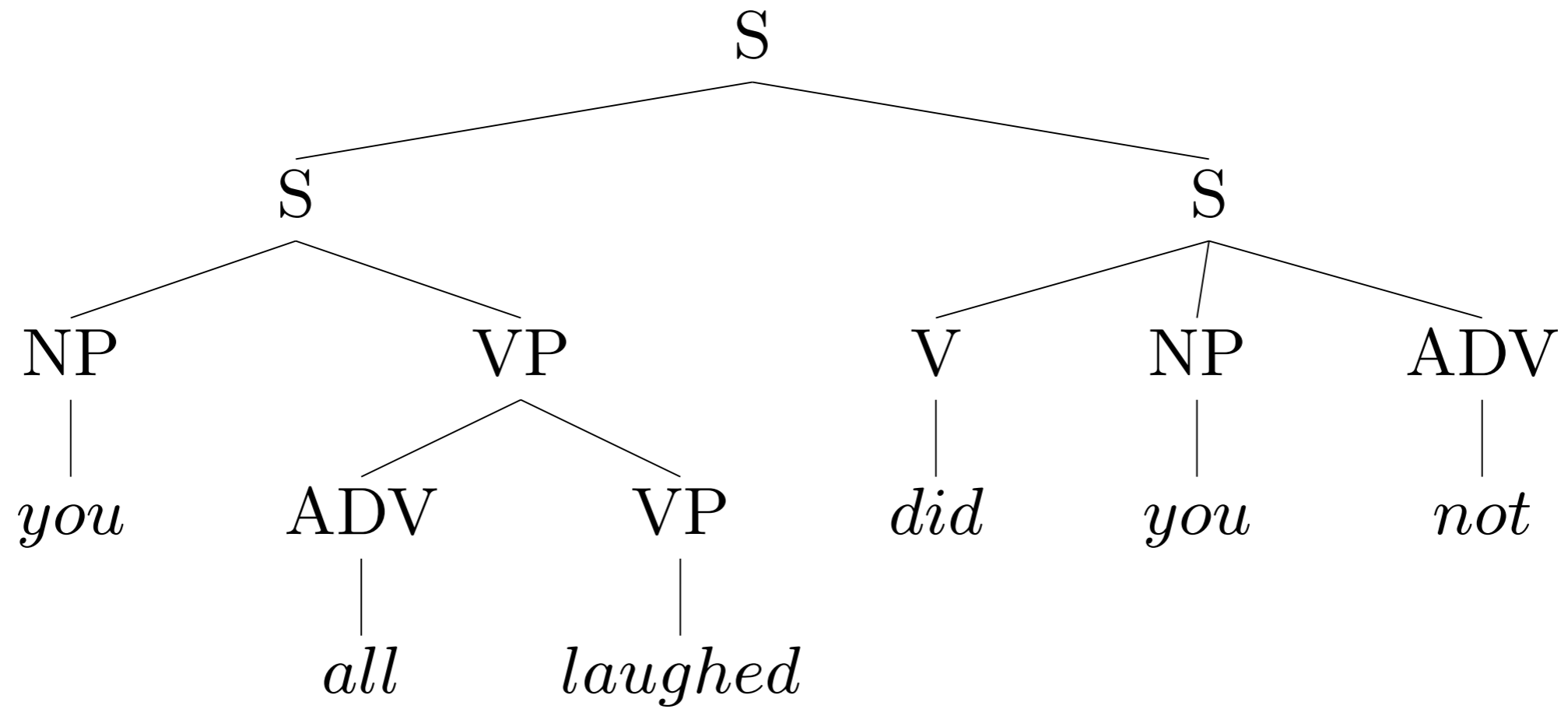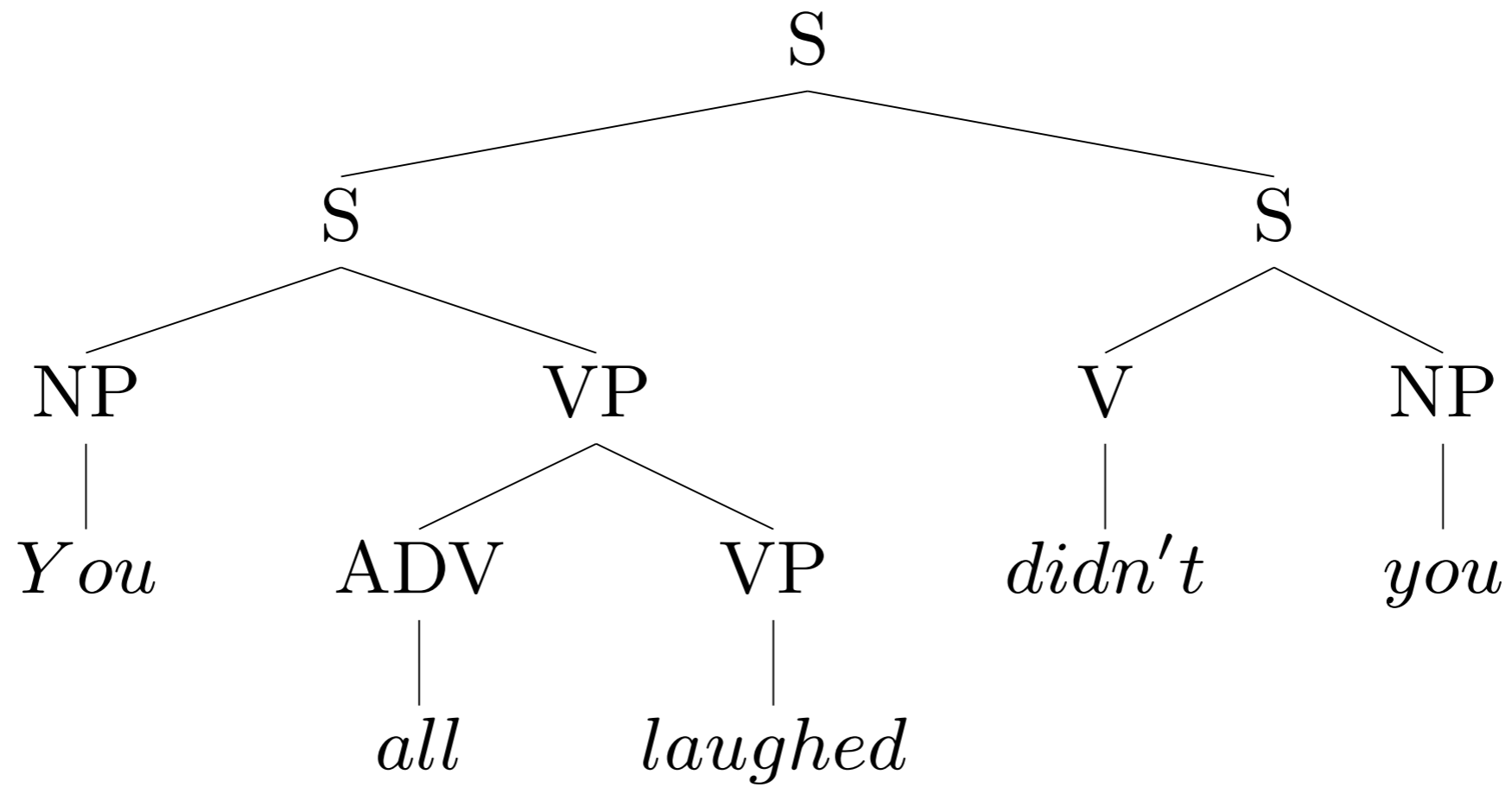
Complicated example #5

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.
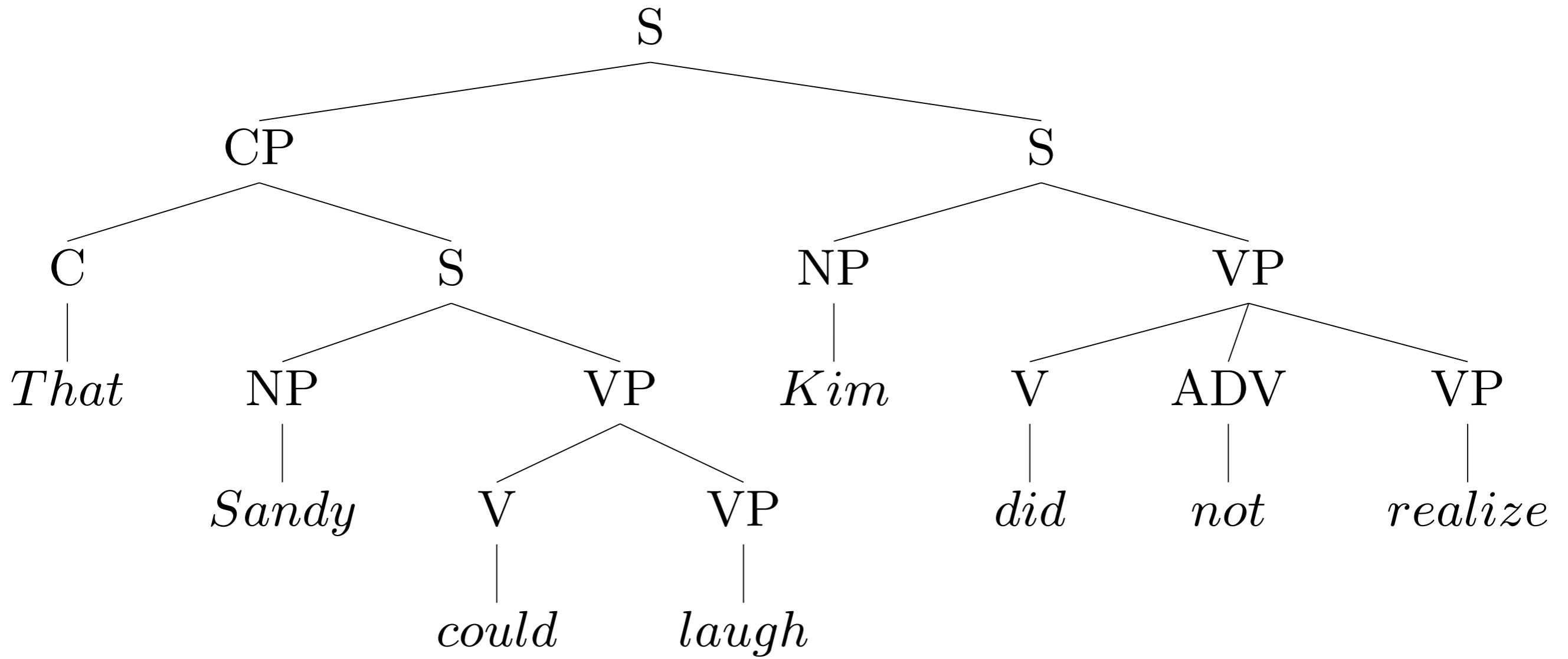
Complicated example #6

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.

S
                    ┌───────────────┴───────────────┐
                   NP   VP
                    │   ┌────────────┴────────────┐
                  Kim   V   VP
                    │   ┌──┴──┐   ┌───────────┴───────────┐
               continues   V   VP   V   VP
                                      │   *to*   *be*   ┌──────────┴──────────┐
                                                                    A   VP
                                                                 likely   ┌──────────┴──────────┐
                                                                               V   VP
                                                                              to   ┌───────────┴───────────┐
                                                                                         V   AP
                                                                                        be   ┌────────────┴────────────┐
                                                                                                    A   VP
                                                                                                  easy   ┌─────────────┴─────────────┐
                                                                                                                V   VP
                                                                                                               to   ┌────────────┴────────────┐
                                                                                                                               V   PP
                                                                                                                             talk   │
                                                                                                                                                        to
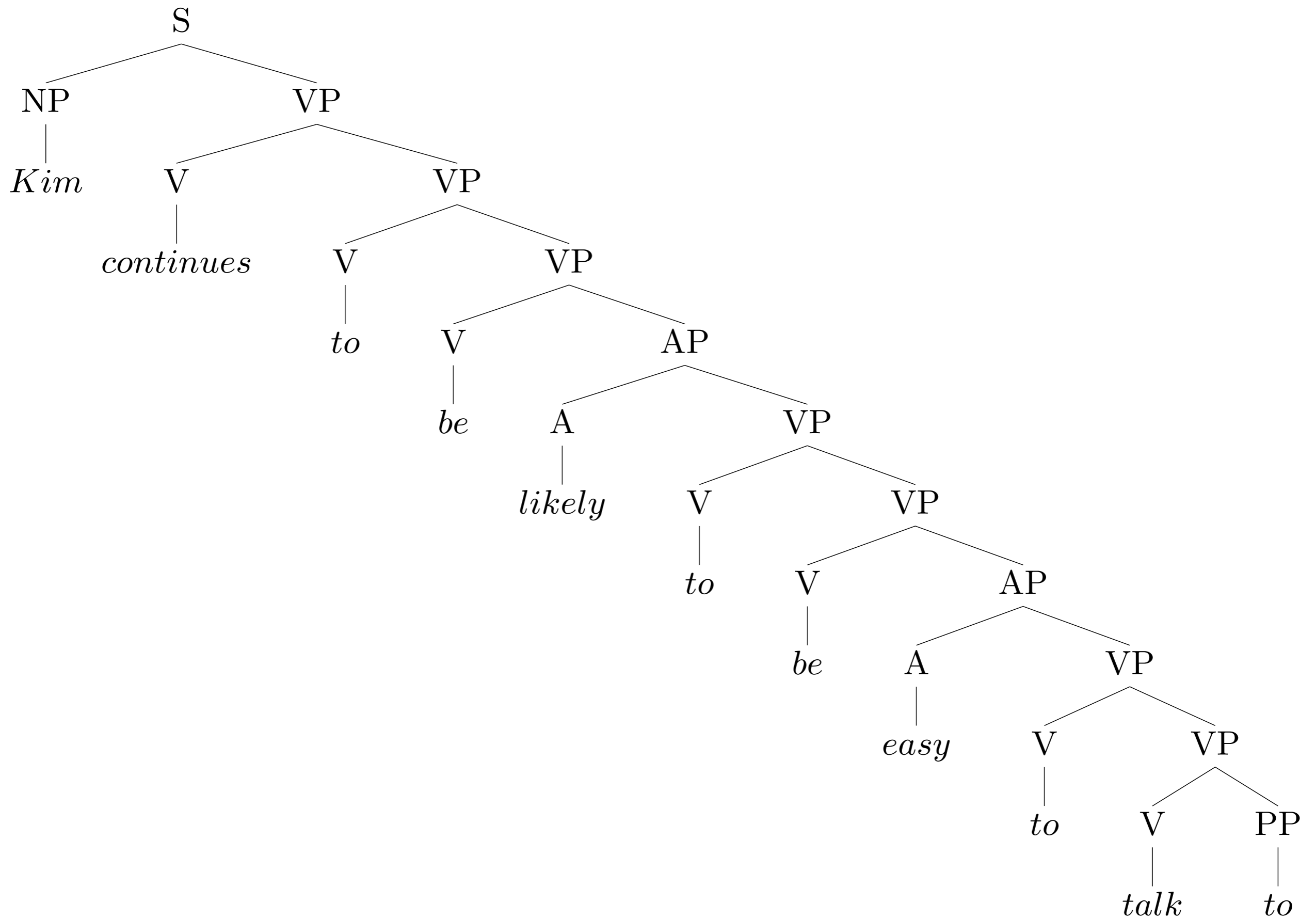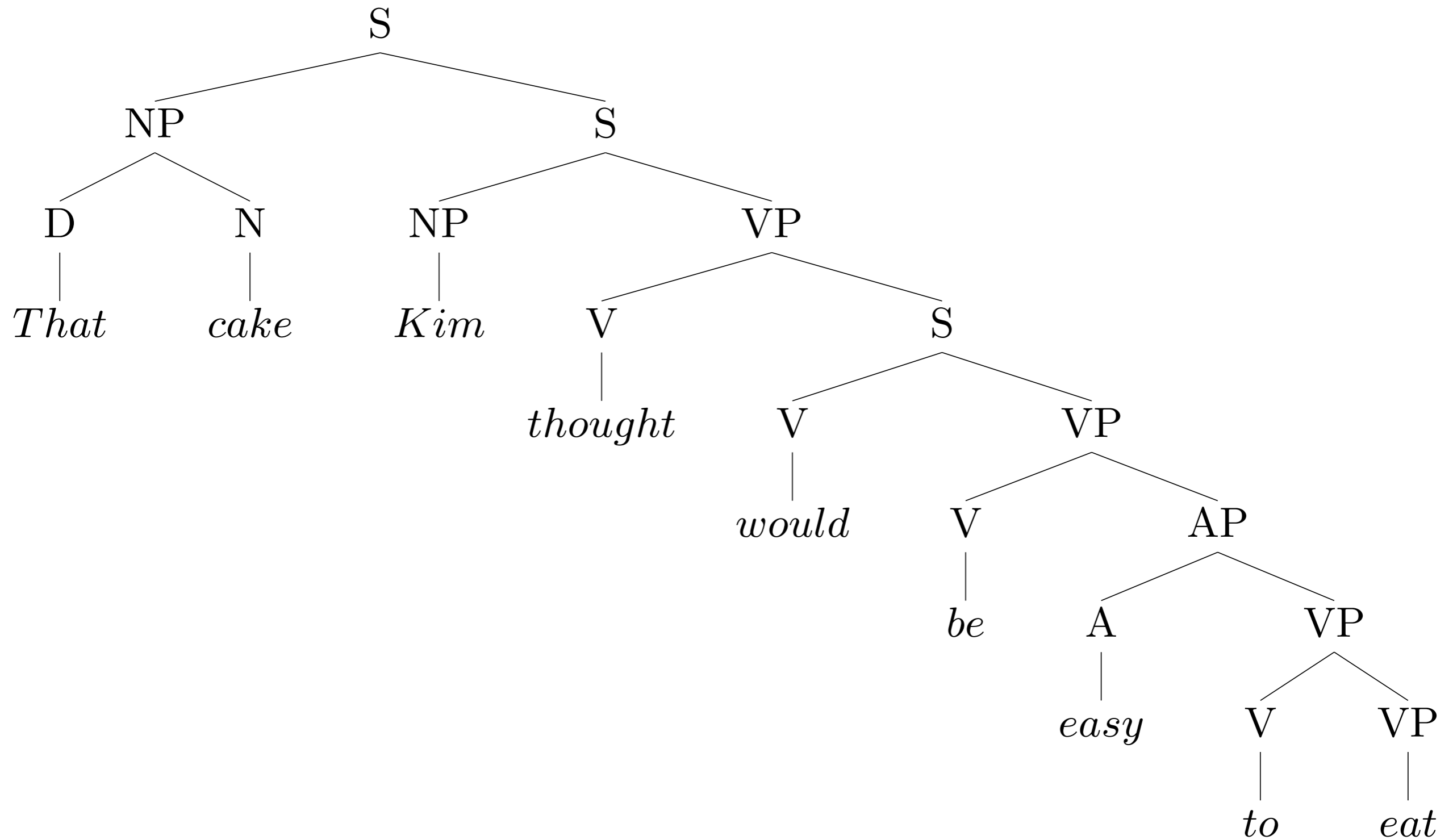
Complicated example #7

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.

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                              S
                  ┌───────────┴───────────┐
                 NP                        S
              ┌───┴───┐            ┌───────┴───────┐
              D       N           NP               VP
              │       │            │        ┌──────┴──────┐
            That     cake         Kim        V             S
                                  │          │      ┌──────┴──────┐
                                 Kim      thought    V            VP
                                            │        │      ┌──────┴──────┐
                                         thought   would    V            AP
                                                     │       │      ┌─────┴─────┐
                                                   would     be     A           VP
                                                             │      │      ┌─────┴─────┐
                                                             be   easy      V         VP
                                                                            │          │
                                                                           to         eat
```

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