

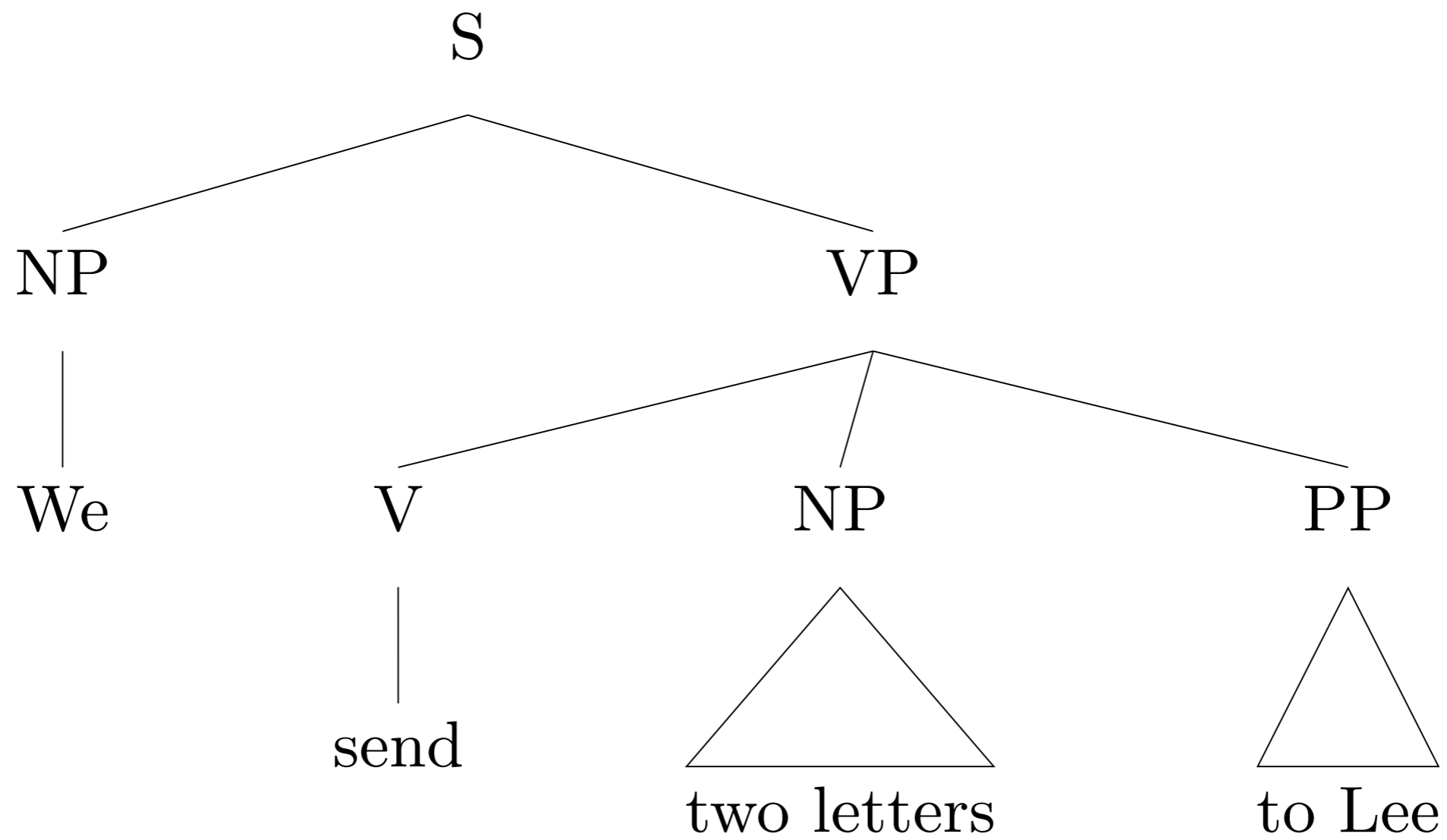
Ling 566  
Oct 17, 2013  
Review

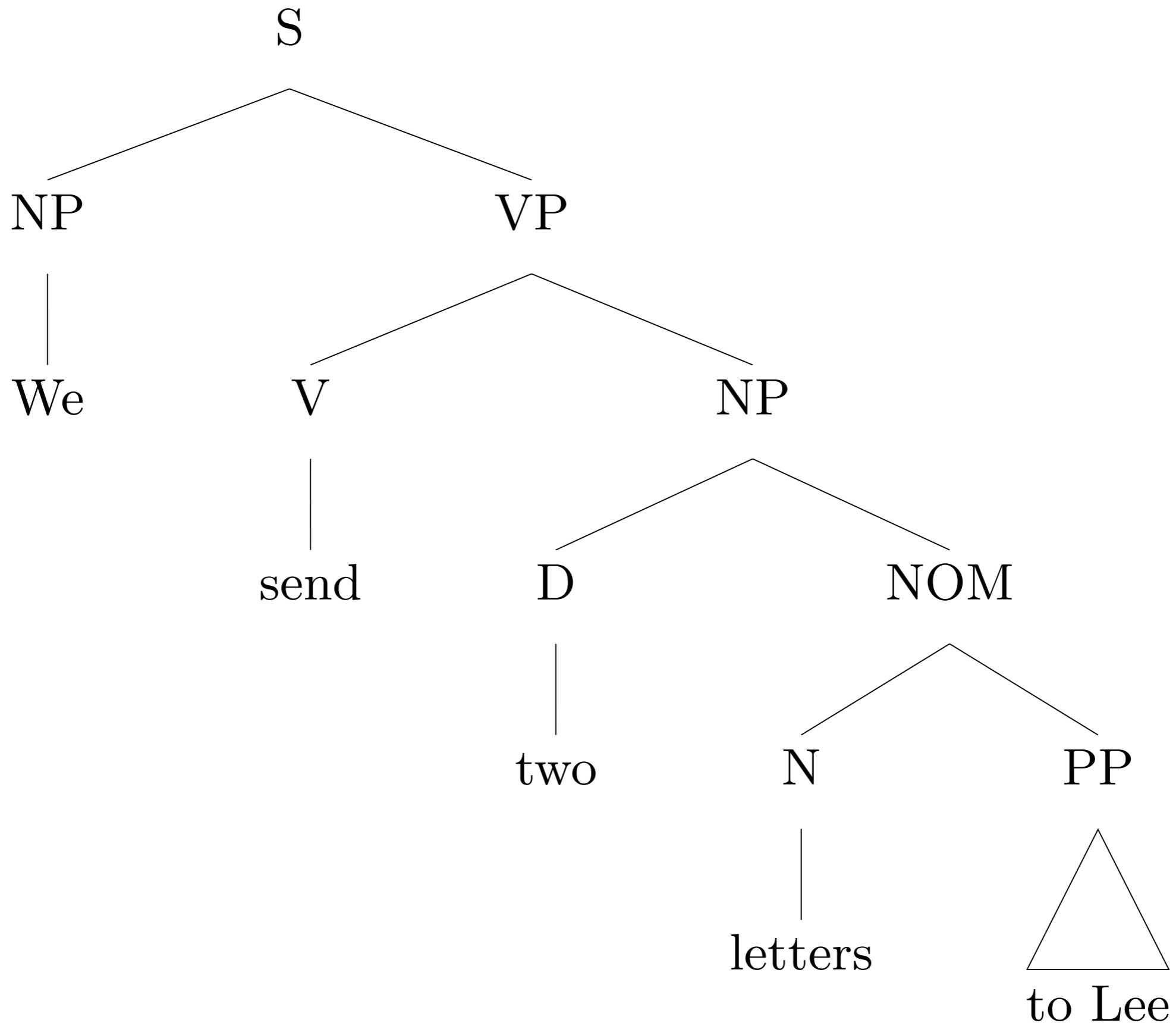
# Overview

- Bonus reading questions
- Homework tips
- SPR and COMPS
- Common mistakes
- Analogies to other systems you might know
- Problems 4.7, 4.9

# Reading Questions

- In what way does the actual meaning of the two structures assigned to this sentence differ?
  - *We sent two letters to Lee.*
- Are they really both grammatical?





$$\left[ \begin{array}{ll} \text{RELN} & \text{group} \\ \text{INST} & i \end{array} \right], \left[ \begin{array}{ll} \text{RELN} & \text{speaker} \\ \text{INST} & l \end{array} \right], \left[ \begin{array}{ll} \text{RELN} & \text{member} \\ \text{SET} & i \\ \text{ELEMENT} & l \end{array} \right],$$

$$\left[ \begin{array}{ll} \text{RELN} & \text{send} \\ \text{SIT} & s_7 \\ \text{SENDER} & i \\ \text{SENDEE} & j \\ \text{SENT} & k \end{array} \right], \left[ \begin{array}{ll} \text{RELN} & \text{two} \\ \text{BV} & k \end{array} \right], \left[ \begin{array}{ll} \text{RELN} & \text{letter} \\ \text{INST} & k \\ \text{ADDRESSEE} & m \end{array} \right],$$

$$\left[ \begin{array}{ll} \text{RELN} & \text{name} \\ \text{NAME} & \text{Lee} \\ \text{NAMED} & j \end{array} \right]$$

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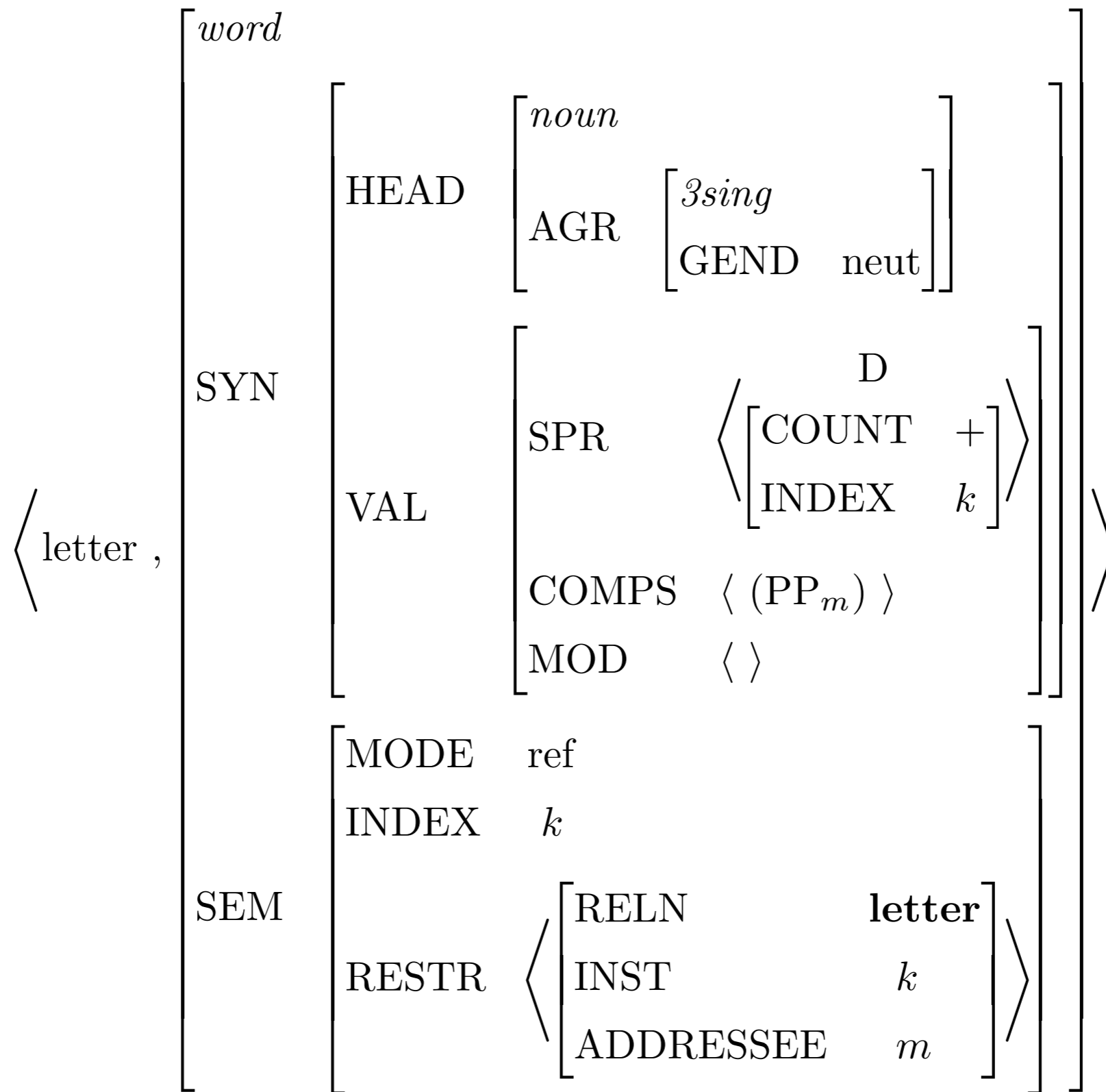
# Reading Questions

- How do we know what features to put into a *predication*?
- Would *letters* as in letters of the alphabet have the same lexical entry as *letters* like what's usually sent in the mail?
- How do we represent the difference in meaning between *send* and *sent*?



# Reading Questions

- How do we get enough different INDEX values for a whole dictionary?
- Why sometimes  $s$  and sometimes  $s_n$ , and not  $t, u, v$ ?
- How can  $to$  be semantically empty and still have a meaningful INDEX value?
- How can the head of a phrase be semantically empty?
- Why does *letter* share its INDEX with its SPR?



# Reading Questions

- Does set of well-formed structures correspond exactly to the set of well-formed English sentences?
- Do we have to understand the squiggly bits?
- Why bother formalizing?
- Don't these feature structures get ridiculously large?

# Reading Questions

- Does English have dative case?
- Is it redundant to have a feature CASE for English given that we mostly use prepositions to mark 'case'?
- English nouns (other than pronouns) are underspecified for CASE. How do we figure out their particular CASE values when they are used in a tree?

# Reading Questions

- Is position alone enough to tell whether something is SPR or COMPS?
- Will this approach work for morphologically complex languages as well?
- What ever happened to NOM?
- Is it worth memorizing the rules now?

# Reading Questions

- Is top-down or bottom-up more efficient in actual processing?
- How can we possibly do "simultaneous satisfaction" of all constraints?
- What are the best practices for writing trees going bottom-up (order of things to put in)?

# Reading Questions

- Does not having to realize semantic roles mean we can license semantically weird sentences?
- Can we build a grammar that works with more than one sentence at a time? (I.e., paragraphs)

# Homework tips/requests

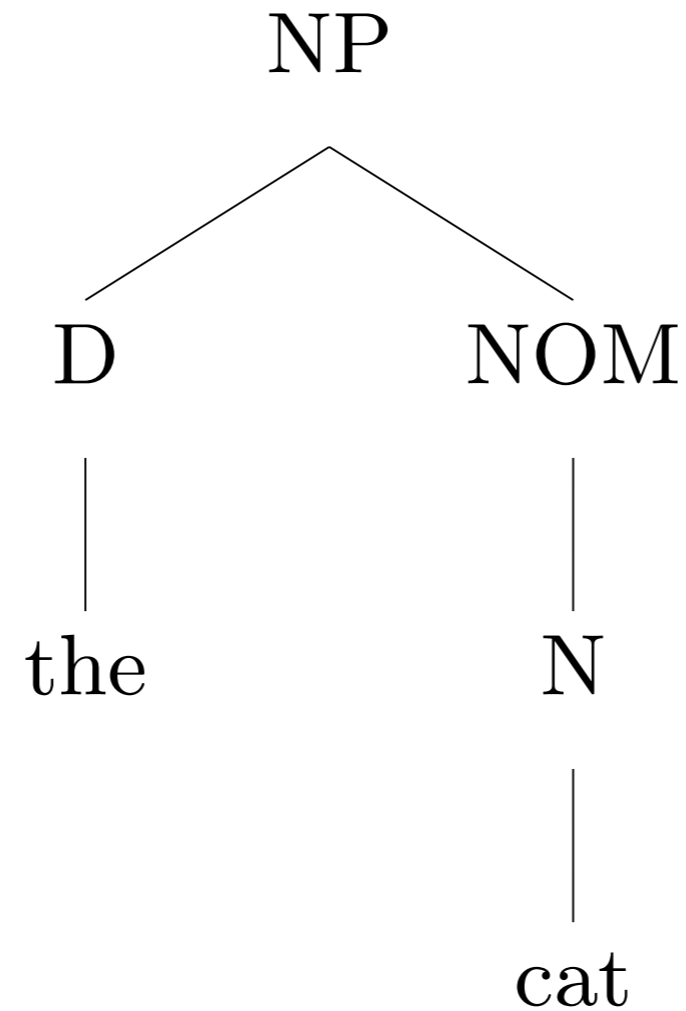
- Type whenever possible
- Answer each part of each question separately
- Be sure to answer each part of each question, and follow the directions!
- Look over the problems early and ask questions
- Check your work
- Monitor GoPost
- **WORK TOGETHER**



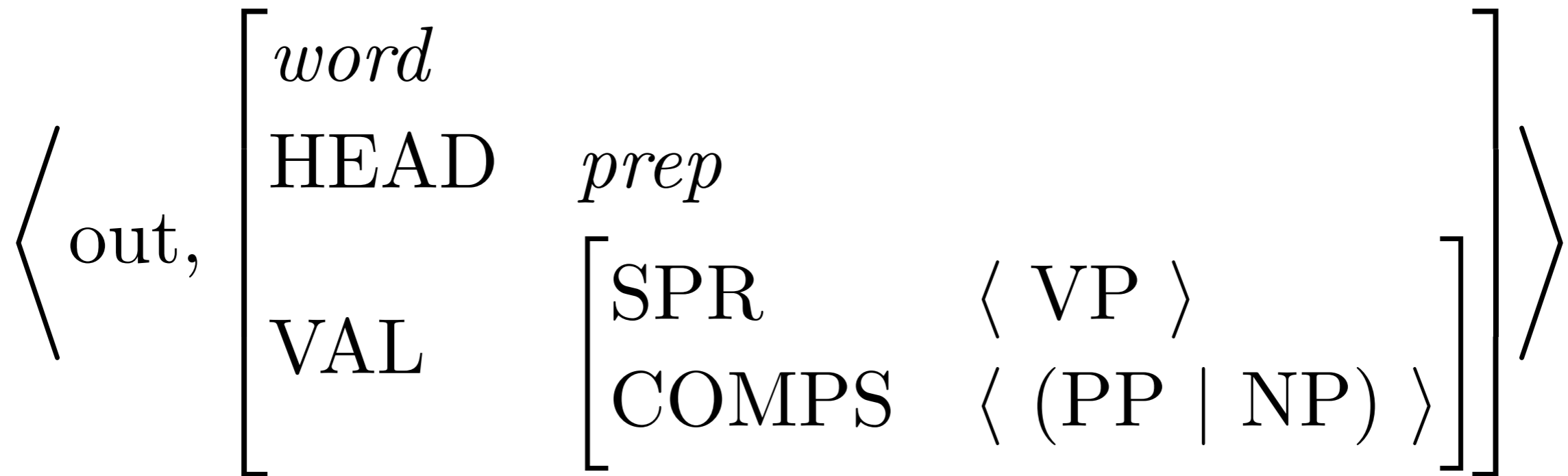
# SPR value on AP/PP?

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

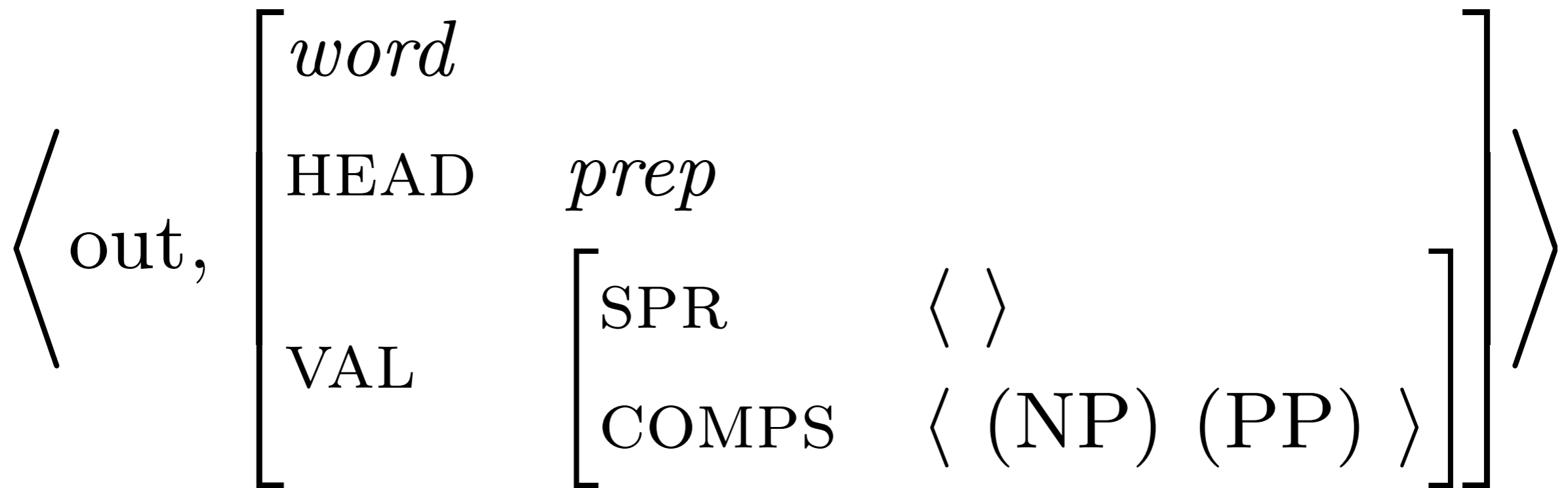
Which grammar does this tree go with?



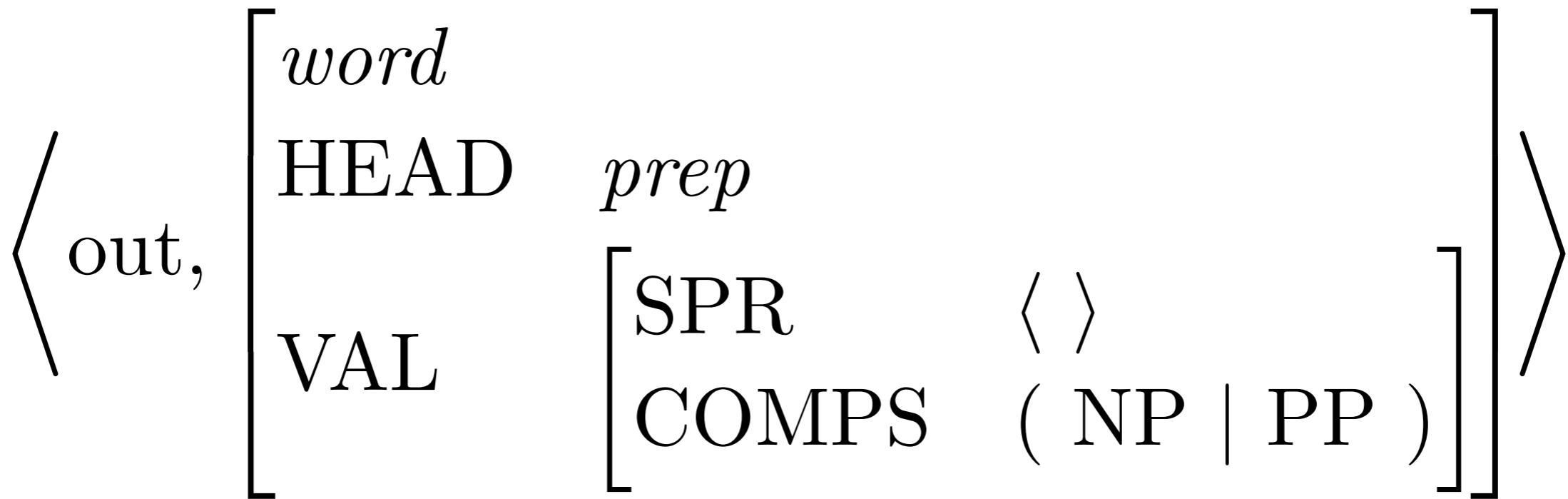
# What's wrong with this?



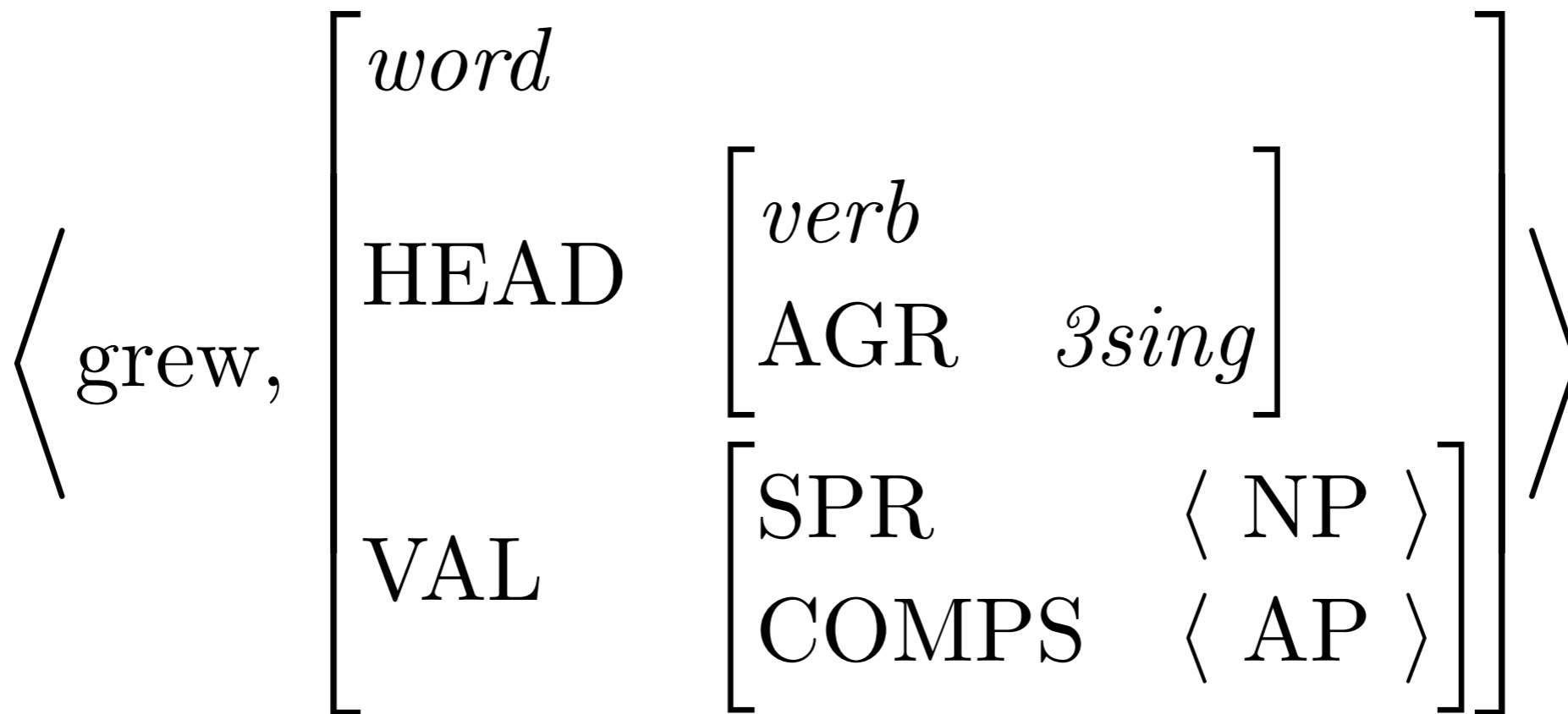
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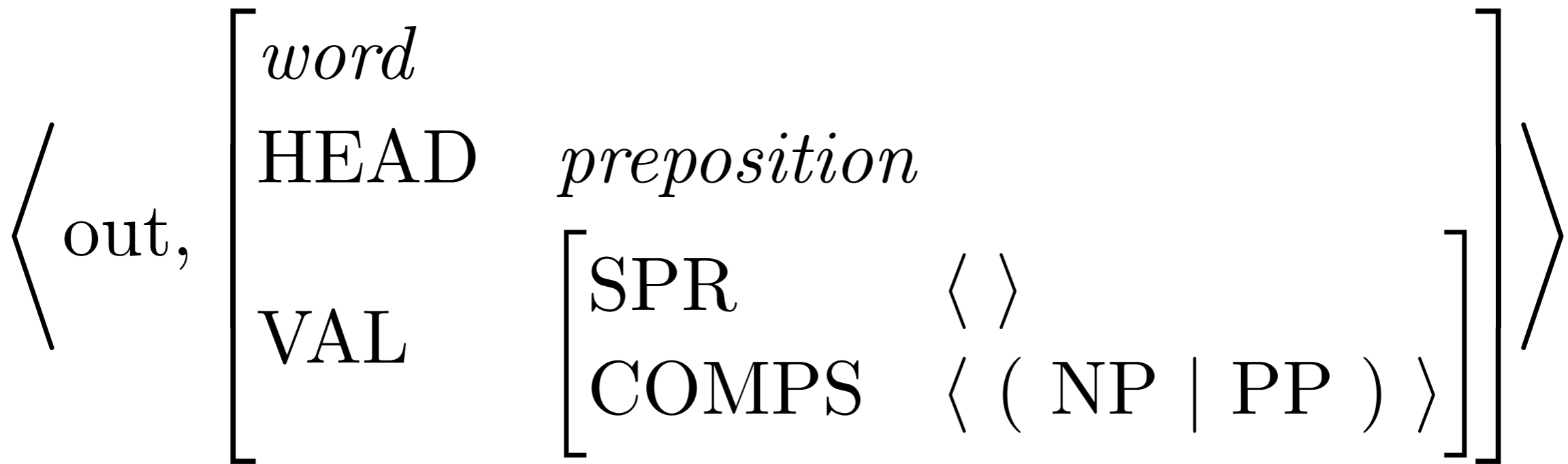
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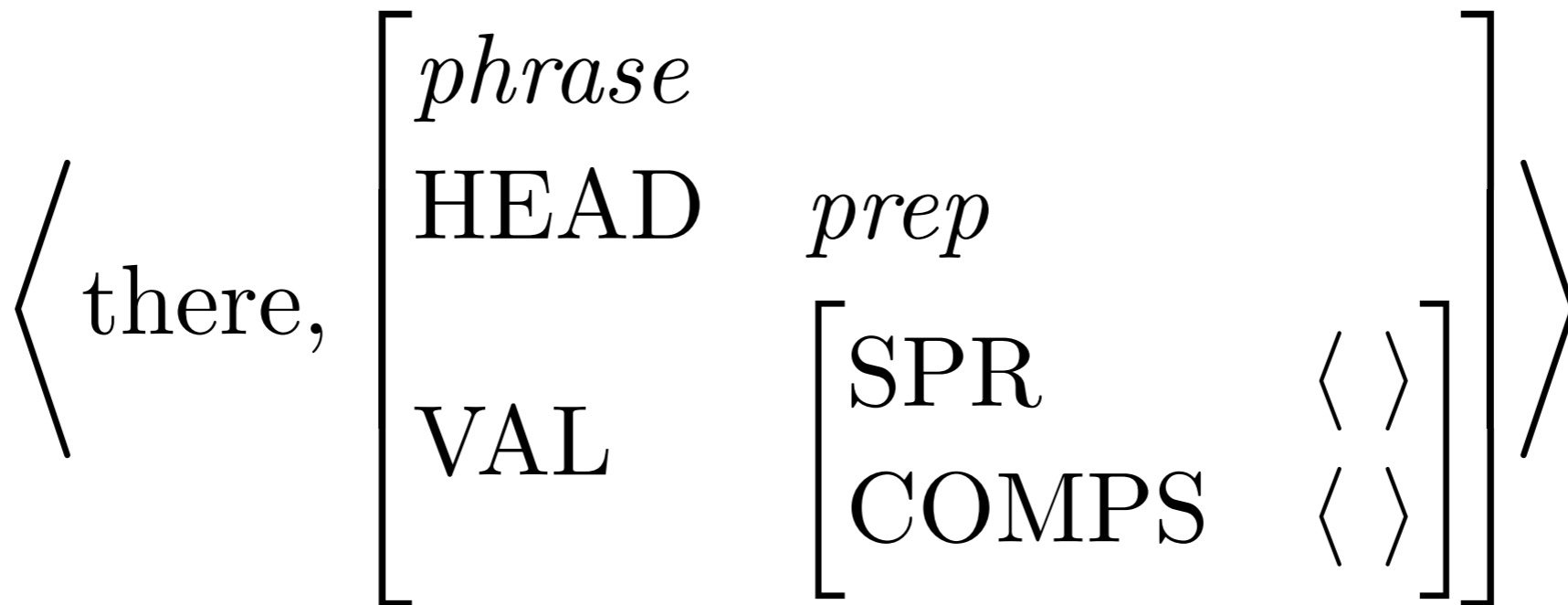
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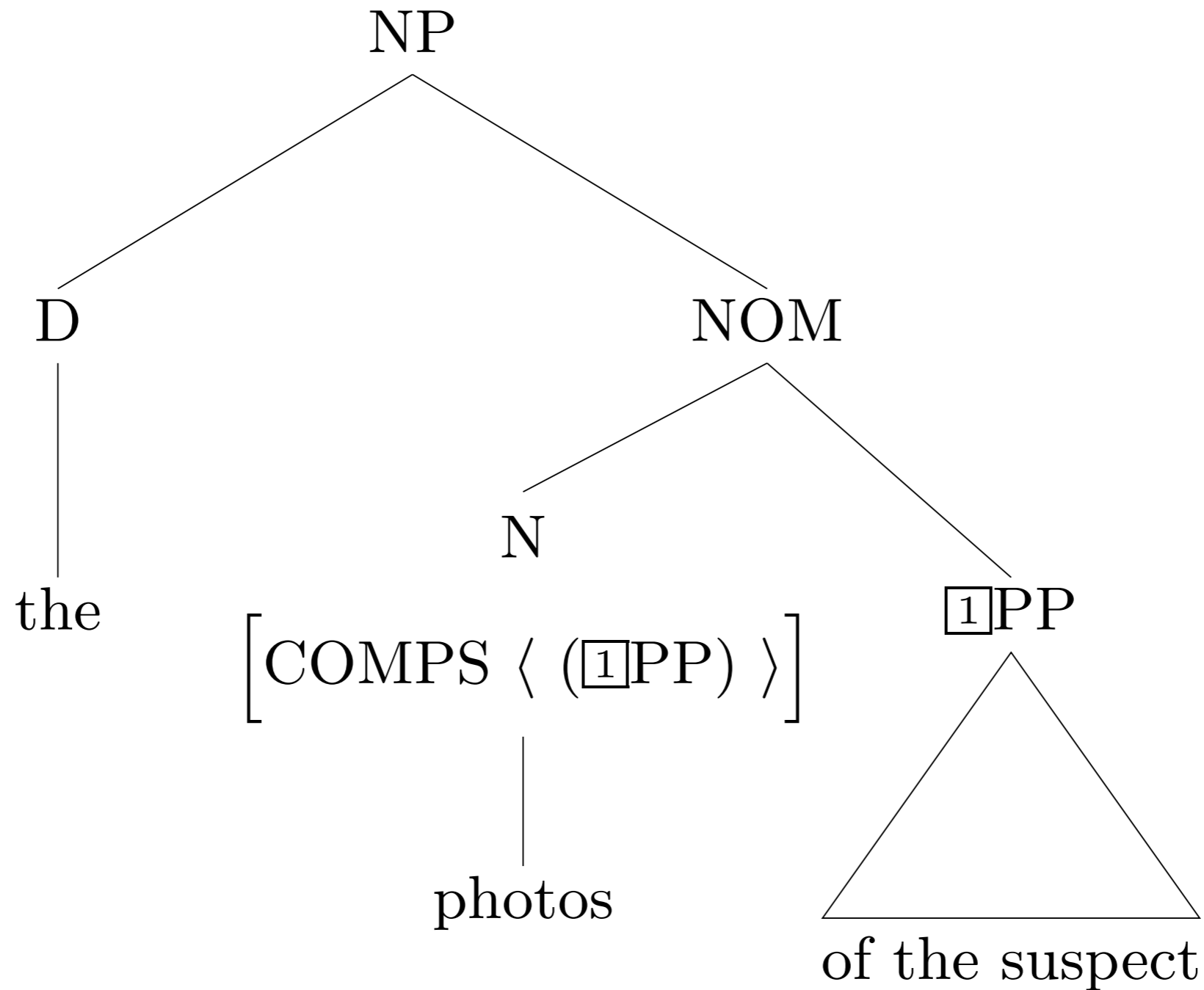
# Tags & lists

- What's the difference between these two?

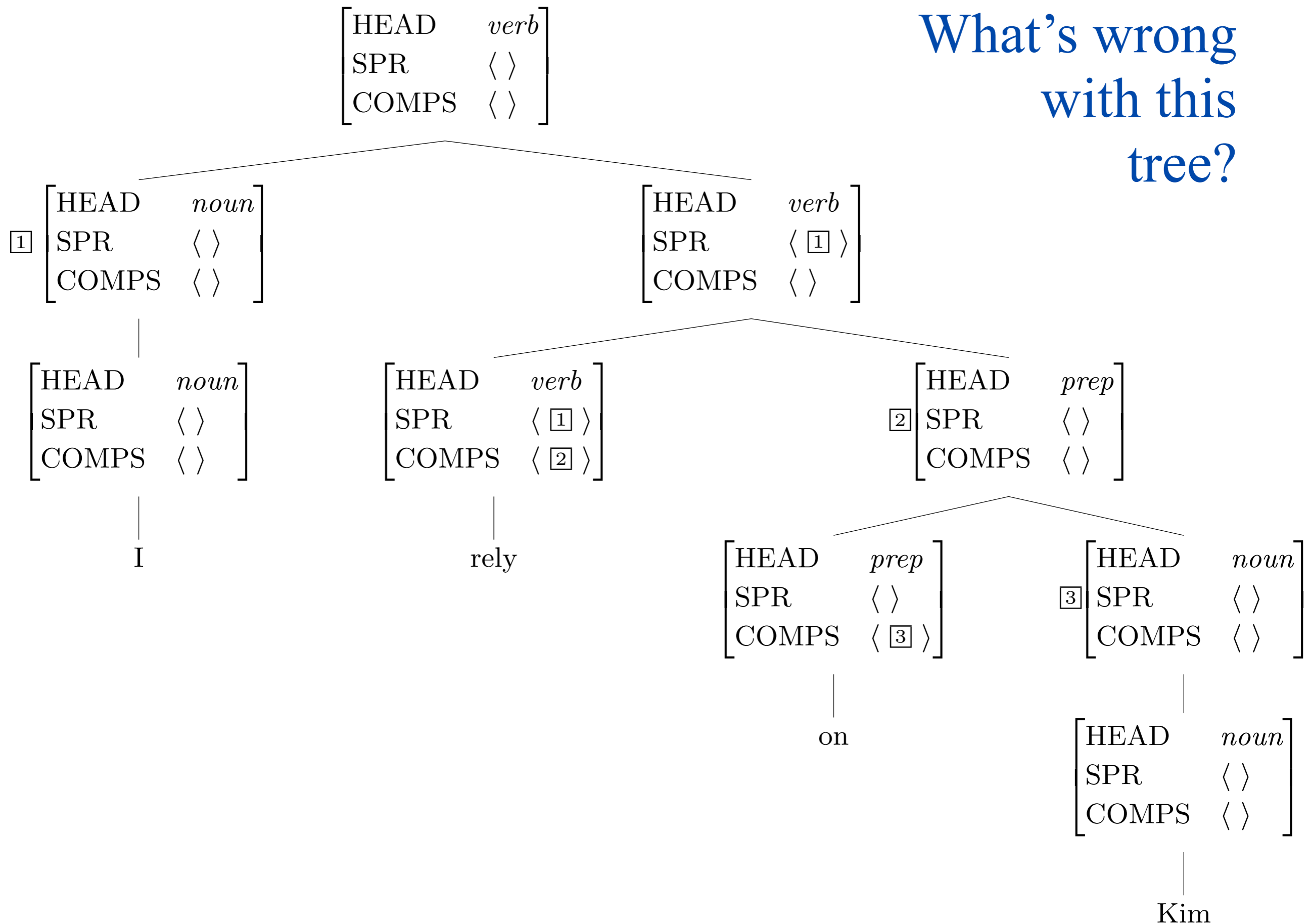
$$\left[ \text{SPR} \quad \boxed{1} \langle \text{NP} \rangle \right]$$
$$\left[ \text{SPR} \quad \langle \boxed{1} \text{NP} \rangle \right]$$

- When does it matter?

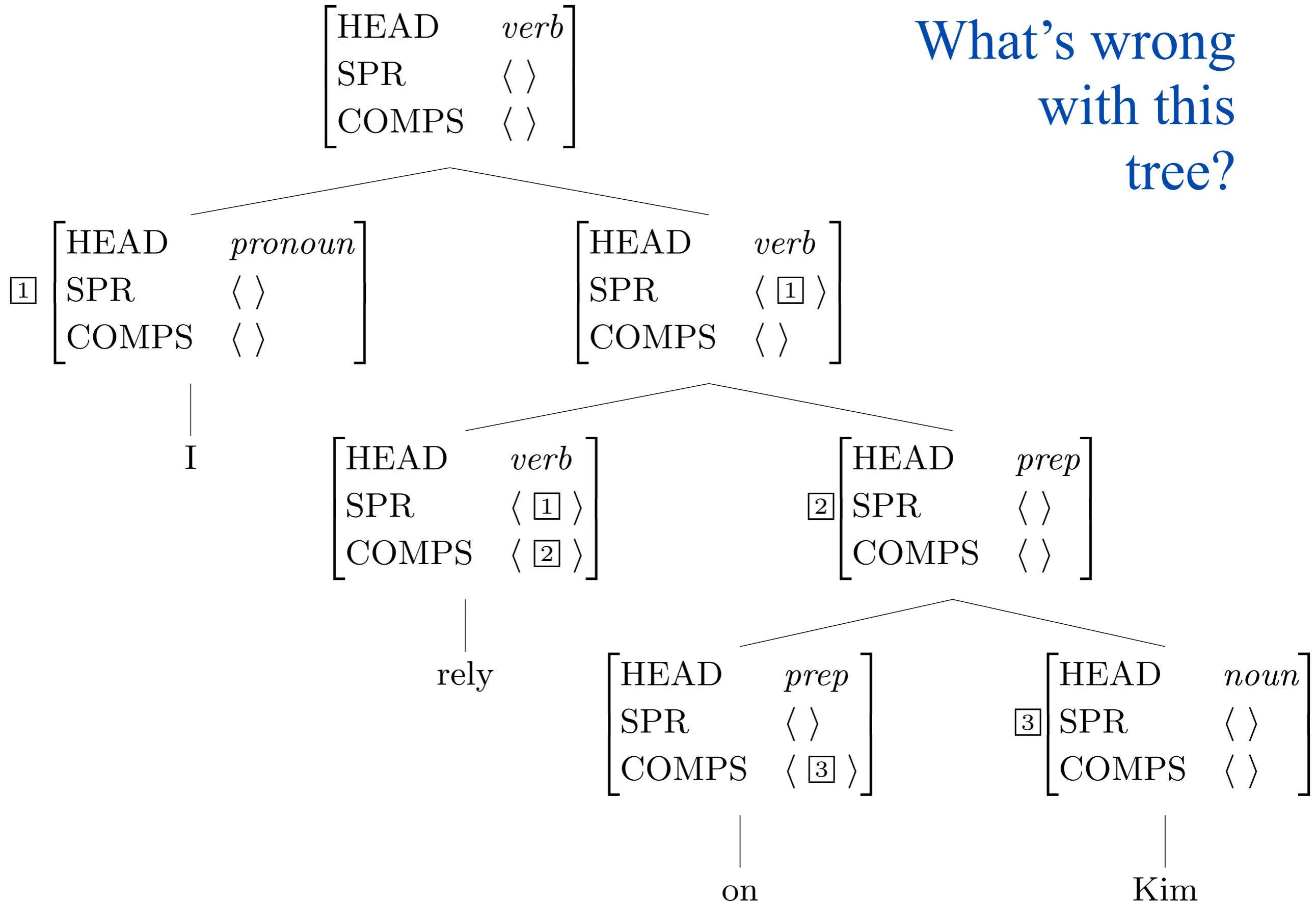
# What's wrong with this tree?



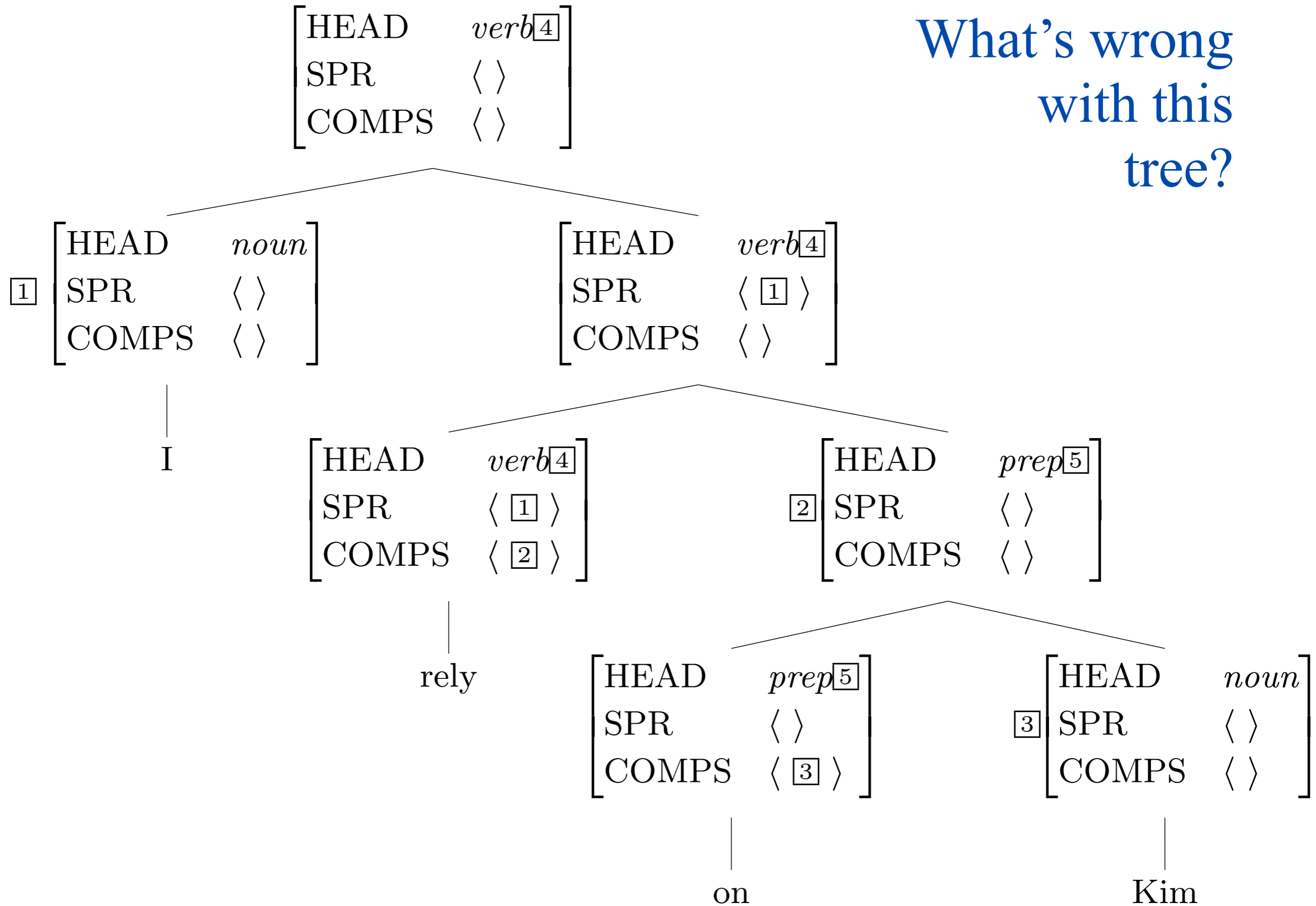
What's wrong  
with this  
tree?



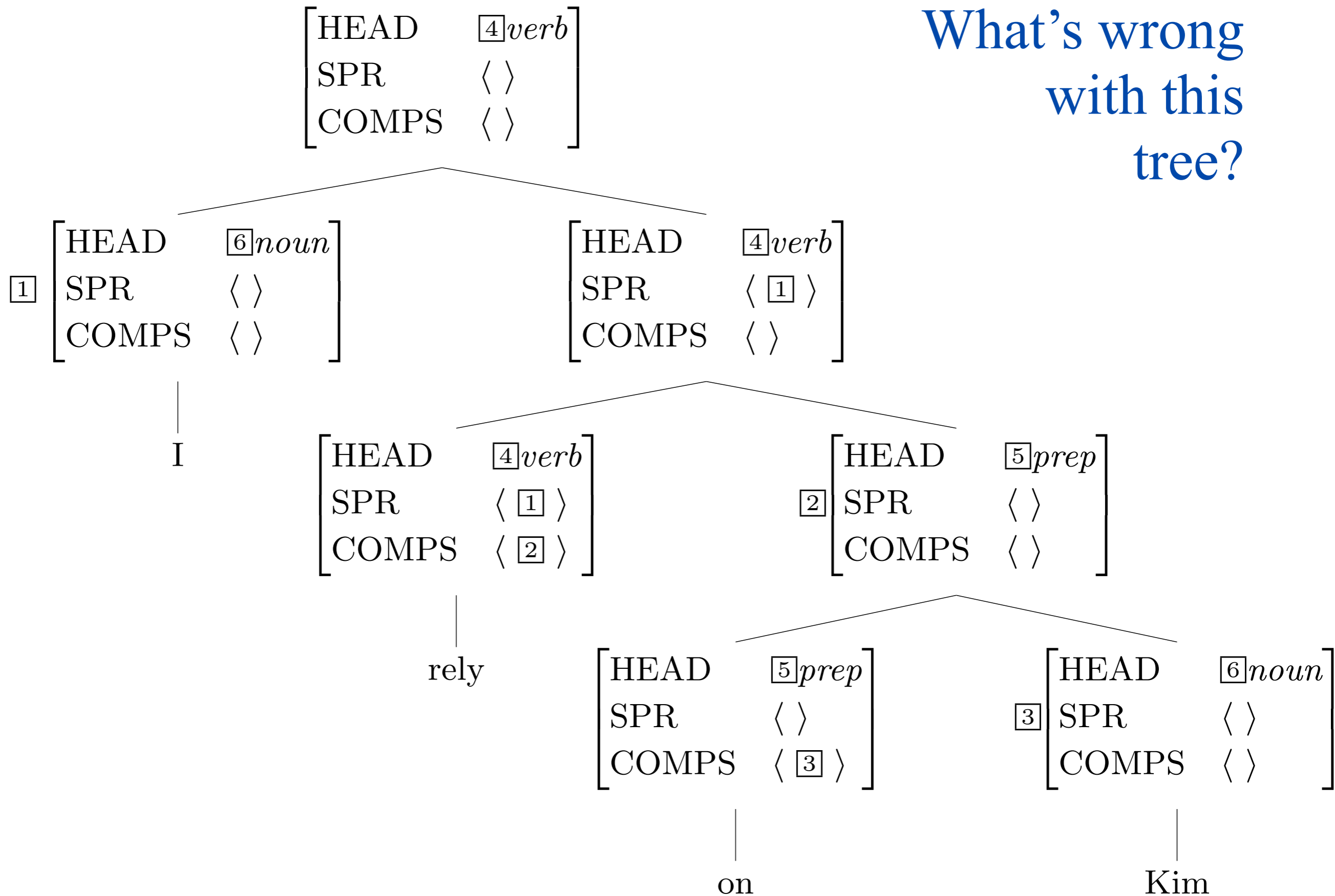
What's wrong  
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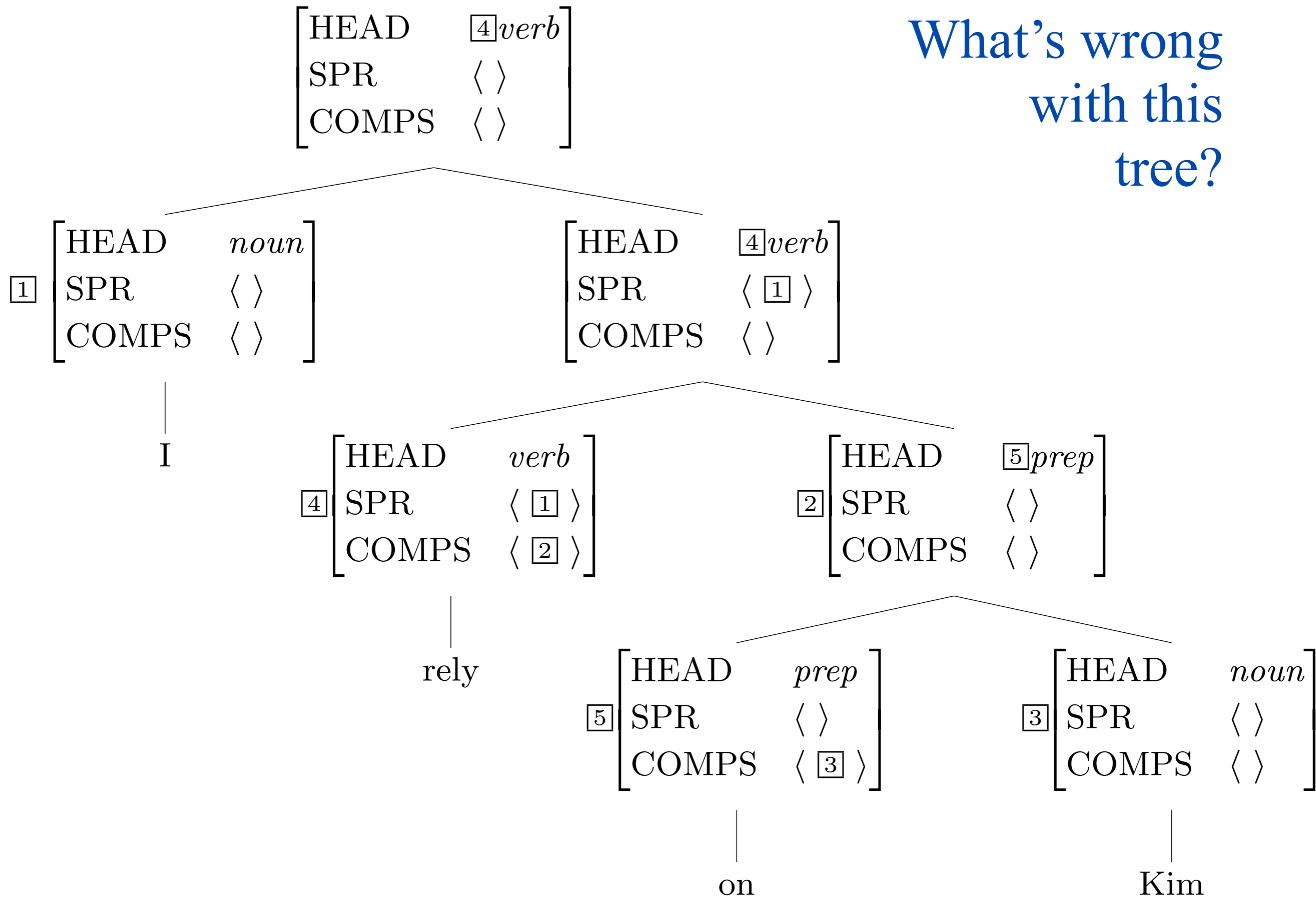
What's wrong  
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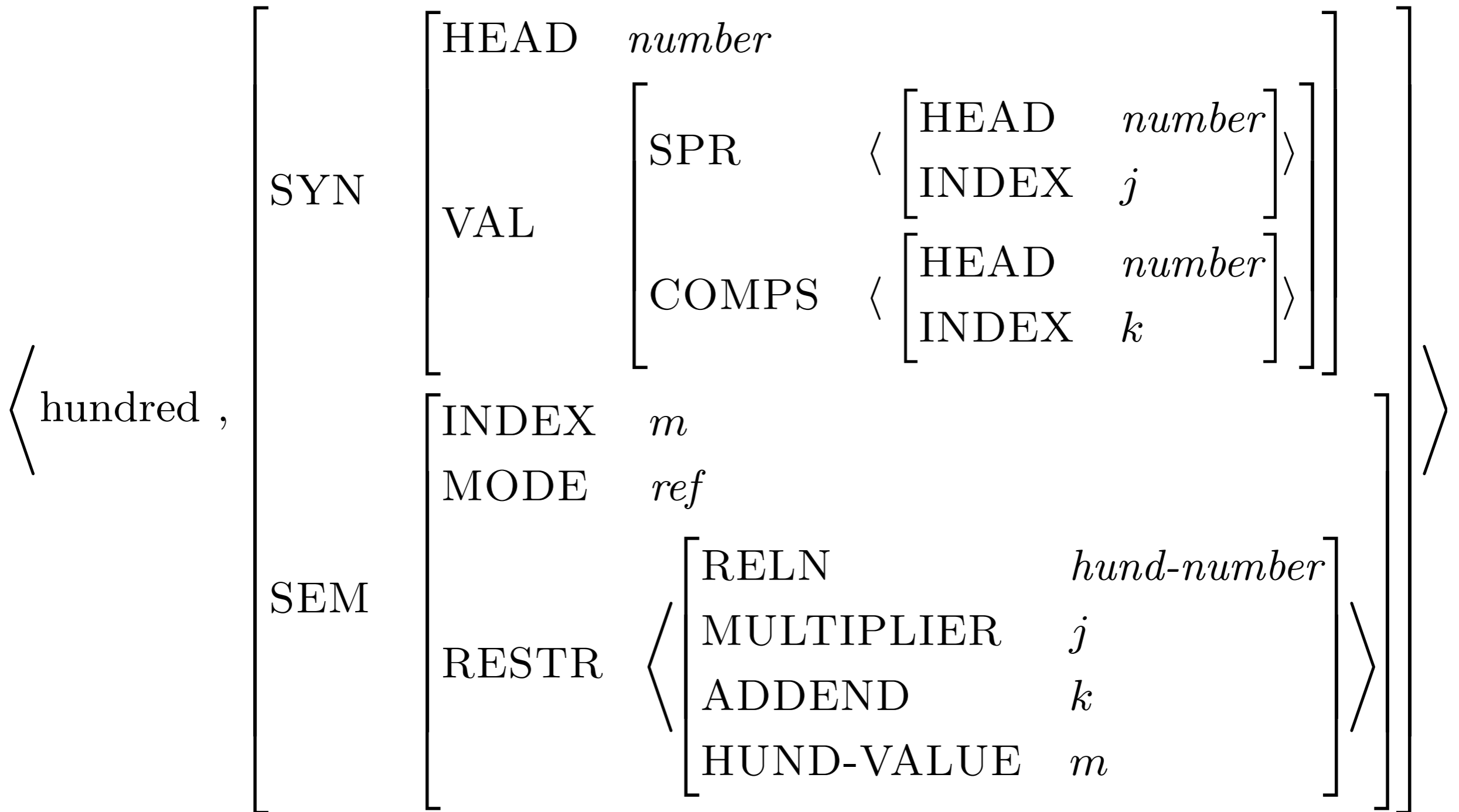
What's wrong  
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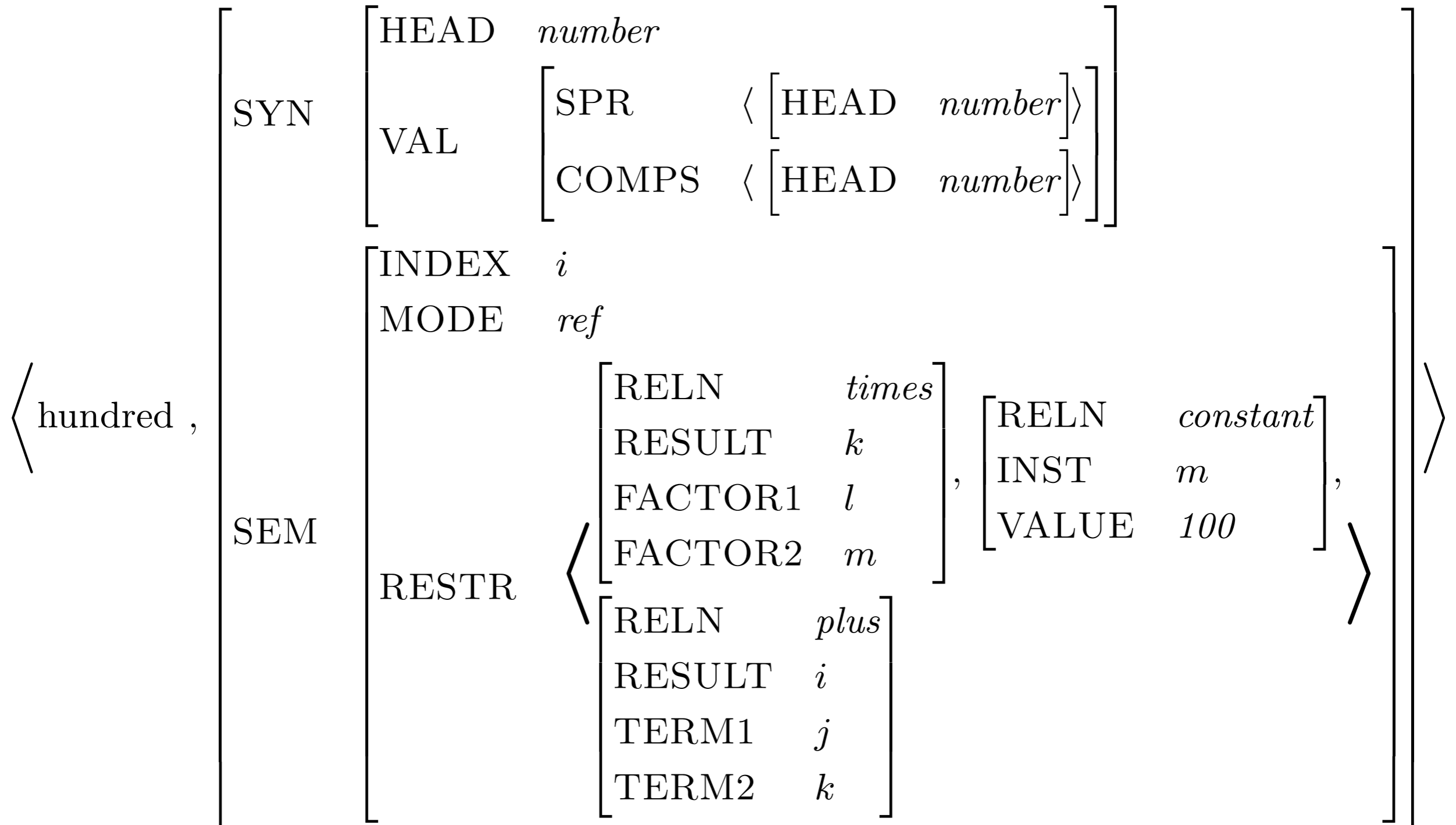


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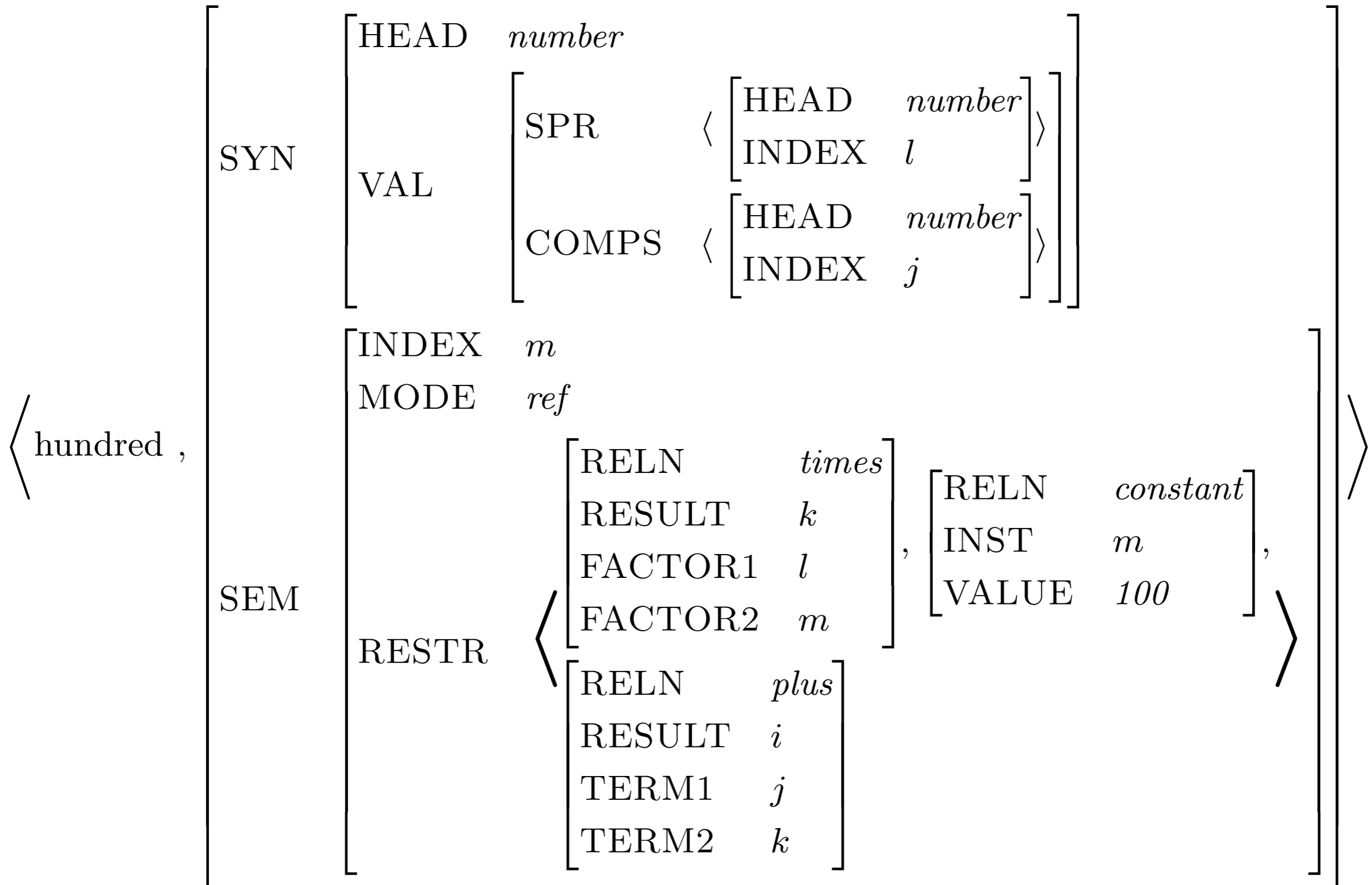




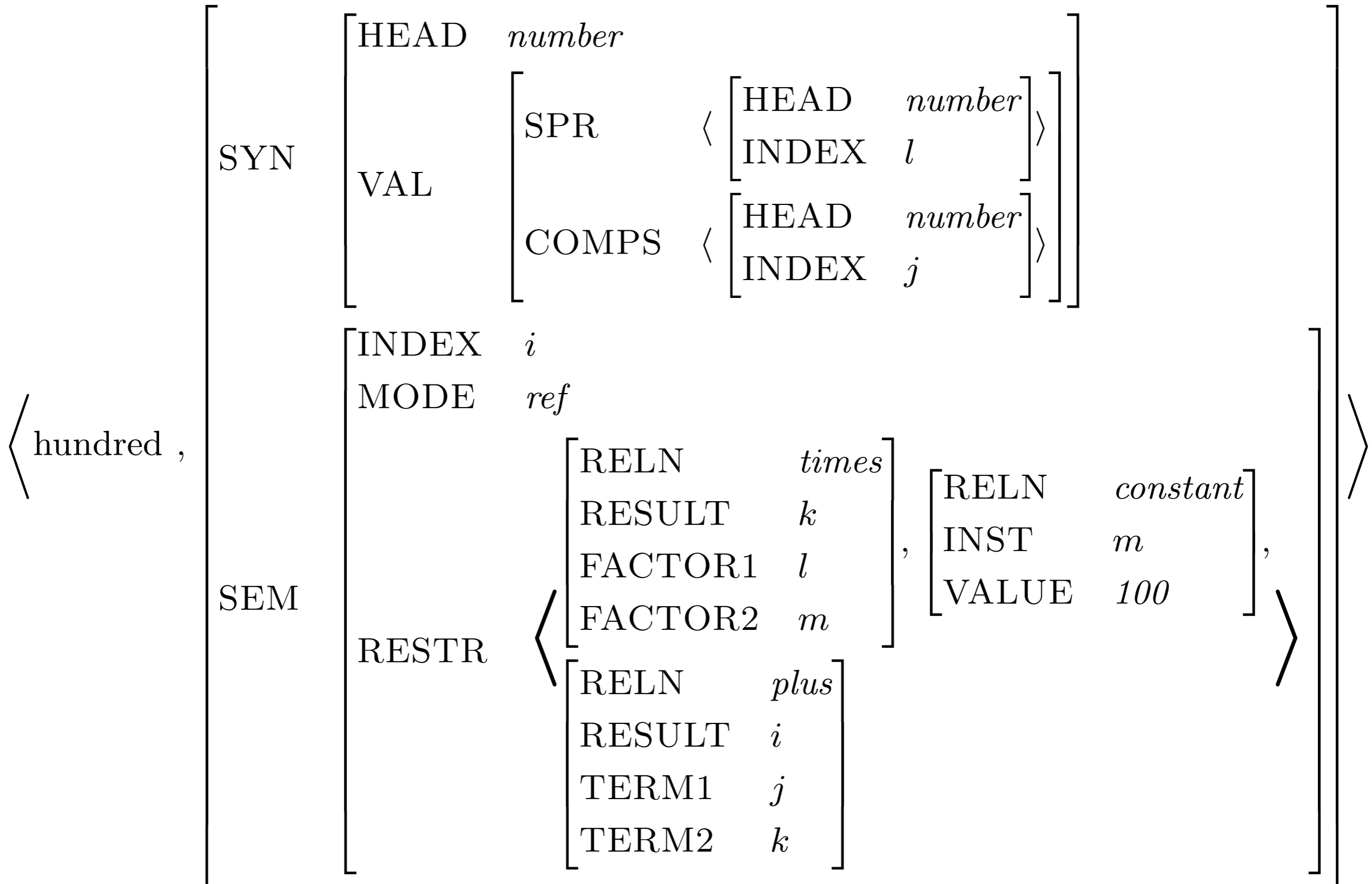
# And this?



# How about this?



# Better version



# 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?

# Overview

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- Analogies to other systems you might know
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## 4.7 Icelandic Case

- How do the following support the analysis of case marking as a lexical phenomenon?

- (i) Drengurinn kyssti stúlkuna.  
the-boy.NOM kissed the-girl.ACC  
'The boy kissed the girl.'
- (ii) Drengina vantar mat.  
the-boys.ACC lacks food.ACC  
'The boys lack food.'
- (iii) Verkjanna gaetir ekki.  
the-pains.GEN is-noticeable not  
'The pains are not noticeable.'
- (iv) Barninu batnathi veikin.  
the-child.DAT recovered-from the-disease.NOM  
'The child recovered from the disease.'

## 4.9 Agreement in NP coord

- What is the NUM value of NPs coordinated with *and*?
- How does the PER value of coordinated NPs get computed from the PER value of the coordinands? Use examples like the following:

You and she distinguished yourselves/  
\*themselves/\*ourselves.