Ling 566 Oct 21, 2010

Overview

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

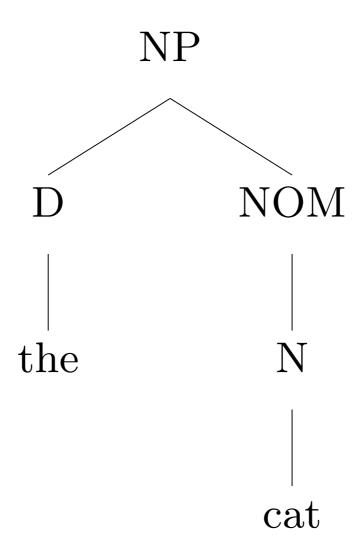
Homework tips/requests

- 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?



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

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

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

$$\left\langle \text{grew}, \begin{bmatrix} word \\ \text{HEAD} & \begin{bmatrix} verb \\ \text{AGR} & 3sing \end{bmatrix} \\ \text{VAL} & \begin{bmatrix} \text{SPR} & \langle \text{NP} \rangle \\ \text{COMPS} & \langle \text{AP} \rangle \end{bmatrix} \right]$$

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

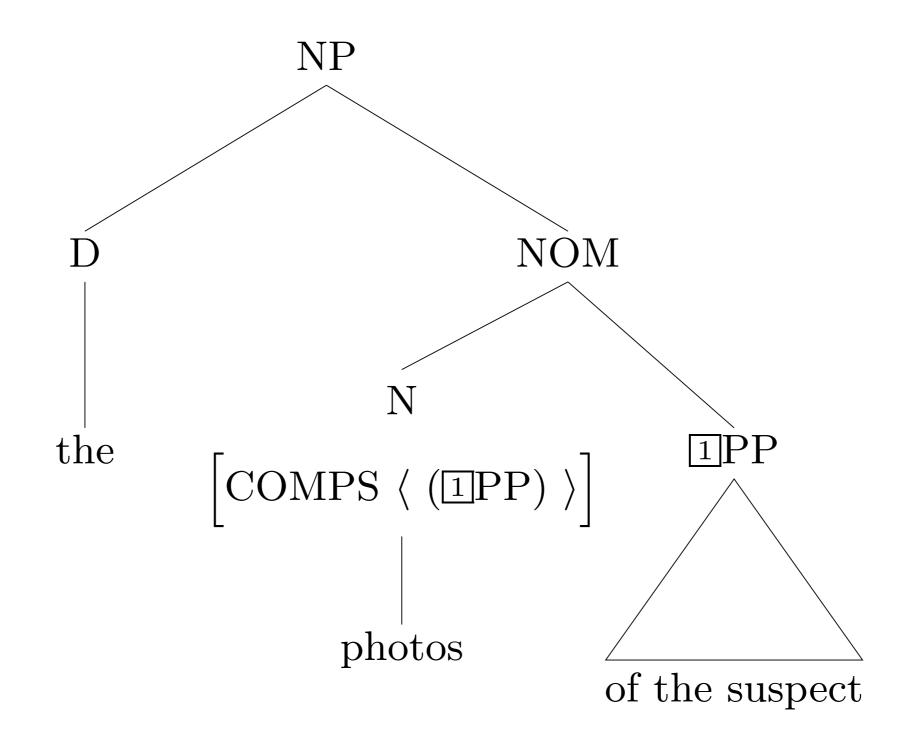
Tags & lists

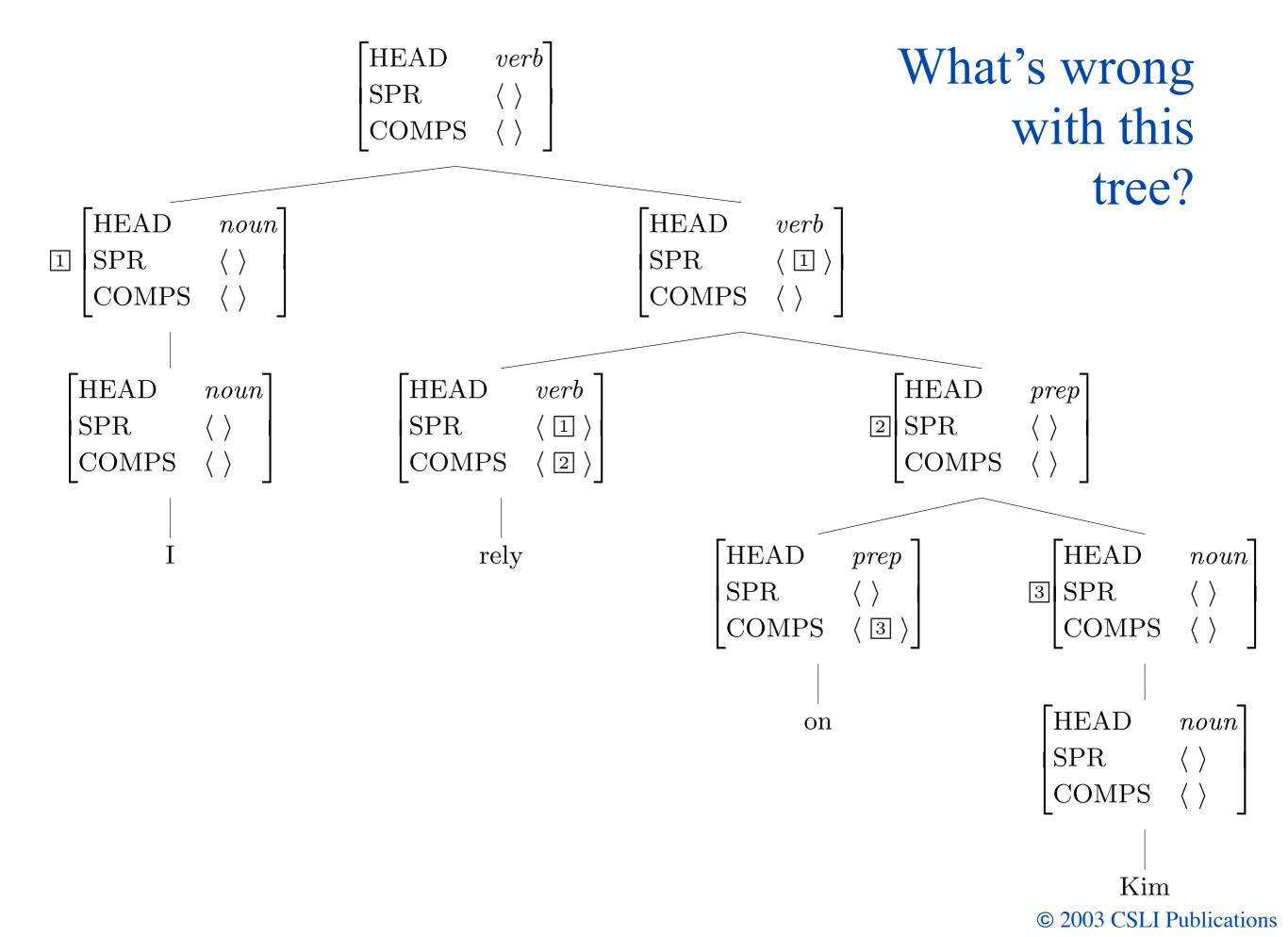
• What's the difference between these two?

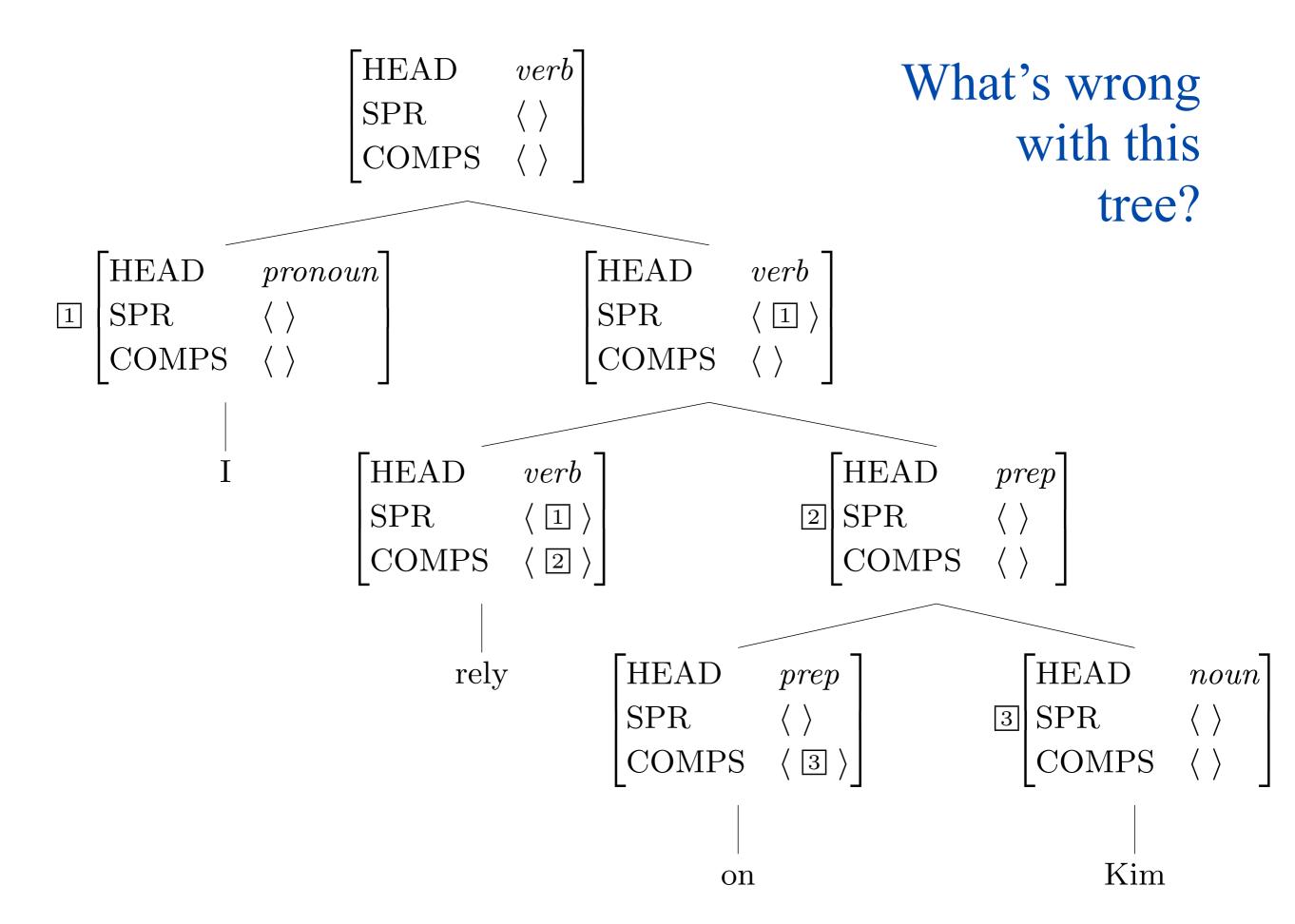
$$\begin{bmatrix} SPR & \mathbb{1}\langle NP \rangle \end{bmatrix}$$

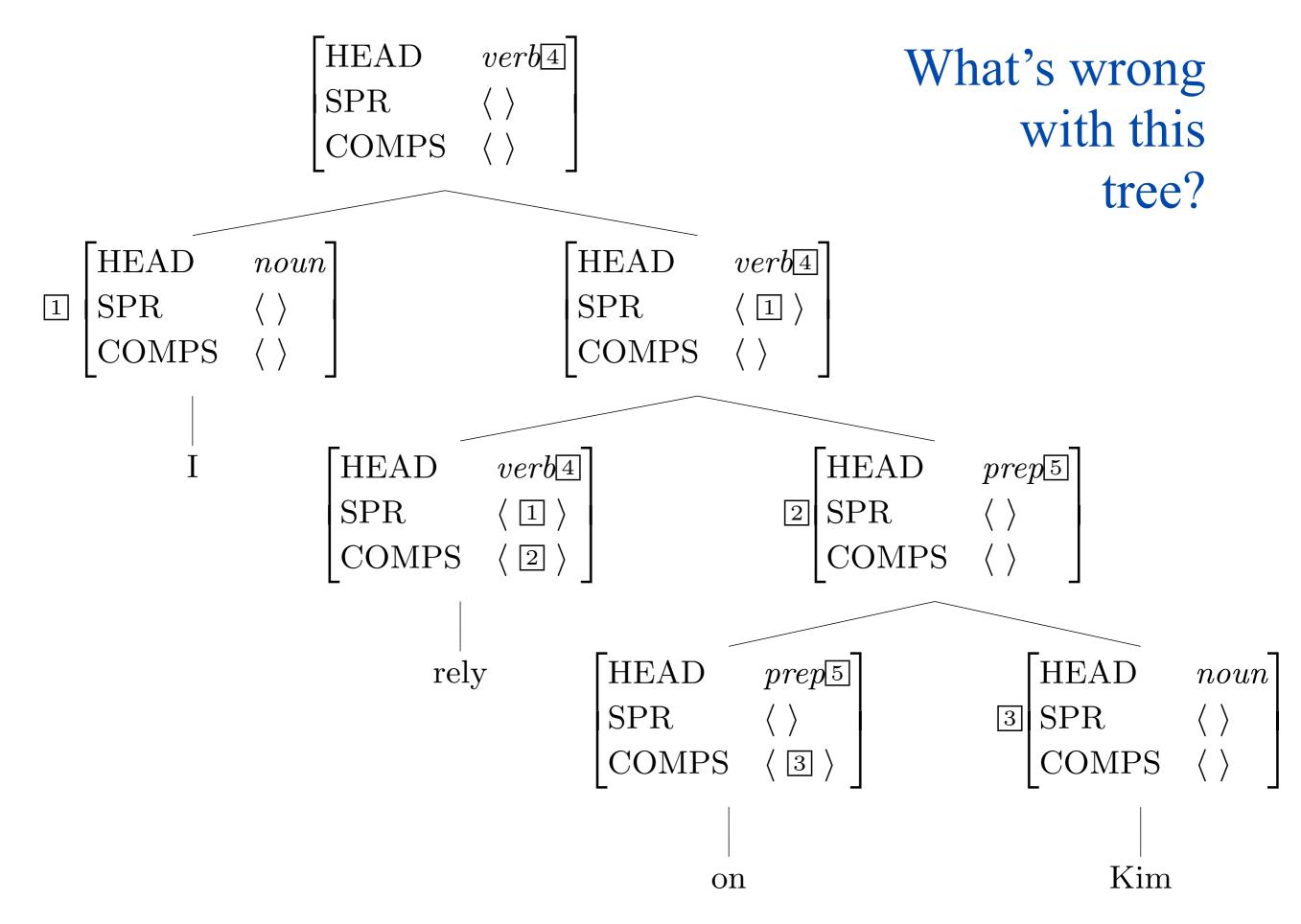
$$\begin{bmatrix} SPR & \langle \mathbb{1}NP \rangle \end{bmatrix}$$

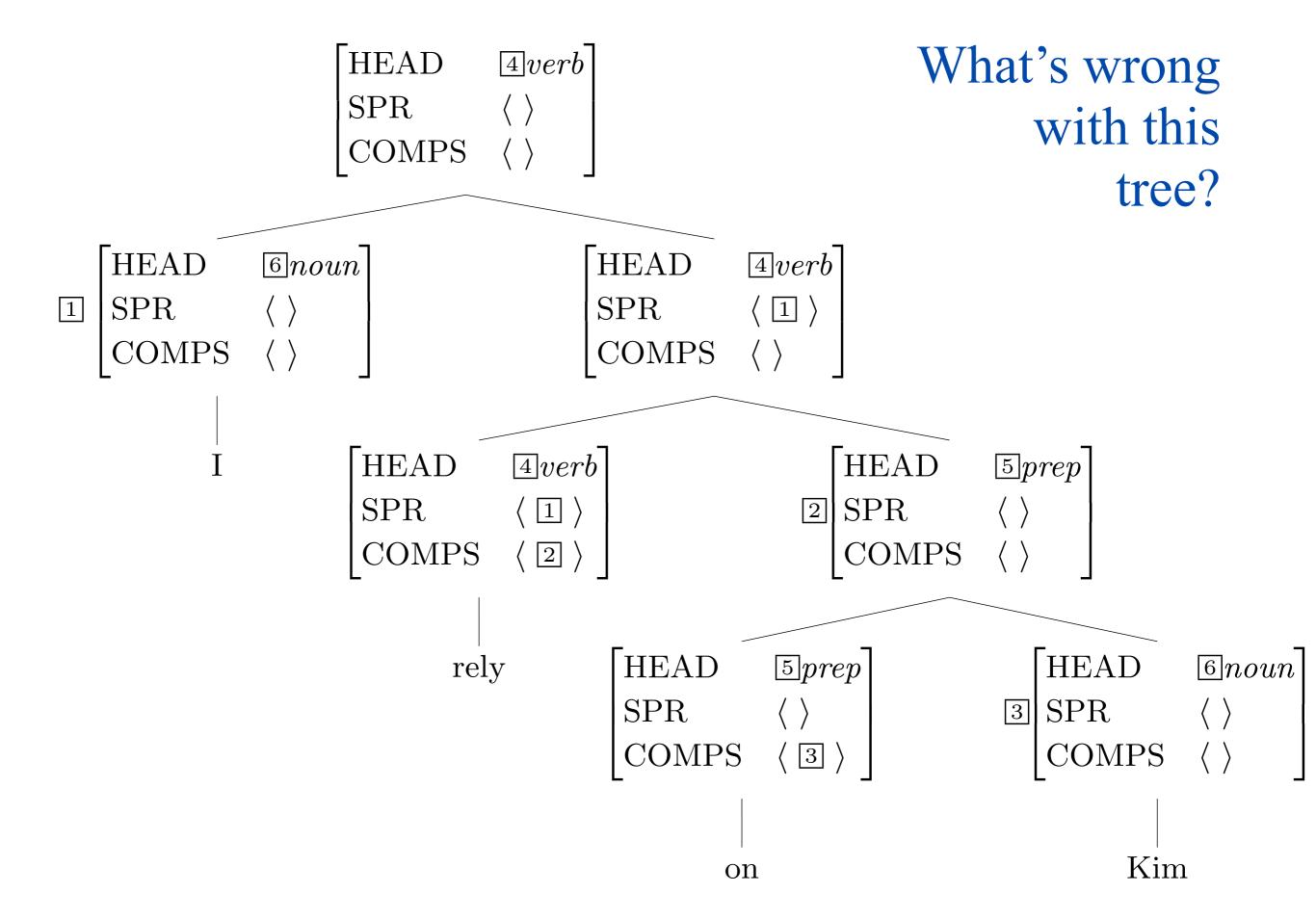
• When does it matter?

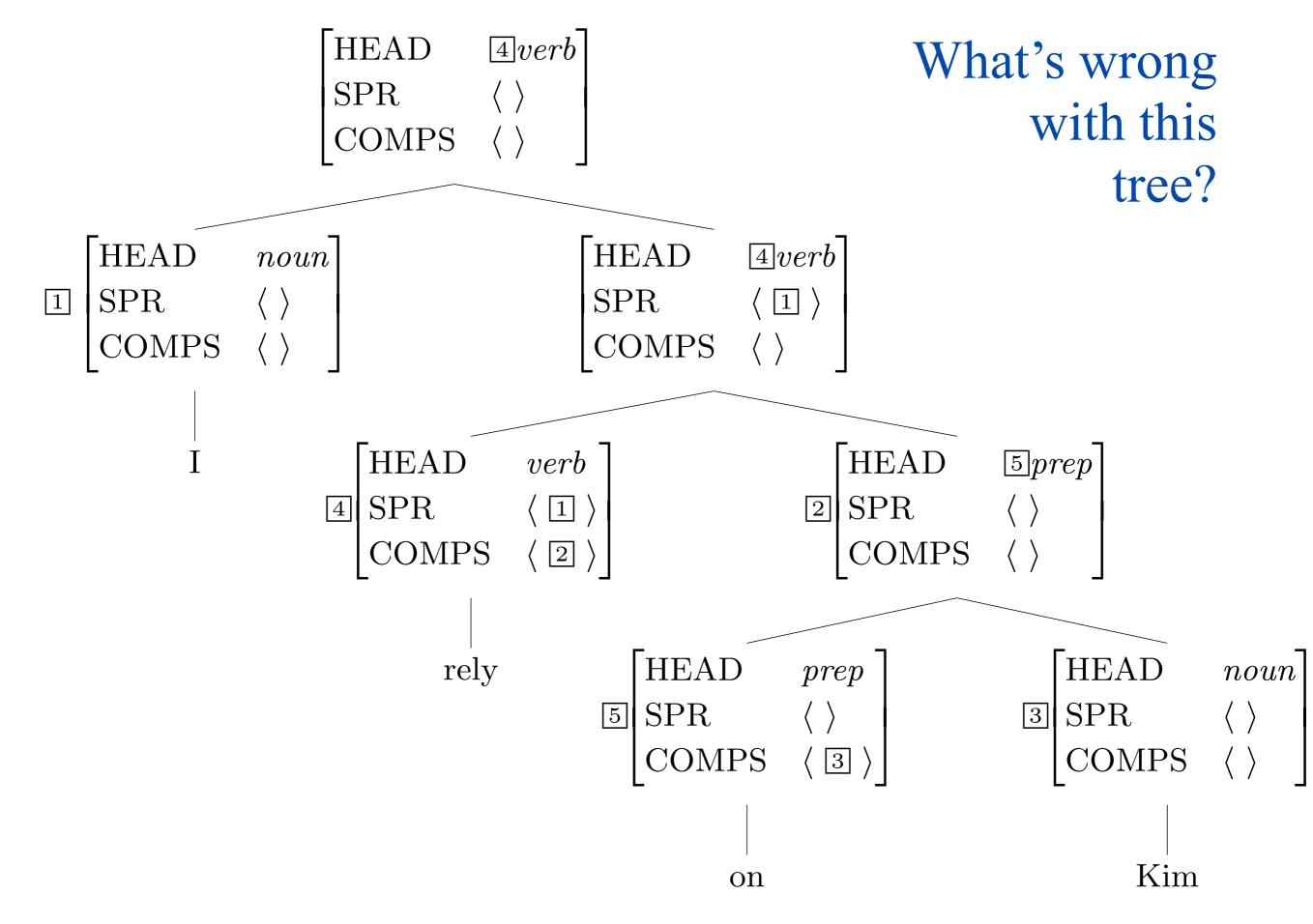










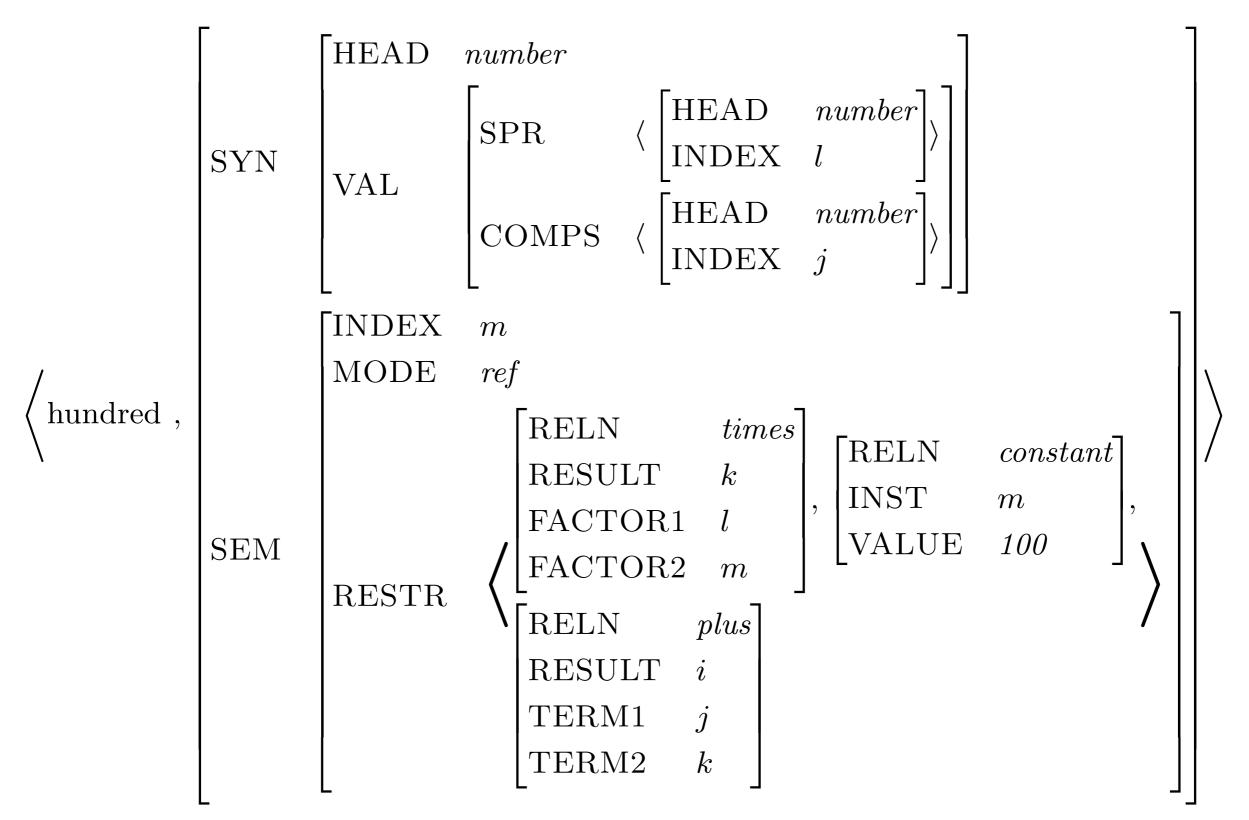


		HEAD	number
$\left\langle \text{hundred} \right.$	SYN	VAL	$\begin{bmatrix} ext{SPR} & \langle \begin{bmatrix} ext{HEAD} & number \\ ext{INDEX} & j \end{bmatrix} angle \end{bmatrix}$
			$\begin{bmatrix} \text{COMPS} & \langle \begin{bmatrix} \text{HEAD} & number \\ \text{INDEX} & k \end{bmatrix} \rangle \end{bmatrix} \end{bmatrix}$
	SEM	INDEX MODE	$m \\ ref$
		RESTR	$\left\langle \begin{bmatrix} \text{RELN} & \textit{hund-number} \\ \text{MULTIPLIER} & \textit{j} \\ \text{ADDEND} & k \\ \text{HUND-VALUE} & m \end{bmatrix} \right angle$

And this?

```
HEAD
                  number
                   SYN
             VAL
             INDEX
             MODE
                   ref
                     RELN
                              times
                                           constant
                                    RELN
hundred,
                     RESULT
                                    INST
                     FACTOR1
                                           100
       SEM
             RESTR
                             plus
                     RELN
                     RESULT
                     TERM1
                     TERM2
```

How about this?



Better version

	SYN	HEAD	number
$\left\langle \text{hundred} \right.$		VAL	$\begin{bmatrix} \text{SPR} & \langle \begin{bmatrix} \text{HEAD} & number \\ \text{INDEX} & l \end{bmatrix} \rangle \end{bmatrix}$
			$\begin{bmatrix} \text{COMPS} & \langle \begin{bmatrix} \text{HEAD} & number \\ \text{INDEX} & j \end{bmatrix} \rangle \end{bmatrix}$
		[INDEX	i
		MODE	ref
	SEM	RESTR	$ \left\langle \begin{bmatrix} \text{RELN} & times \\ \text{RESULT} & k \\ \text{FACTOR1} & l \\ \text{FACTOR2} & m \end{bmatrix}, \begin{bmatrix} \text{RELN} & constant \\ \text{INST} & m \\ \text{VALUE} & 100 \end{bmatrix}, \right\rangle $ $ \left\langle \begin{bmatrix} \text{RELN} & plus \\ \text{RESULT} & i \\ \text{TERM1} & j \\ \text{TERM2} & k \end{bmatrix} \right. $

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?

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- Information movement in trees
- Exercise in critical thinking
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- Technical details (lexical entries, trees)
- Analogies to other systems you might know
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Your questions

- ?
- ?
- ?
- ?
- ?
- ?
- ?

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.

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