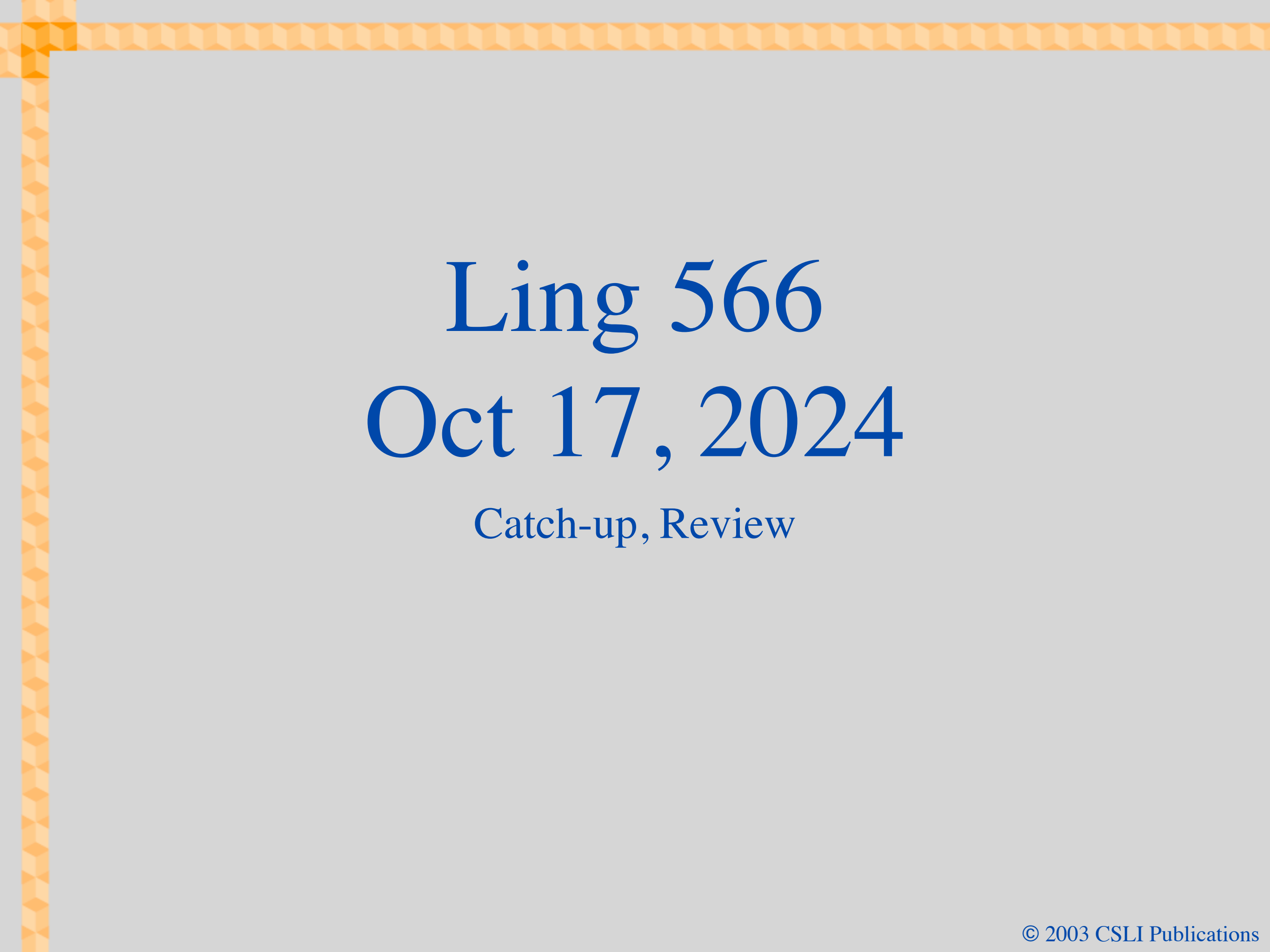


A decorative border in the top-left corner of the slide, composed of a grid of small orange squares and rectangles, creating a geometric pattern.

Ling 566

Oct 17, 2024

Catch-up, Review

Great Shake Out

- 10:17am - UW Alert

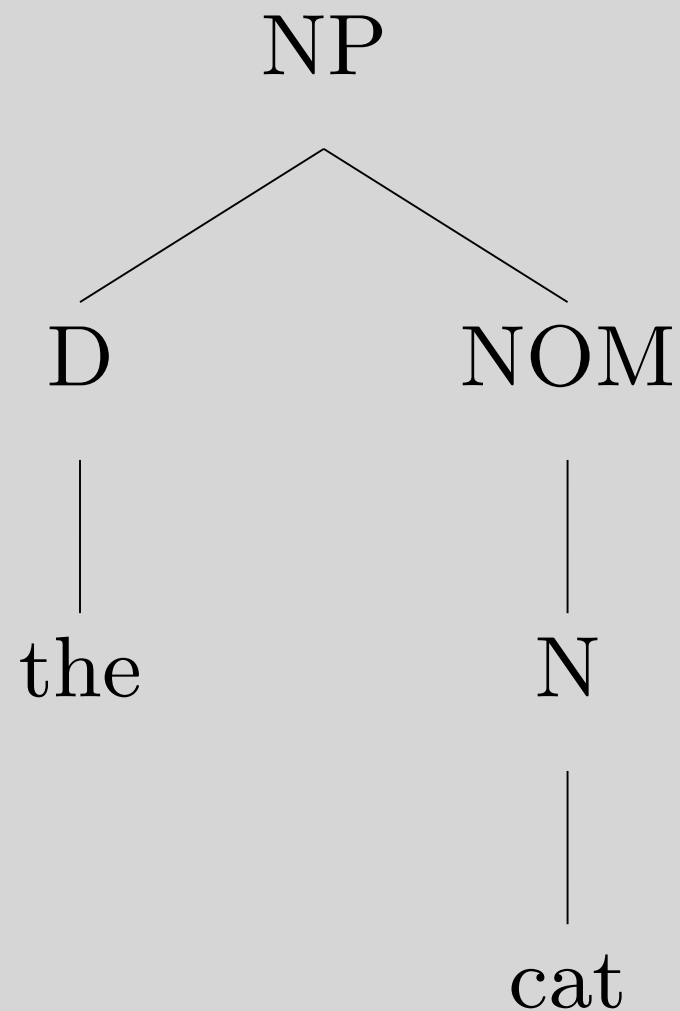
Overview

- Homework tips
- Common mistakes
- RQs
- Terminology
- Analogies to other systems you might know
- DELPH-IN demos (if time)

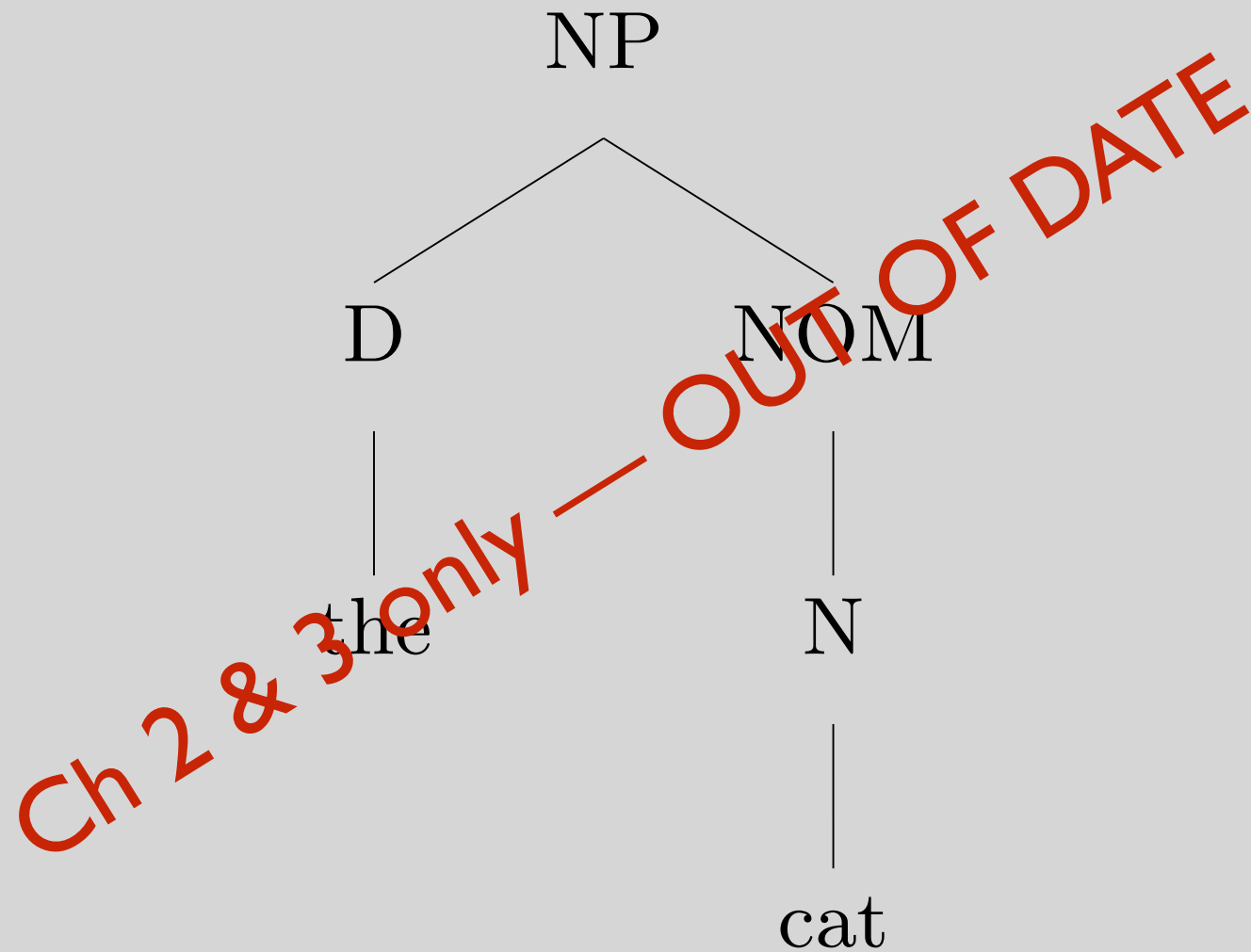
Homework tips/requests

- Type whenever possible (no photos of whiteboards)
 - But LaTeX is not required
- Answer each part of each question separately (but don't include the full text of the question)
- Be sure to answer each part of each question, and follow the directions!
- Look over the problems early and ask questions
- Check your work
- Monitor Canvas discussions
- WORK TOGETHER

Which grammar does this tree go with?



Which grammar does this tree go with?



What's wrong with this?

$\left\langle \text{out}, \begin{bmatrix} \text{word} \\ \text{HEAD} & \text{prep} \\ \text{VAL} & \begin{bmatrix} \text{SPR} & \langle \text{VP} \rangle \\ \text{COMPS} & \langle (\text{PP} \mid \text{NP}) \rangle \end{bmatrix} \end{bmatrix} \right\rangle$

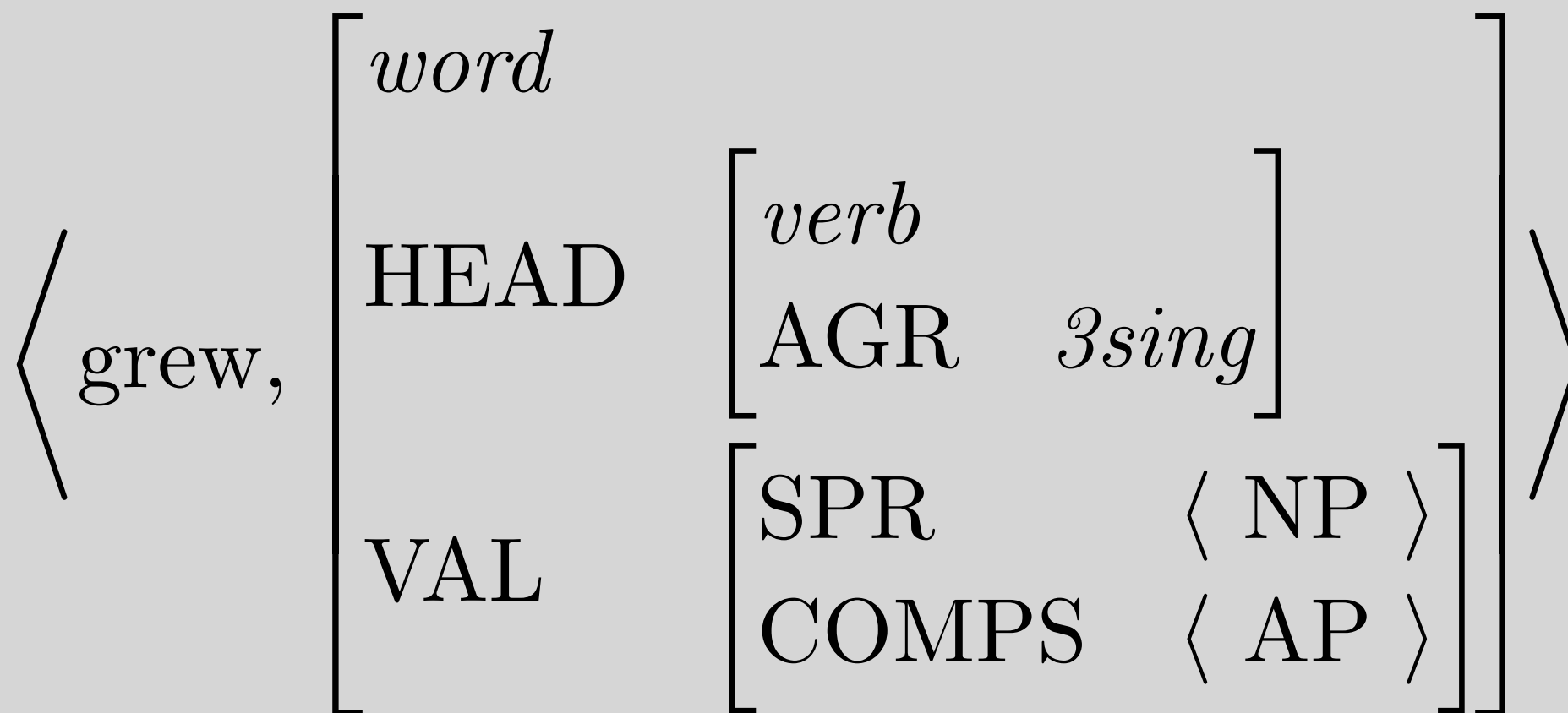
What's wrong with this?

$\left\langle \text{out}, \begin{bmatrix} \text{word} \\ \text{HEAD} \quad \textit{prep} \\ \text{VAL} \begin{bmatrix} \text{SPR} & \langle \rangle \\ \text{COMPS} & \langle (\text{NP}) (\text{PP}) \rangle \end{bmatrix} \end{bmatrix} \right\rangle$

What's wrong with this?

$\left\langle \text{out}, \left[\begin{array}{ll} \text{word} & \\ \text{HEAD} & \text{prep} \\ \text{VAL} & \left[\begin{array}{ll} \text{SPR} & \langle \rangle \\ \text{COMPS} & (\text{NP} \mid \text{PP}) \end{array} \right] \end{array} \right] \right\rangle$

What's wrong with this?



What's wrong with this?

$\left\langle \text{out}, \left[\begin{array}{ll} \text{word} & \\ \text{HEAD} & \textit{preposition} \\ \text{VAL} & \left[\begin{array}{ll} \text{SPR} & \langle \rangle \\ \text{COMPS} & \langle (\text{NP} \mid \text{PP}) \rangle \end{array} \right] \end{array} \right] \right\rangle$

What's wrong with this?

$\left\langle \text{there,} \begin{bmatrix} \textit{phrase} \\ \text{HEAD} & \textit{prep} \\ \text{VAL} & \begin{bmatrix} \text{SPR} & \langle \rangle \\ \text{COMPS} & \langle \rangle \end{bmatrix} \end{bmatrix} \right\rangle$

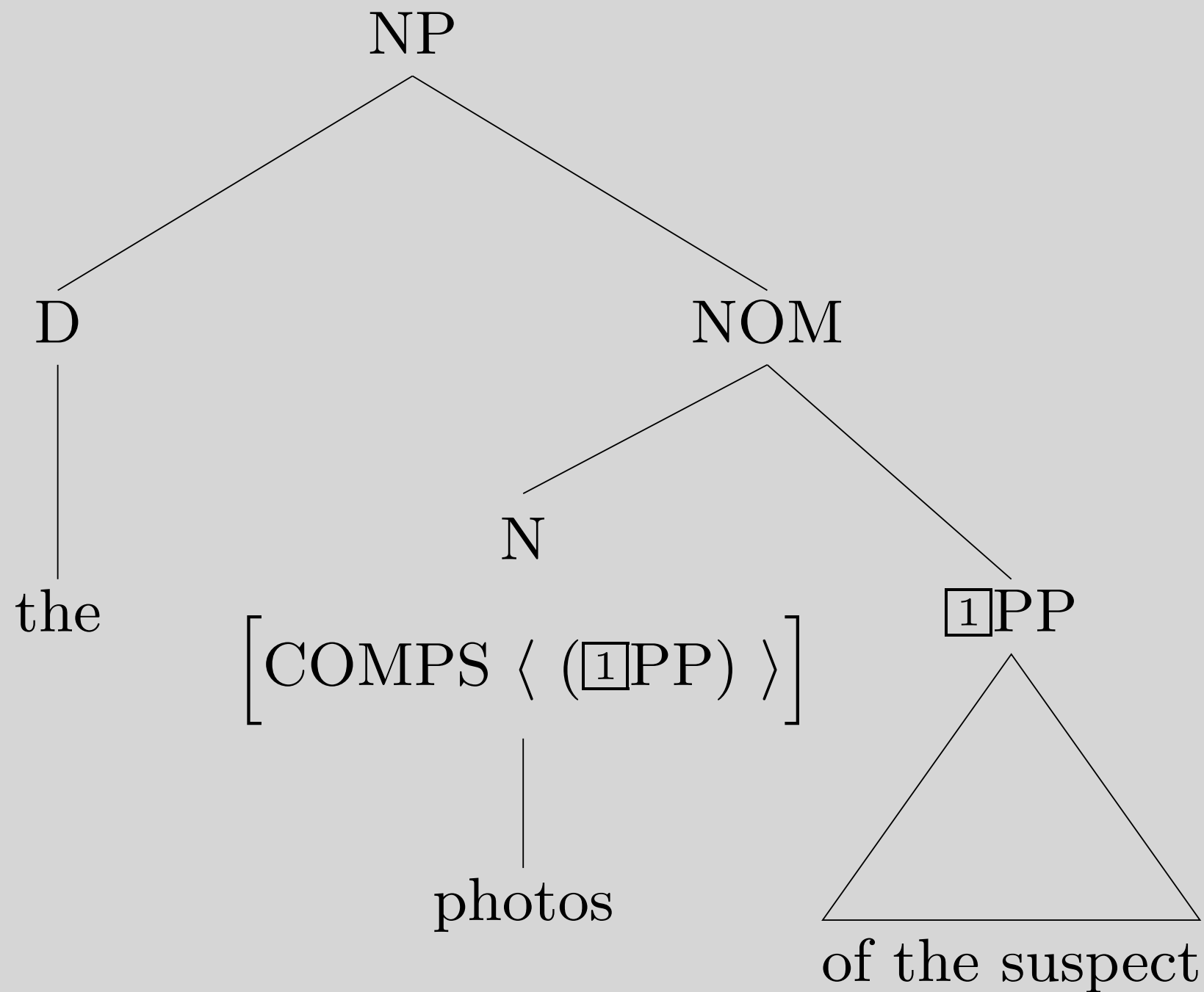
Tags & lists

- What's the difference between these two?

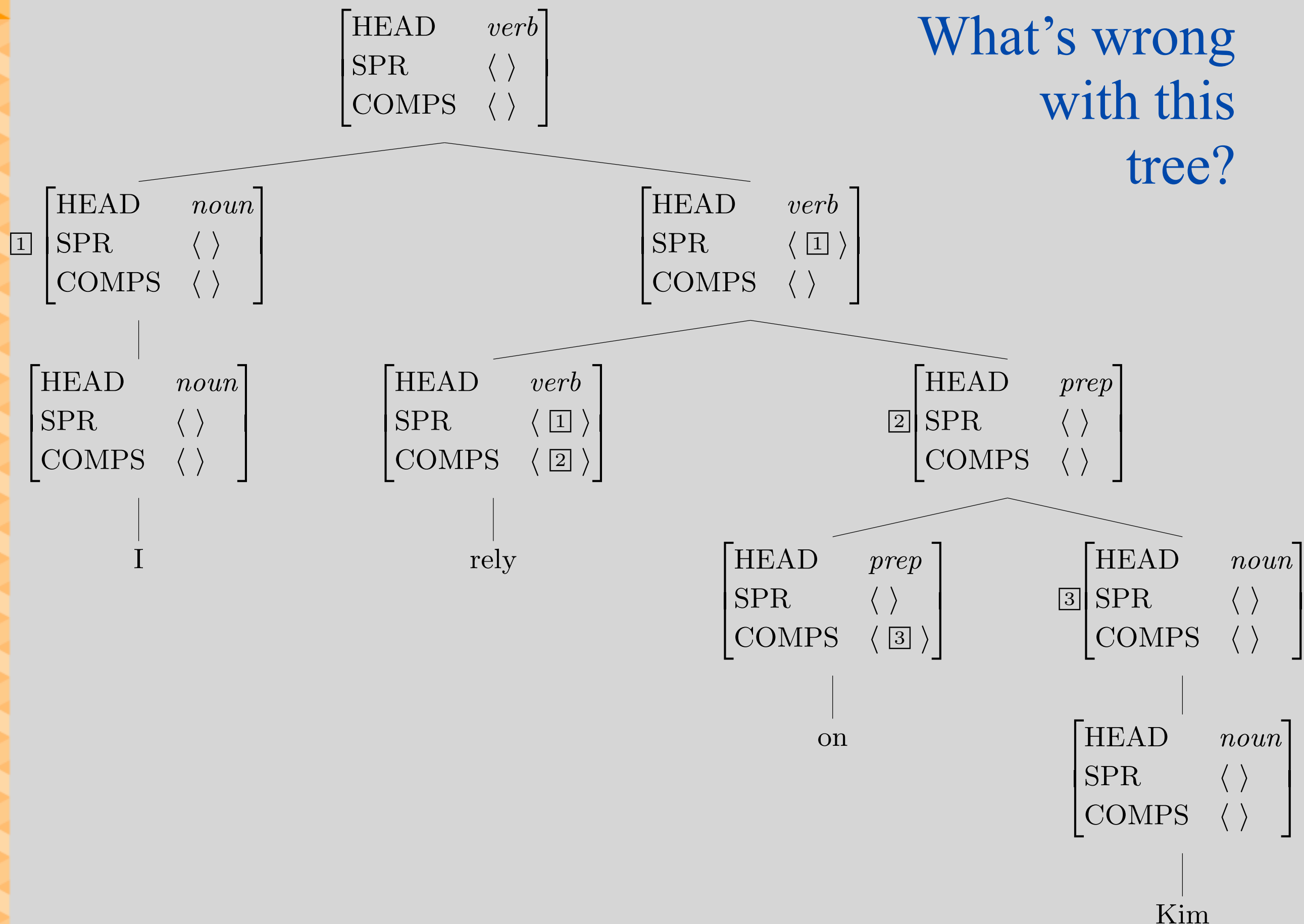
$$\left[\text{SPR} \quad \boxed{1} \langle \text{NP} \rangle \right]$$
$$\left[\text{SPR} \quad \langle \boxed{1} \text{NP} \rangle \right]$$

- When does it matter?

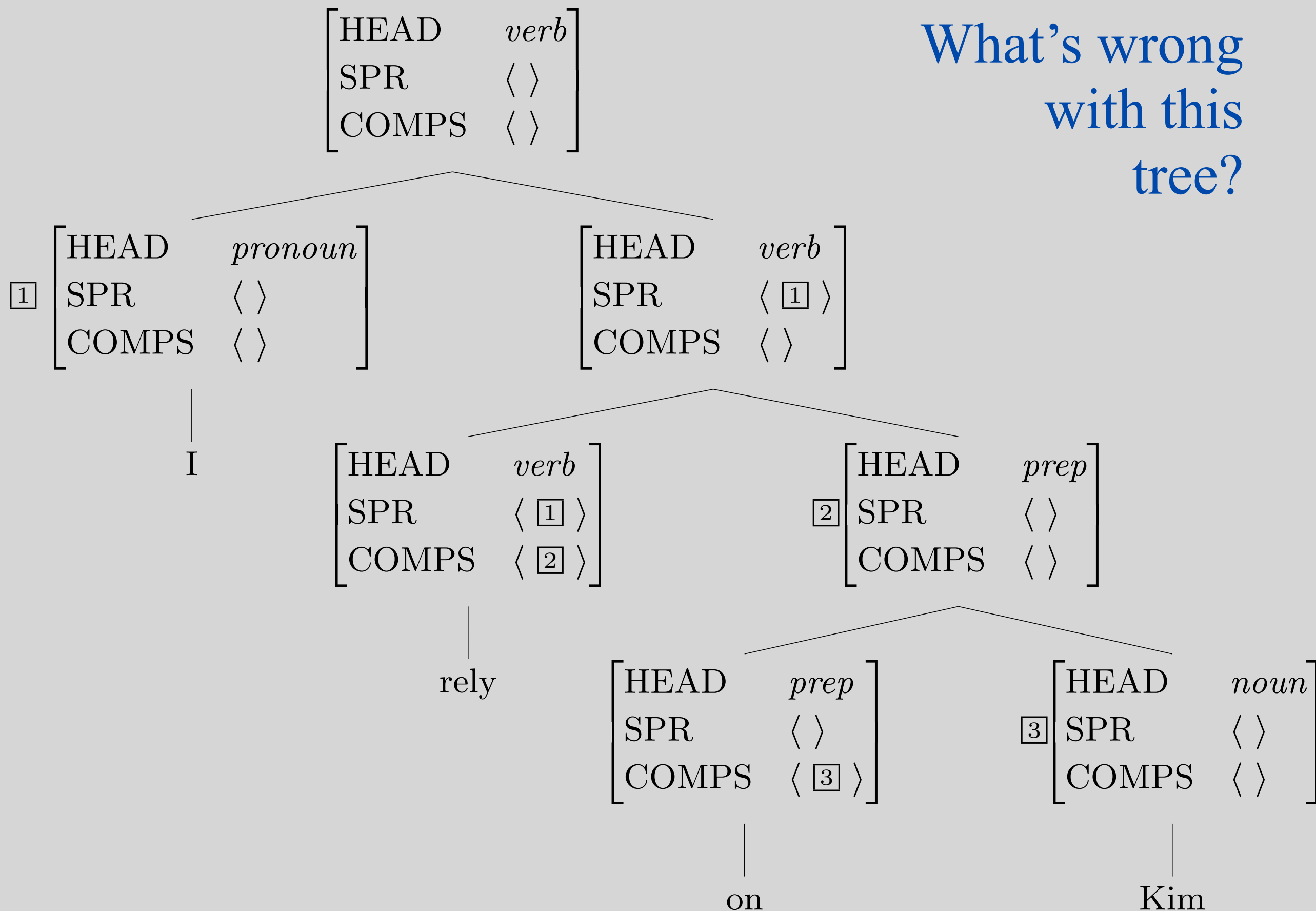
What's wrong with this tree?



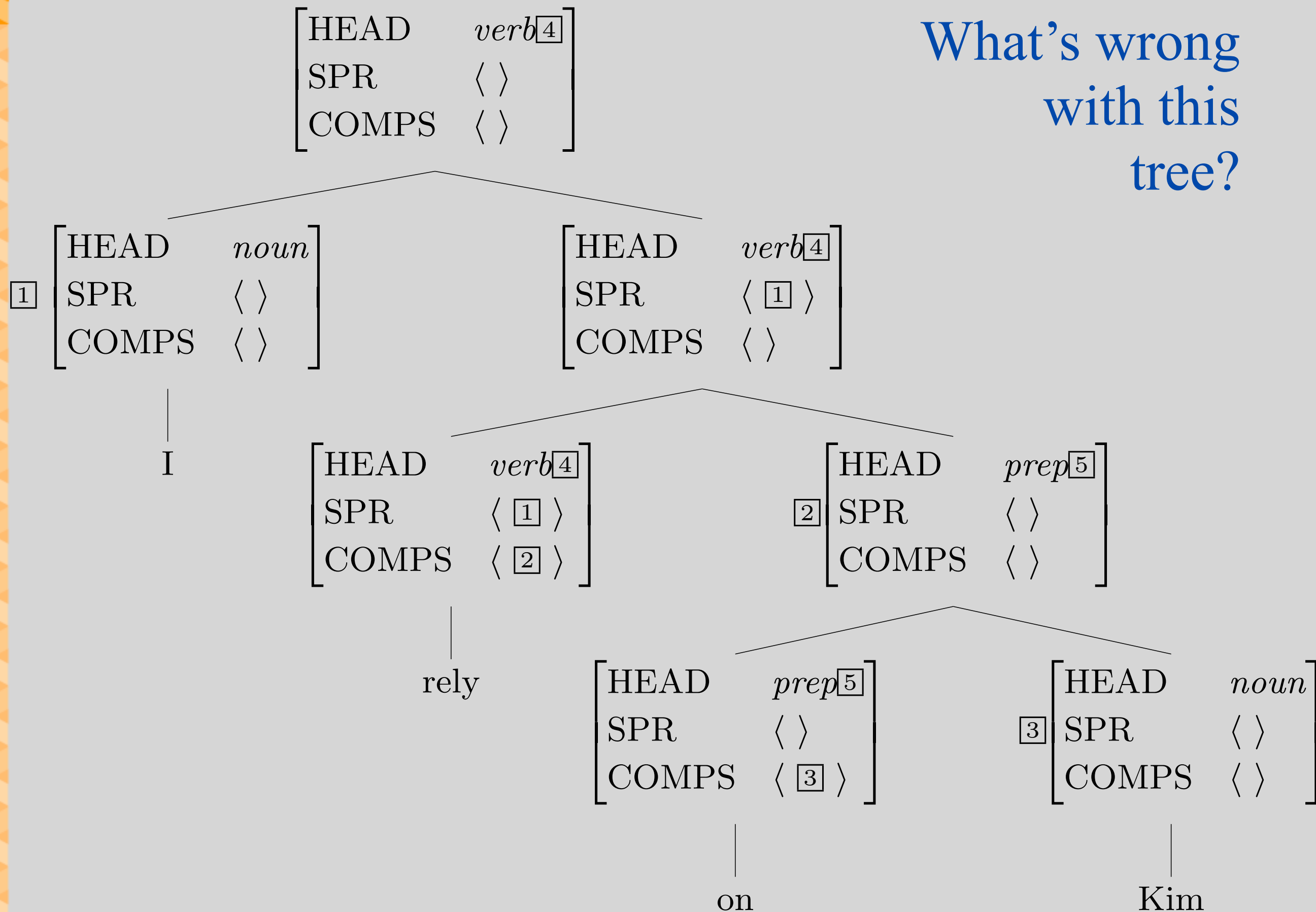
What's wrong
with this
tree?



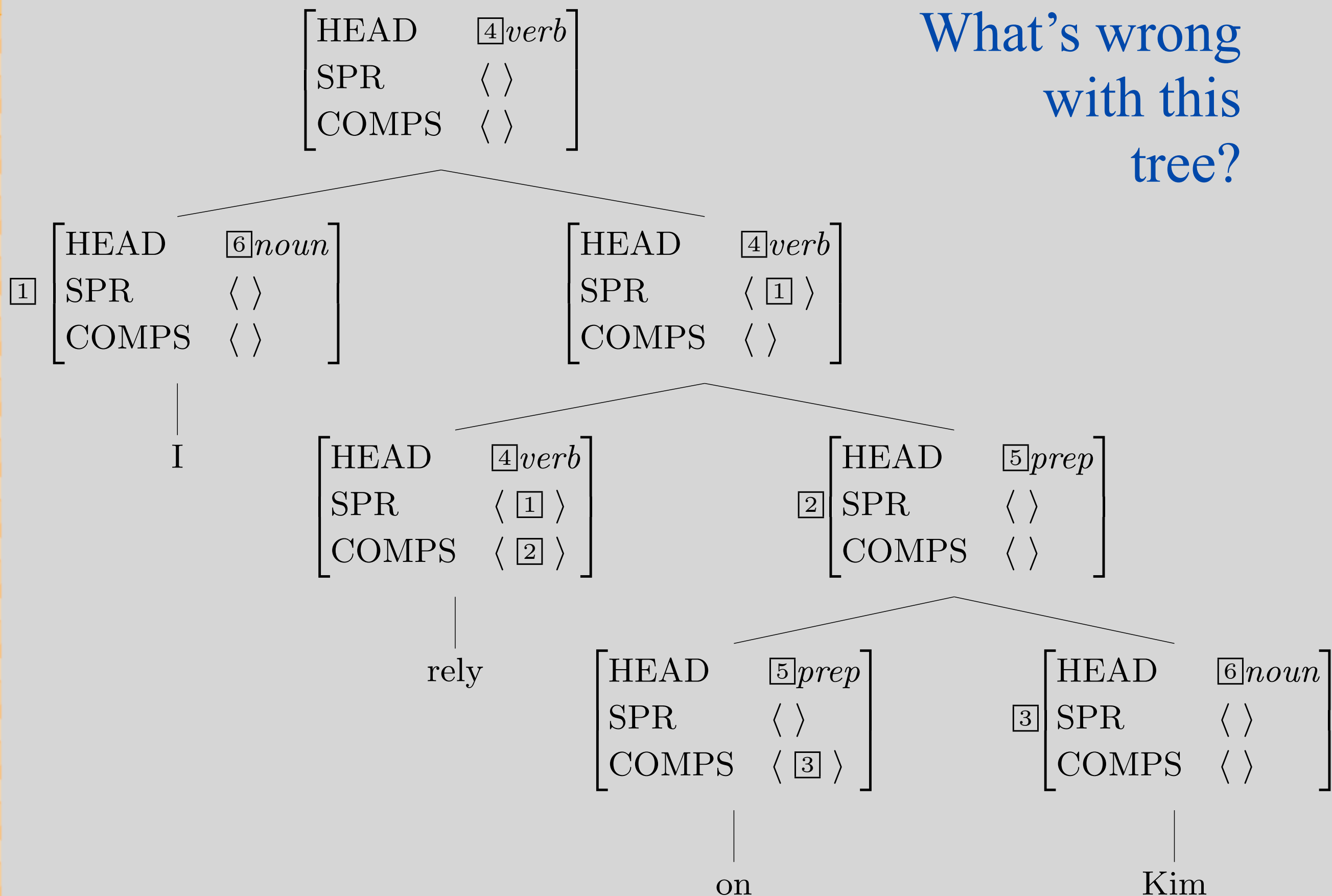
What's wrong
with this
tree?



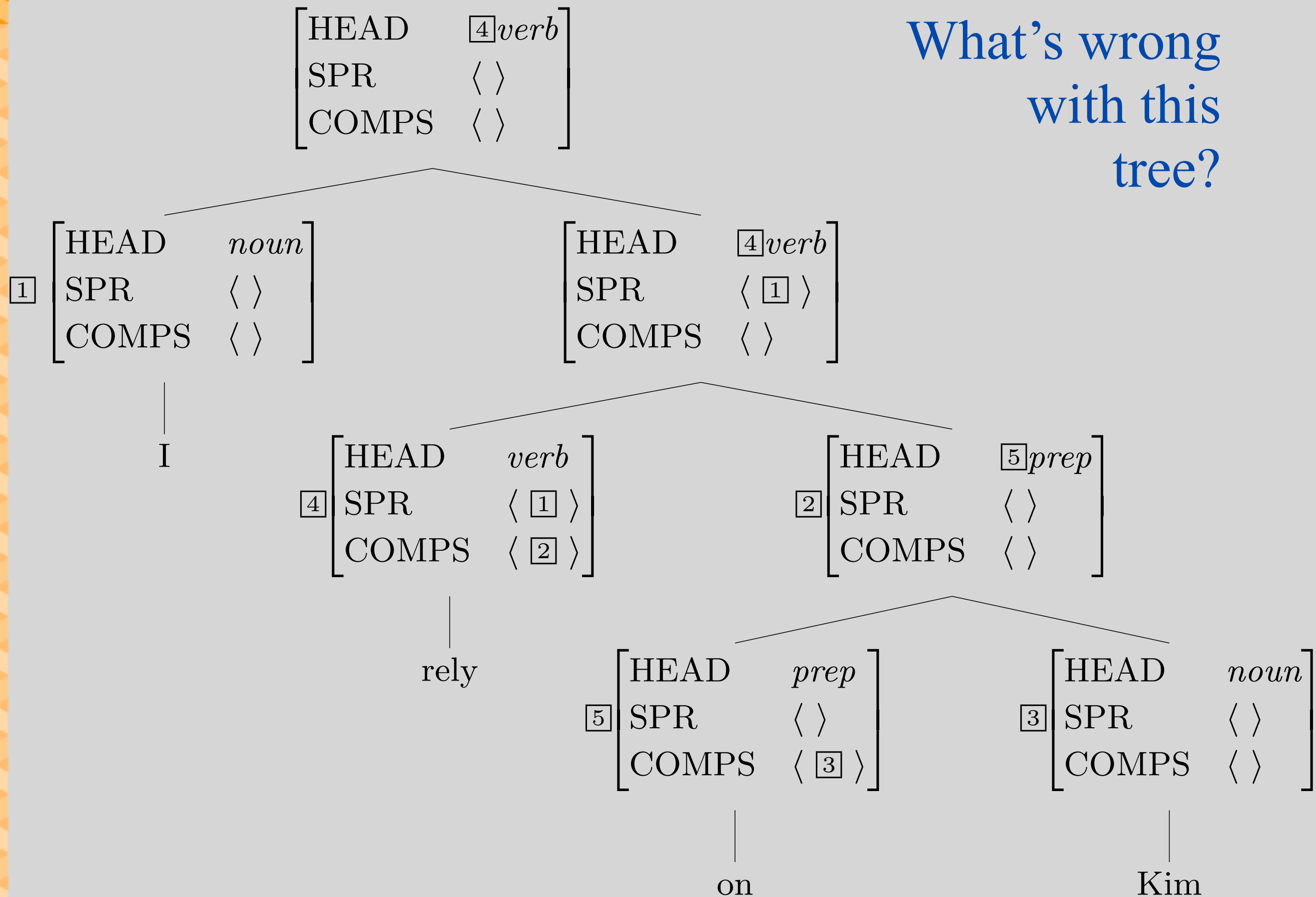
What's wrong
with this
tree?



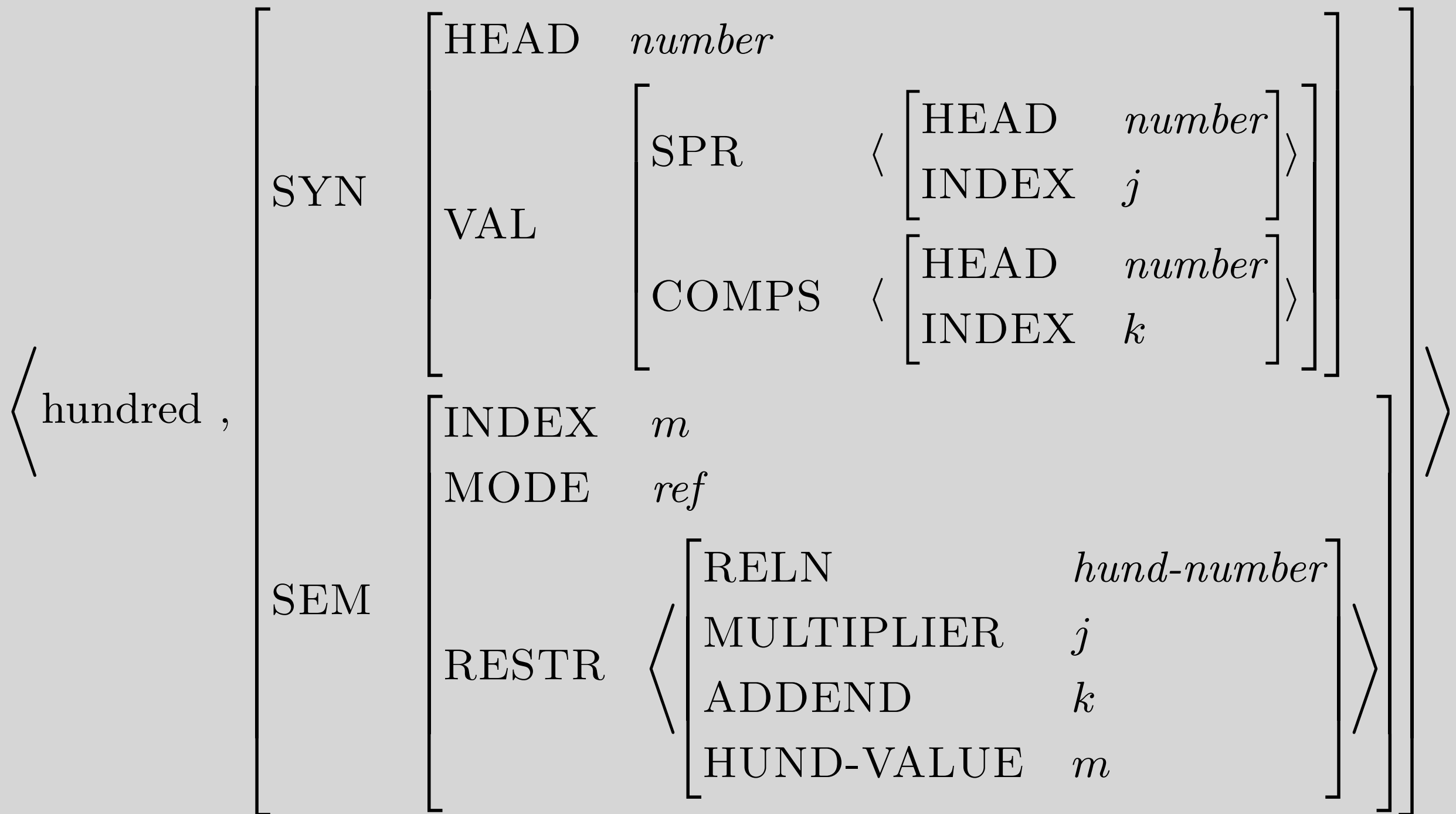
What's wrong
with this
tree?



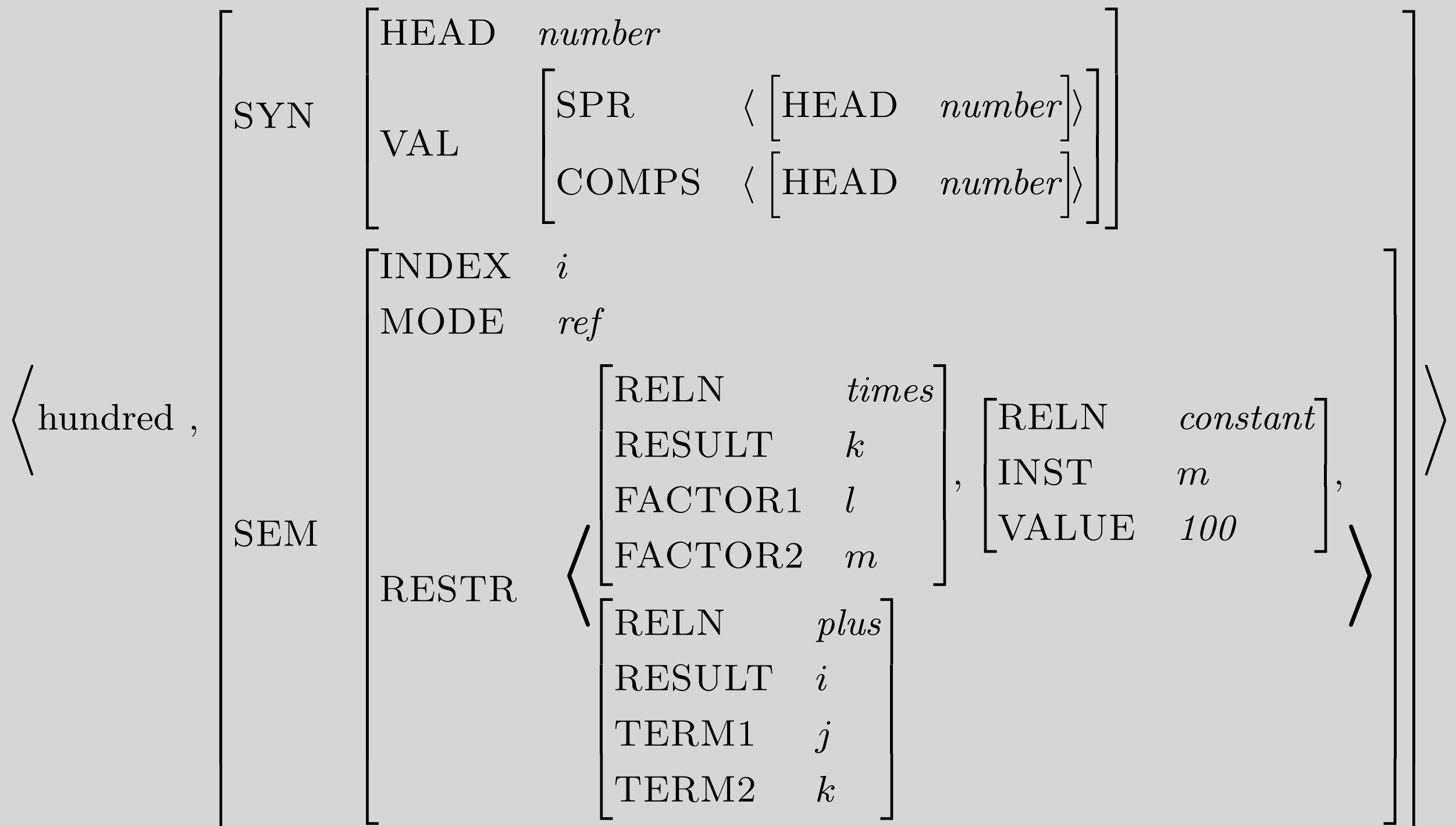
What's wrong
with this
tree?



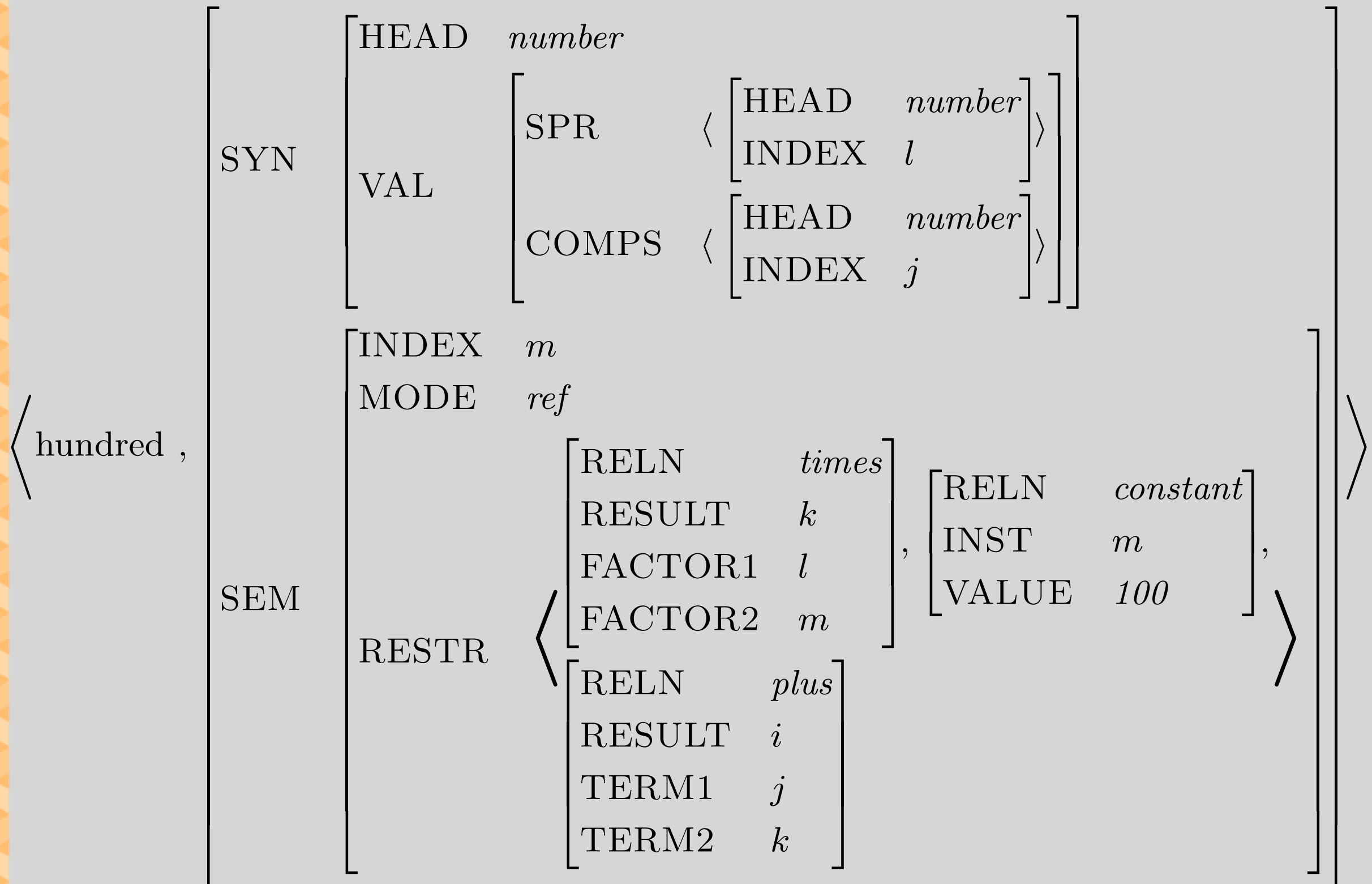
What's wrong with this?



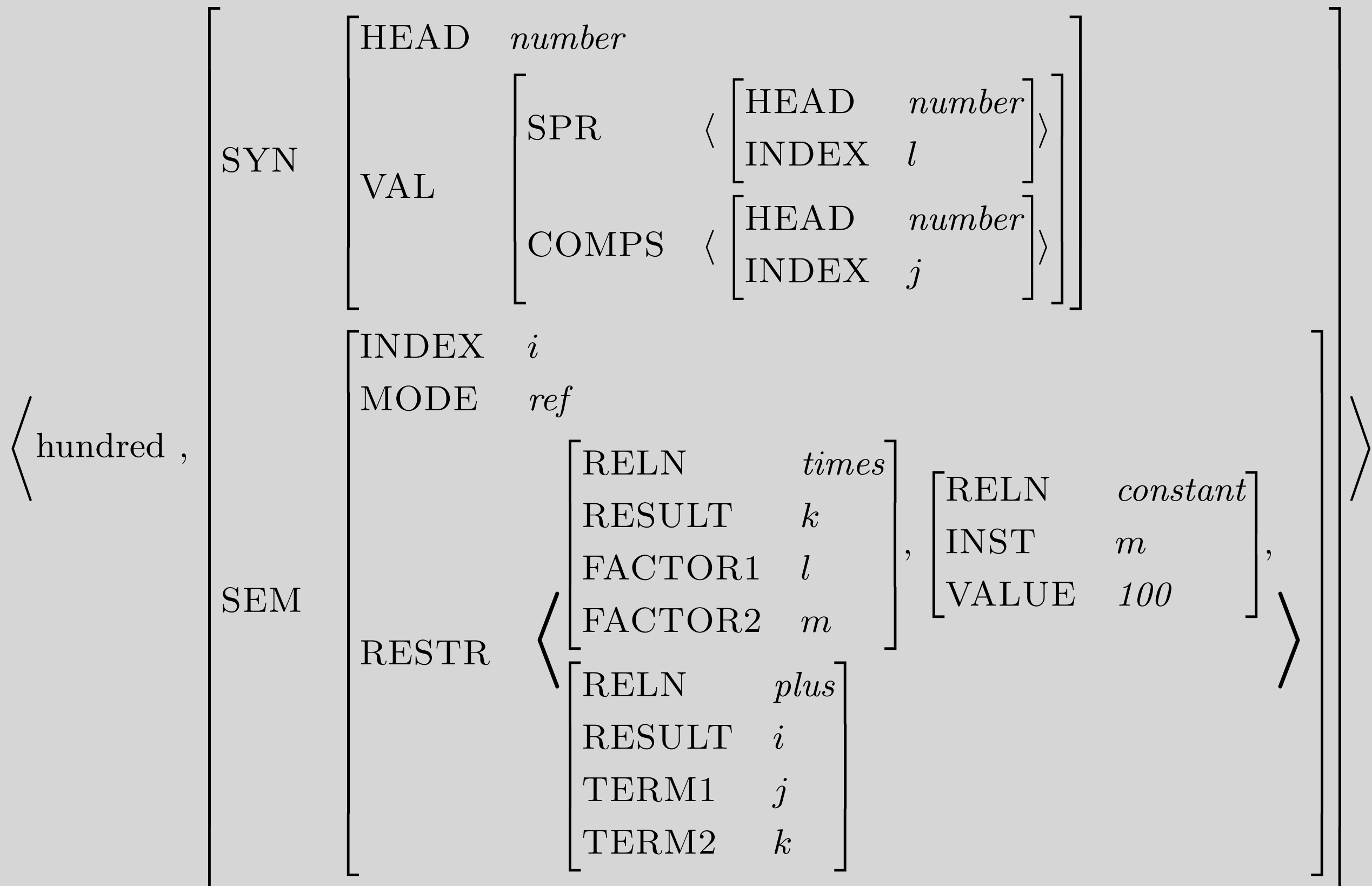
And this?



How about this?



Better version



SPR value on AP/PP?

- Kim grew fond of baseball.
- Kim and Sandy ate lunch in the park.
- Kim and Sandy are in the park.

RQs: Unexpressed SENDEE/ADDRESSEE

- Is that okay? How does that work?
- Two interpretations of the sentence 'We send two letters to Lee' are discussed in Chapter 6. One is that Lee is the SENDEE but not the ADDRESSEE, and the other is that Lee is the ADDRESSEE but not the SENDEE. I wonder what the tree would look like in the situation where Lee is both the SENDEE and the ADDRESSEE. Would it look like (30) on page 189, but with a tag for the name predication where the NAMED value is the same for both SENDEE and ADDRESSEE?

RQs: Syntax-semantics interface

- What role does proximity play in word order when determining the roles of various NPs in a sentence (in English)? How far can an object be from the verb? Does this change when a preposition is present to mark their relationship?

RQs: BV

- Still need some clarification on BV. I've only seen this used to bind a det to its noun, but can it also be used elsewhere?

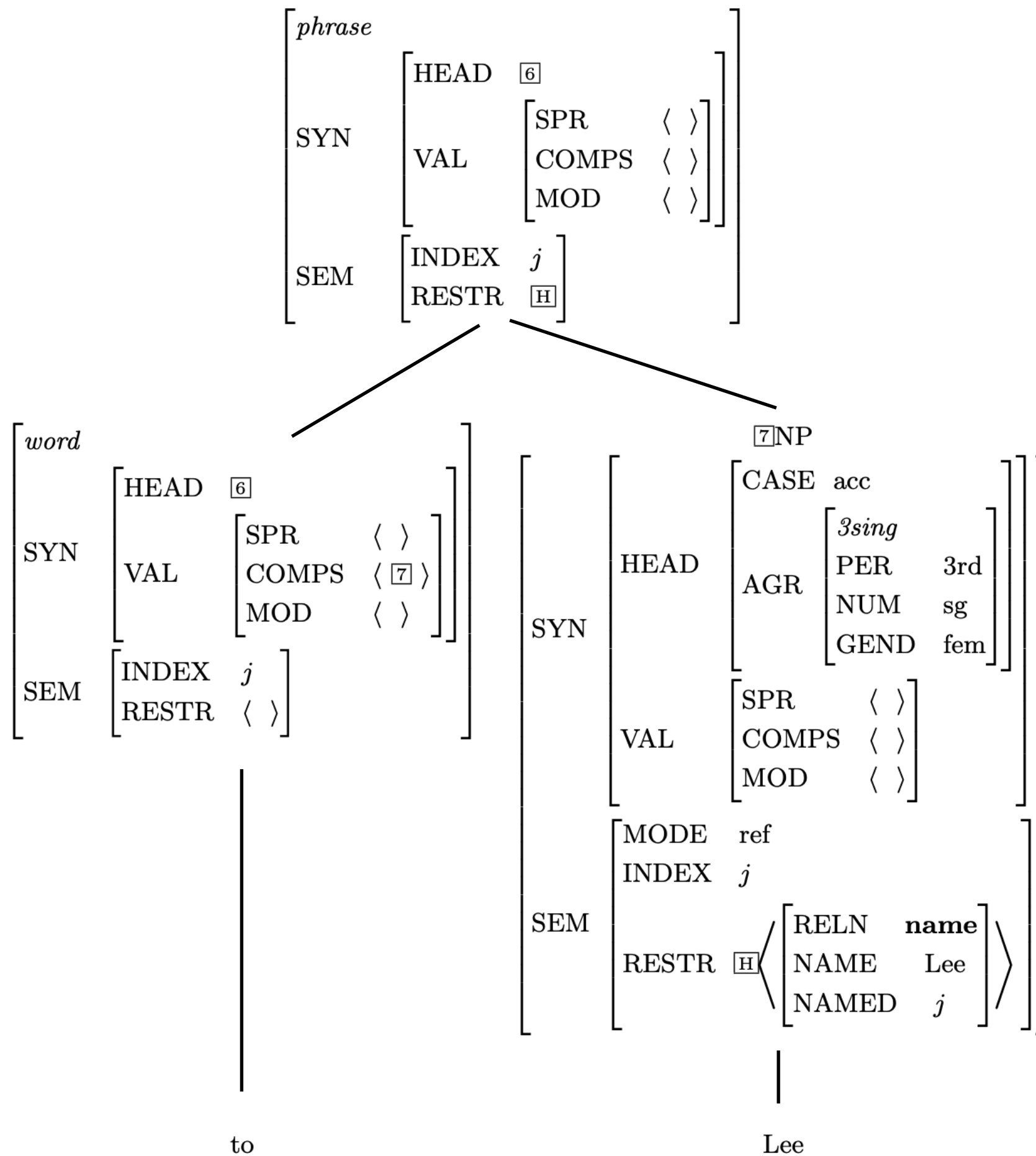
RQs: How to design grammars

- I'm wondering with all the first 6 chapter learnt, with the understanding of complex syntactic roles and feature-value pairs and considering this chapter as how the grammar works, I am wondering how do we effectively differentiate when specific syntactic features like BV or lexical entries should be utilized to maintain grammatical accuracy and coherence?

RQs: Semantically empty prepositions

- What's going on in the tree on p. 187?

(28)



RQs: CASE and AGR

- From some representations in this chapter and HW, I am curious about the interactions between case and agreement: should these two be treated as entirely distinct features, or is there theoretical flexibility to consider case as part of the agreement category in contexts where agreement with case features is observed?

Type hierarchy analogies

- How is this formalism like OOP?
- How is it different?
- How is the type hierarchy like an ontology?
- How is it different?
- How is this formalism like the MP's formalism?
- How is it different?

English Resource Grammar

- Broad-coverage, precision HPSG for English
- Under continuous development since 1993
- >90% validated coverage on open-domain (well edited) English text
- Demo: <https://delph-in.github.io/delphin-viz/demo>
- Flickinger 2000, 2011

Redwoods Treebank

- <https://github.com/delph-in/docs/wiki/RedwoodsTop>
- Use grammar to create parse forest
- Hand select preferred parse based on discriminants (Carter 1997)
- Store these choices!
- Oepen et al 2004, Flickinger et al 2017

HPSG formalism as Turing machine

- <https://delph-in.github.io/docs/summits/Fairhaven2022-Emerson-Turing-types/>