Ling 566 Oct 18, 2007

Review

Overview

- Homework tips
- SPR and COMPS
- Technical details (lexical entries, trees)
- Cascades of identities in Wambaya
- Analogies to other systems you might know
- Your questions...
- Problems

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.

COMPS on PP?

- Kim put the books here.
- Here, have a cookie.
- Kim put the books here have a cookie.
- Kim put the books on the table.

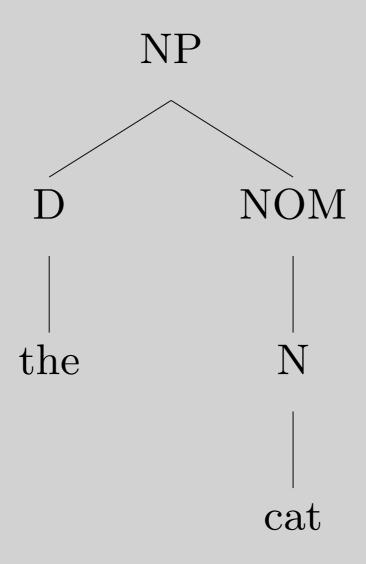
COMPS on D?

```
 \left\langle \text{iniyaga}, \begin{bmatrix} word \\ \text{HEAD} & \begin{bmatrix} det \\ \text{AGR} & \begin{bmatrix} \text{GEND } masc \end{bmatrix} \\ \text{CASE} & acc \end{bmatrix} \right\rangle 
 \left[ \begin{array}{c} \text{VAL} & \begin{bmatrix} \text{SPR} & \langle \ \rangle \\ \text{COMPS} & \langle \ \text{NP[masc, acc]} \ \rangle \end{bmatrix} \right]
```

COMPS on D?

```
 \left\langle \text{iniyaga ,} \begin{bmatrix} word \\ \text{HEAD} & \begin{bmatrix} det \\ \text{AGR} & \begin{bmatrix} \text{GEND } masc \end{bmatrix} \\ \text{CASE } & acc \end{bmatrix} \right\rangle   \left[ \begin{array}{c} \text{VAL} & \begin{bmatrix} \text{SPR} & \langle \ \rangle \\ \text{COMPS} & \langle \ \text{NP[masc, acc]} \ \rangle \end{bmatrix} \right]
```

Which grammar does this tree go with?



$$\left\langle \text{here,} \begin{bmatrix} word \\ \text{HEAD} & [prep] \\ \text{VAL} & \begin{bmatrix} \text{COMPS} & \langle \ \rangle \\ \text{SPR} & \langle \ \rangle \end{bmatrix} \right\rangle$$

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

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

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\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
```

$$\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$$

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

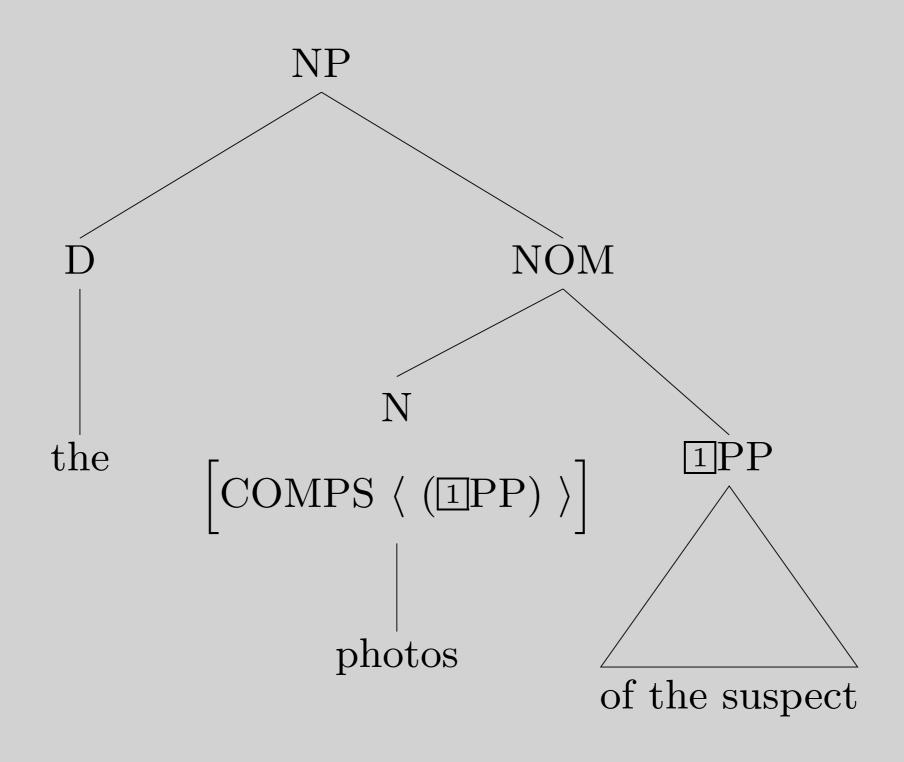
Tags & lists

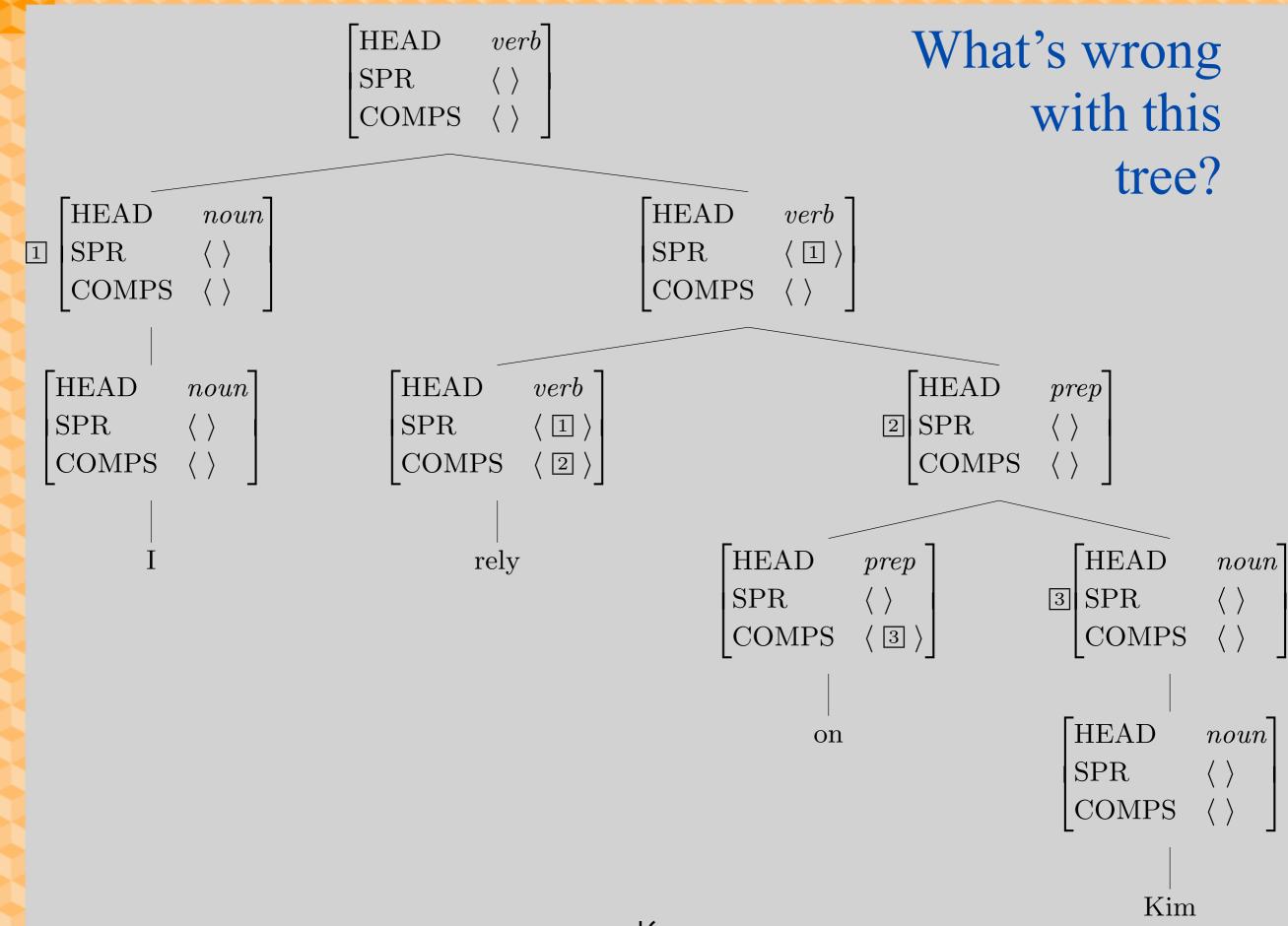
• What's the difference between these two?

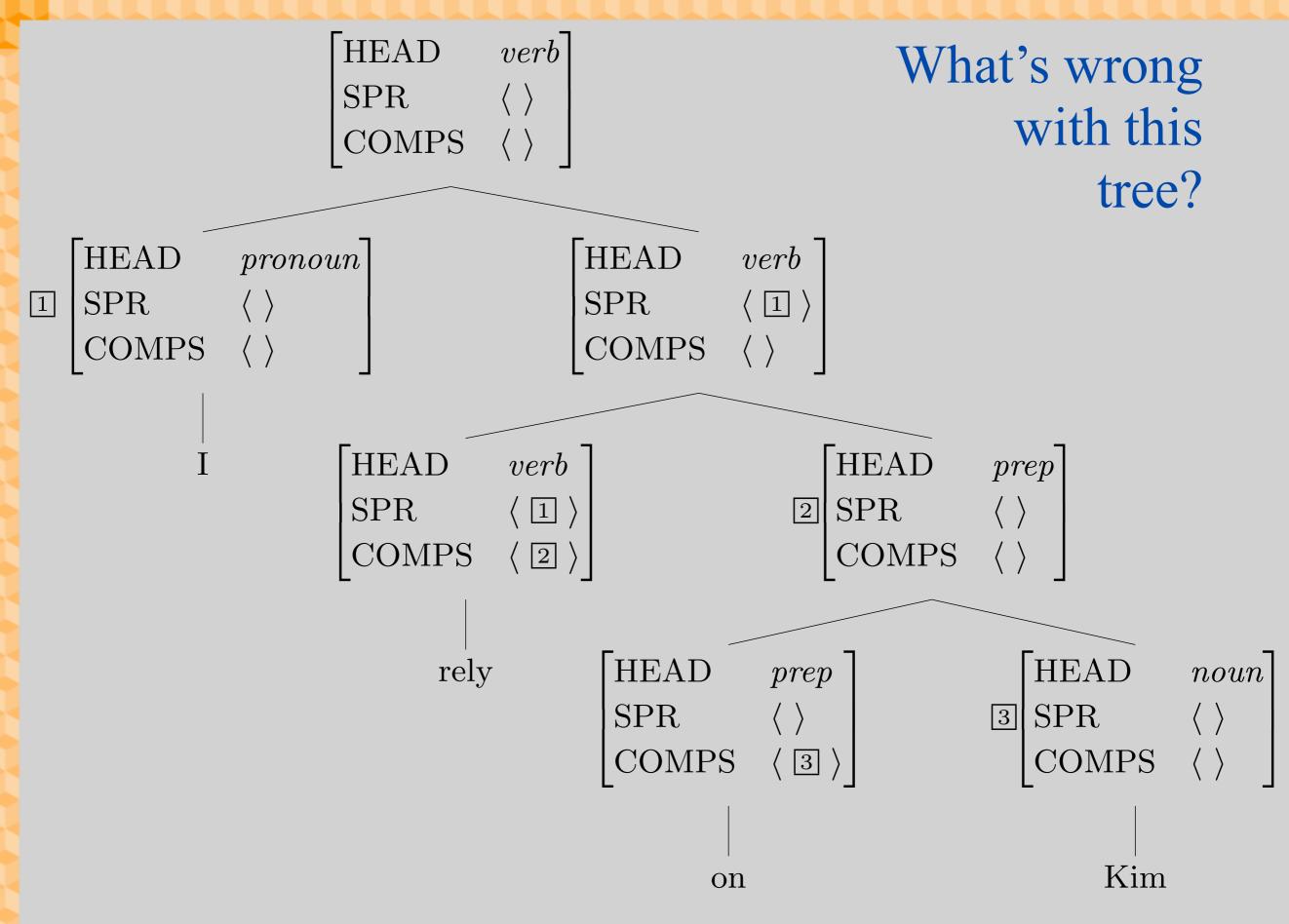
$$\begin{bmatrix} SPR & \boxed{1}\langle NP \rangle \end{bmatrix}$$

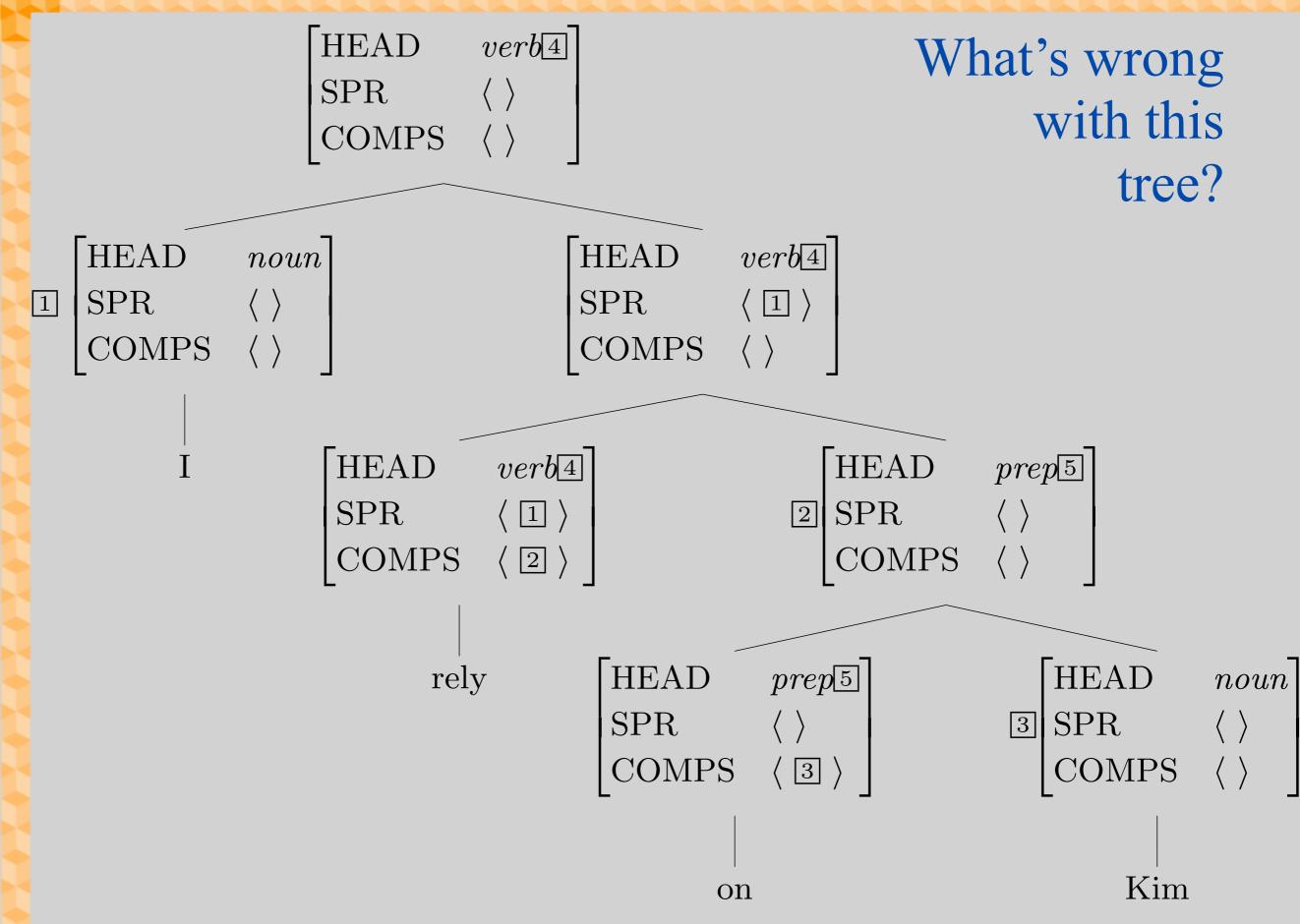
$$\begin{bmatrix} SPR & \langle \boxed{1}NP \rangle \end{bmatrix}$$

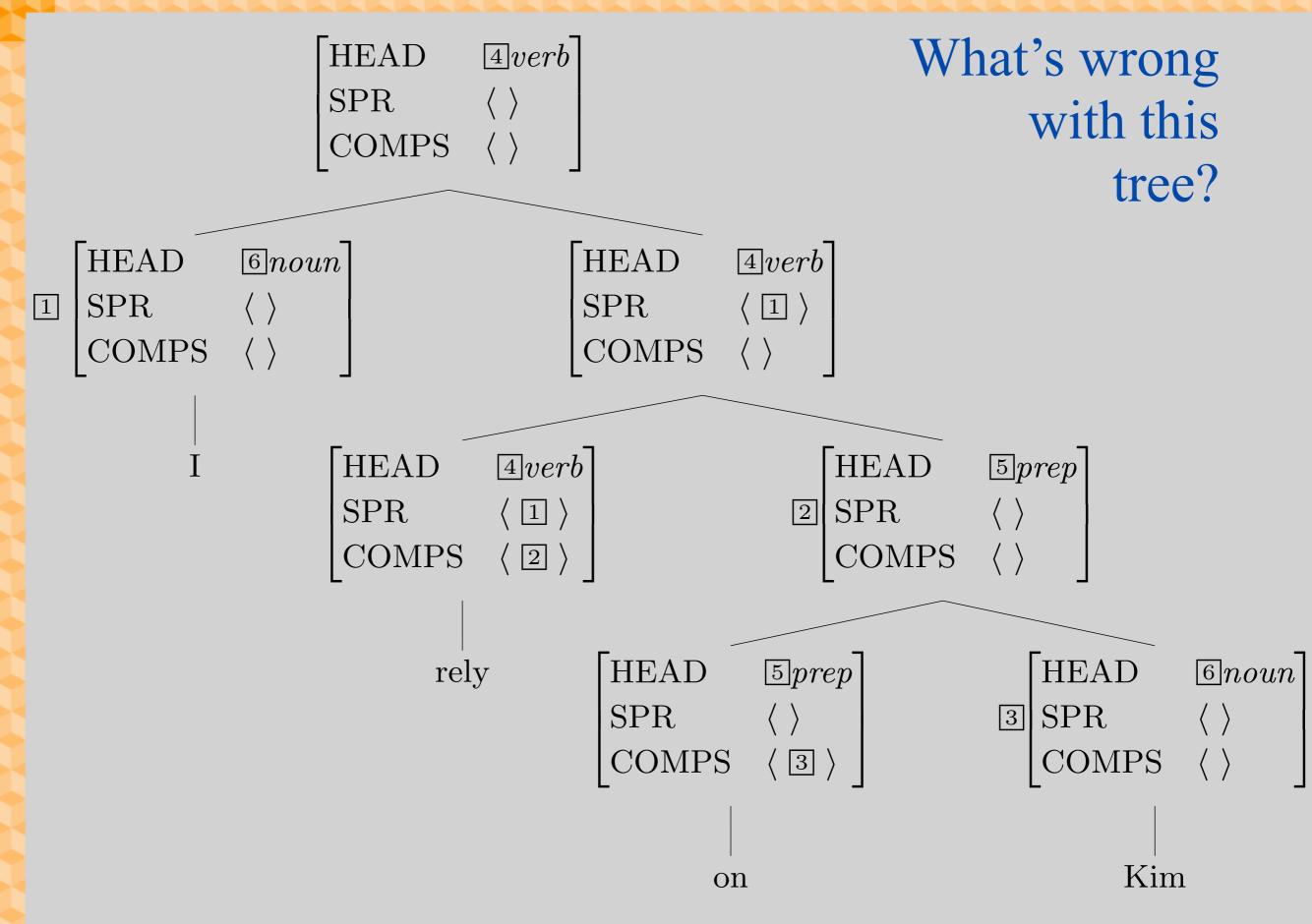
• When does it matter?

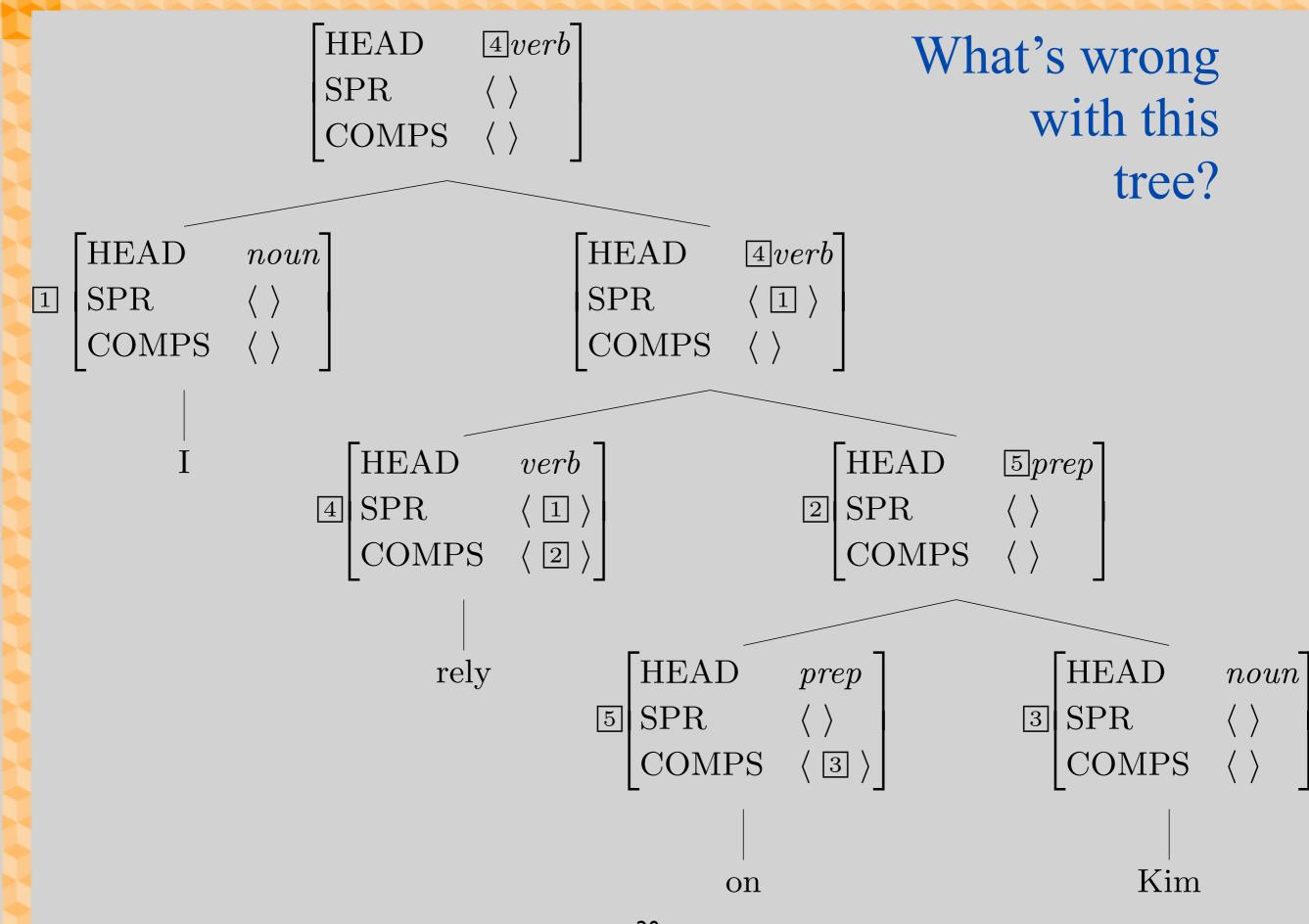


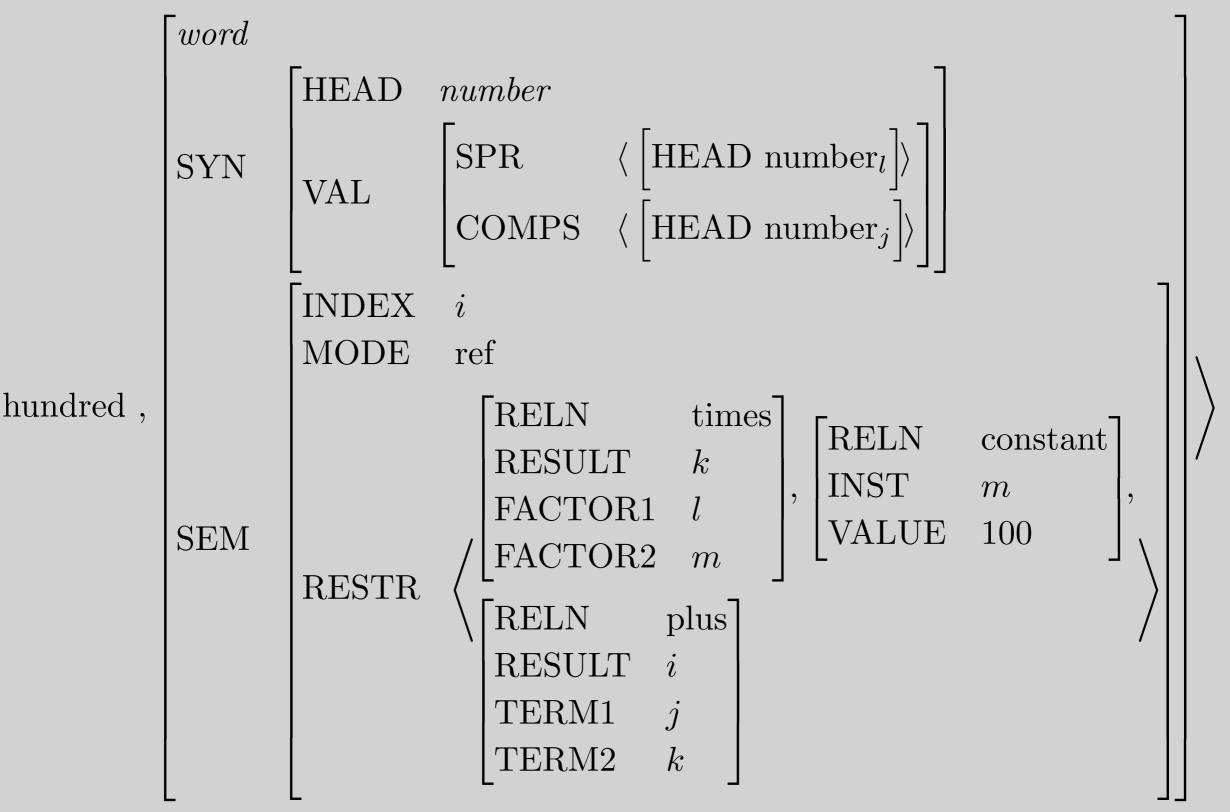








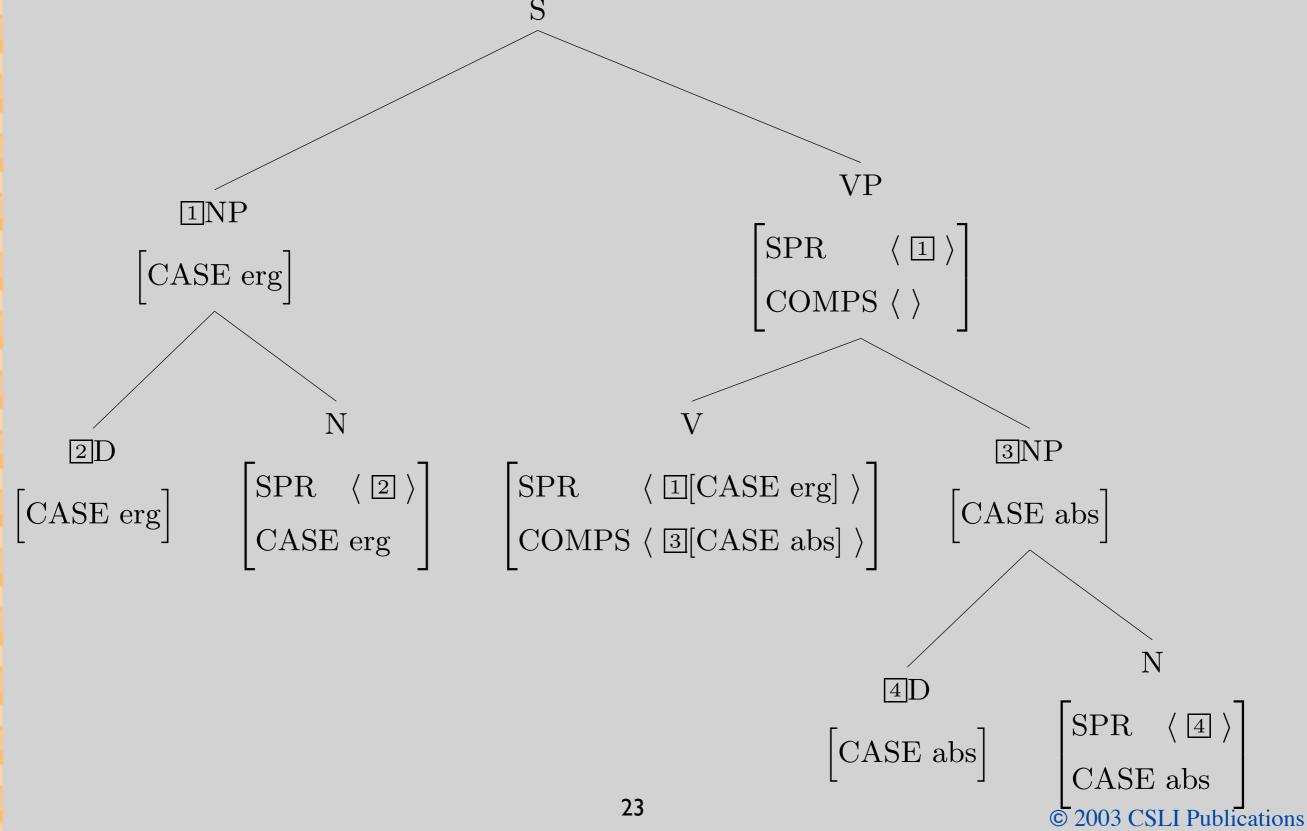




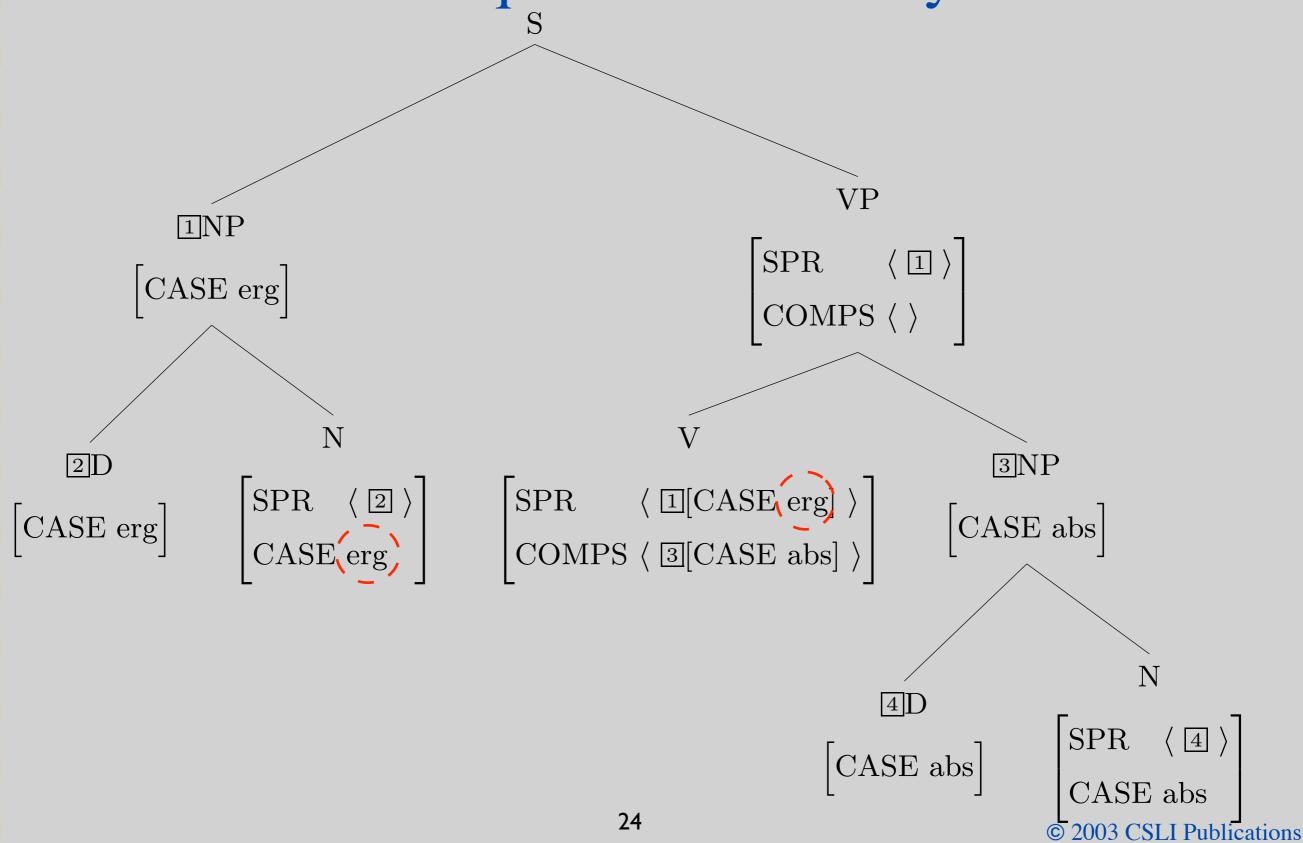
Better version

```
\overline{word}
                      HEAD
                                number
                                             \langle | \text{HEAD number} |_{l} \rangle
                                 SPR
            SYN
                      VAL
                                           \langle \left[ \text{HEAD number} \middle|_{j} \right. \rangle \right|
                                 COMPS
                      INDEX
                      MODE
                                 ref
hundred,
                                    RELN
                                                   times
                                                             RELN
                                                                        constant
                                    RESULT
                                                            INST
                                                                        m
                                    FACTOR1
                                                             VALUE
                                                                        100
            SEM
                                    FACTOR2
                      RESTR
                                                 plus
                                    RELN
                                    RESULT
                                    TERM1
                                    TERM2
```

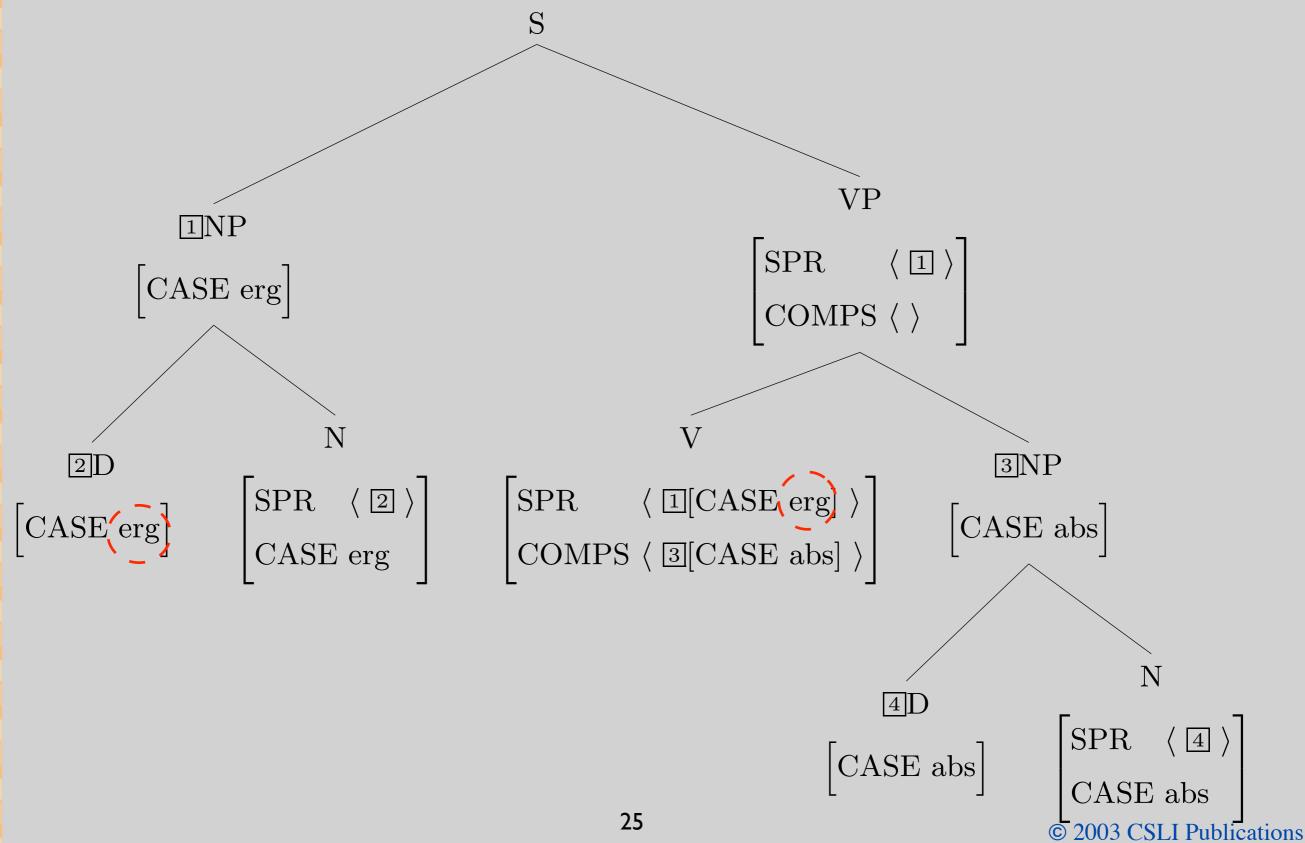
Information passing in Wambaya



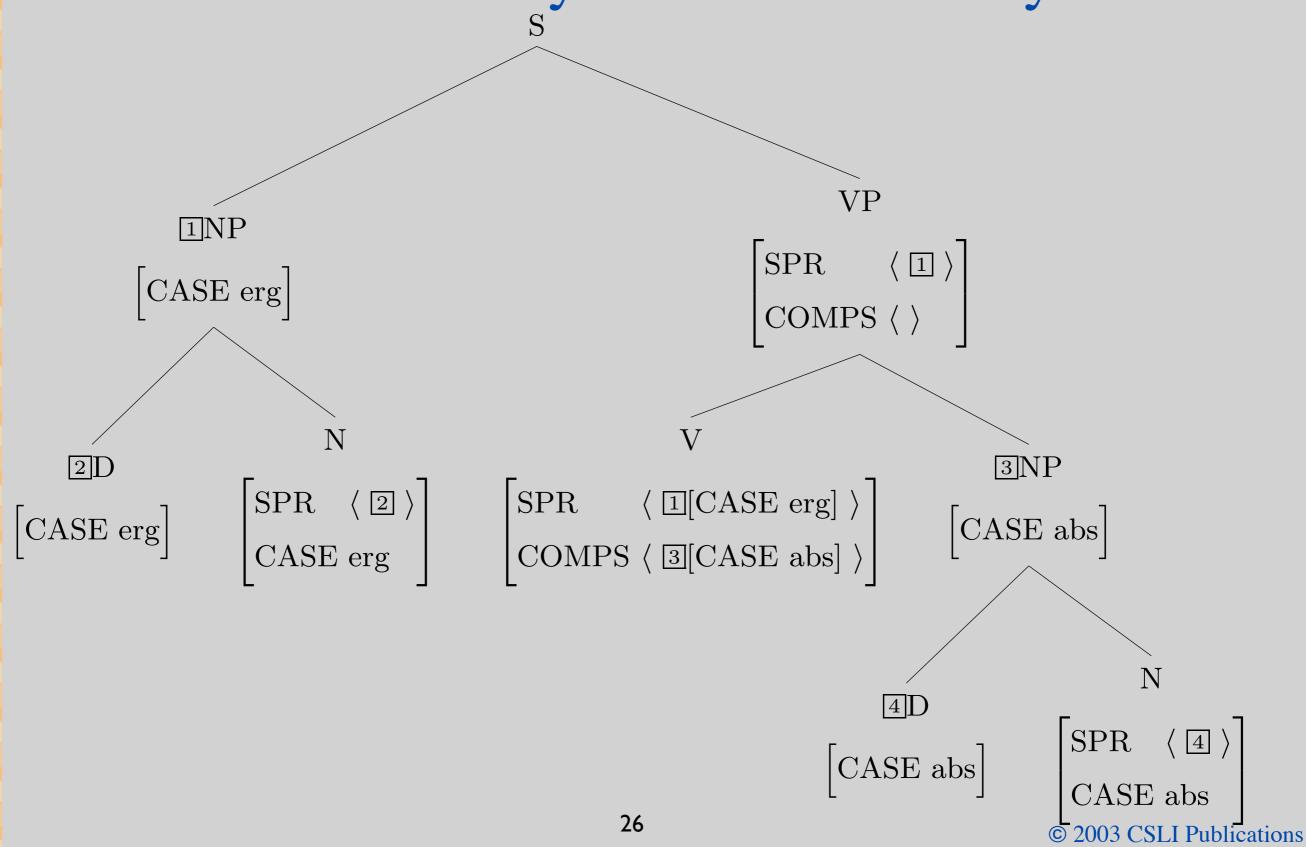
What requires this identity?



How about this one?



Is this tree really valid for Wambaya?



What's a predication?

What's a predication?

- A feature structure ...
- ... which appears on RESTR lists ...
- ... and has the feature RELN ...
- ... among others

• How is this formalism like OOP?

- How is this formalism like OOP?
- How is it different?

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- How is the type hierarchy like an ontology?

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- How is this formalism like the MP's formalism?

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- How is it different?
- How is this formalism like the MP's formalism?
- How is it different?

3.4: Coord. & Modification

- NOM > NOM PP; VP > VP PP
 - (i) Alex walks and talks without difficulty
 - (ii) Terry likes the poetry and music on the program
- (i) and (ii) are ambiguous; draw the trees
- Should PP be able to attach to S and NP as well? Provide an argument using examples with coordination to show that they should.

4.2 Spanish NPs I

- (i) a. La jirafa corrió.

 The.FEM.SG giraffe ran.3SG

 'The giraffe ran.'
 - b.*Las/El/Los jirafa corrió.
- (ii) a. Las jirafas corrieron.

 The.FEM.PL giraffes ran.3PL

 'The giraffes ran.'
 - b.*La/El/Los jirafas corrieron.
- (iii) a. El pingüino corrió.

 The.MASC.SG penguin RAN.3SG

 'The penguin ran.'
 - b.*La/Las/Los pingüino corrió.
- (iv) a. Los pingüinos corrieron.

 The.MASC.PL penguins RAN.3PL

 'The penguins ran.'
 - b.*La/Las/El pingüinos corrieron.

- Do Spanish nouns obey the SHAC?
- Is GEND appropriate for 3sing only?
- Write lexical entries for *la*, *los*, and *pinguino*

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