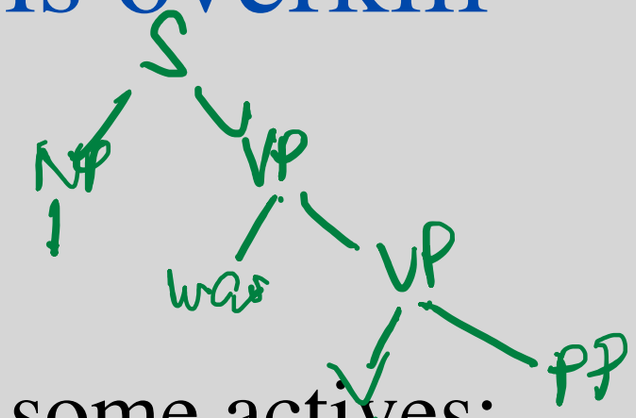
Overview

- Passive
  - Arguments for lexicalist account
  - Details of our analysis
- Reading Questions

The Passive in Transformational Grammar

- Passive was the paradigmatic transformation in early TG.
- Motivations
  - Near paraphrase of active/passive pairs.
  - Simplified statement of cooccurrence restrictions.
    - E.g. *devour* must be followed by an NP, *put* by NP-PP
    - Such restrictions refer to pre-transformational (“deep”) structure.
  - Intuition that active forms were more basic, in some sense.
- Its formulation was complex:
  - Promote object
  - Demote subject, inserting *by*
  - Insert appropriate form of *be*, changing main verb to a participle.

But transforming whole sentences is overkill



be-lxm

- Passive sentences look an awful lot like some actives:

  The cat was chased by the dog vs passive

  The cat was lying by the door active

- Passives occur without *be* and without the *by* phrase:

  Cats chased by dogs usually get away.

  My cat was attacked. (by NP: a dog)

So a lexical analysis seems called for

- What really changes are the verb's form and its cooccurrence restrictions (that is, its valence).
- There are lexical exceptions
  - Negative: Pat likes Bo Bo is liked by Pat.

    Pat resembles Bo but **Bo is resembled by Pat*

    That look suits you but **You are suited by that look*
  - Positive

    Chris is rumored to be a spy but

    **They rumor Chris to be a spy*

We posit a lexical rule

past participles

- Why not just list passive participles individually?
  - To avoid redundancy
  - To capture productivity (for example?)

- We make it a derivational (lexeme-to-lexeme) rule. Why?
  - Our constraints on lexeme-to-word rules wouldn't allow us to make Passive one.

The Passive Lexical Rule

$$
\left[\begin{array}{l}
\textit{d-rule} \\
\text{INPUT} \quad \left\langle \boxed{1}, \left[\begin{array}{l} \textit{tv-lxm} \\ \text{ARG-ST} \quad \langle\, [\text{INDEX } i] \,\rangle \oplus \boxed{\text{A}} \end{array}\right] \right\rangle \\
\\
\text{OUPUT} \quad \left\langle \text{F}_{PSP}(\boxed{1}),\ \left[\begin{array}{ll} \textit{part-lxm} & \\ \text{SYN} & \left[\text{HEAD} \quad [\text{FORM} \quad \text{pass}\,]\right] \\ \\ \text{ARG-ST} & \boxed{\text{A}} \oplus \left\langle \left(\left[\begin{array}{ll} & \text{PP} \\ \text{FORM} & \text{by} \\ \text{INDEX} & i \end{array}\right] \right) \right\rangle \end{array}\right] \right\rangle
\end{array}\right]
$$

Questions About the Passive Rule

$$\left[\begin{array}{l} \textit{d-rule} \\ \text{INPUT} \quad \left\langle \boxed{1}, \left[\begin{array}{l} \textit{tv-lxm} \\ \text{ARG-ST} \quad \langle\, [\text{INDEX } i] \,\rangle \oplus \boxed{\text{A}} \end{array}\right] \right\rangle \\ \text{OUPUT} \quad \left\langle \text{F}_{PSP}(\boxed{1}), \left[\begin{array}{l} \textit{part-lxm} \\ \text{SYN} \quad \left[\text{HEAD} \quad [\text{FORM} \quad \text{pass}\,]\right] \\ \text{ARG-ST} \quad \boxed{\text{A}} \oplus \left\langle \left(\left[\begin{array}{ll} & \text{PP} \\ \text{FORM} & \text{by} \\ \text{INDEX} & i \end{array}\right] \right) \right\rangle \end{array}\right] \right\rangle \end{array}\right]$$

- Why is the morphological function F_{PSP}?
- Why do we have a separate FORM value pass? Why not say the output is [FORM psp]?
- What kind of a PP is the *by*-phrase (that is, argument-marking or predicational)?

More Questions

$$\left[\begin{array}{ll} \textit{d-rule} & \\ \text{INPUT} & \left\langle \boxed{1}, \left[\begin{array}{ll} \textit{tv-lxm} & \\ \text{ARG-ST} & \langle\, [\text{INDEX } i] \,\rangle \;\oplus\; \boxed{\text{A}} \end{array}\right] \right\rangle \\ \text{OUPUT} & \left\langle \text{F}_{PSP}(\boxed{1}),\; \left[\begin{array}{ll} \textit{part-lxm} & \\ \text{SYN} & \left[\text{HEAD} \quad [\text{FORM} \quad \text{pass}\,]\right] \\ \text{ARG-ST} & \boxed{\text{A}} \;\oplus\; \left\langle \left(\left[\begin{array}{ll} & \text{PP} \\ \text{FORM} & \text{by} \\ \text{INDEX} & i \end{array}\right] \right) \right\rangle \end{array}\right] \right\rangle \end{array}\right]$$

- What makes the object turn into the subject?
- Why is the type of the input *tv-lxm*?
- What would happen if it were just *verb-lxm*?

Intransitives have passives in German

es wird nicht gekauft
it is not bought

es
In der Küche wird nicht getanzt.

in the kitchen is not danced

'There is no dancing in the kitchen.'

NB: The exact analysis for such examples is debatable, but German, like many other languages, allows passives of intransitives, as would be allowed by our analysis if the input type in the Passive LR is *verb-lxm*.

Passive Input & Output

If you have one of these....

verb-lxm

stv-lxm

eat like love

Then you also get one of these....

$$\left\langle \text{love}, \begin{bmatrix} \textit{stv-lxm} \\ \text{ARG-ST} & \langle \text{NP}_i, \text{Y}_j \rangle \\ \text{SEM} & \begin{bmatrix} \text{INDEX} & s \\ \text{RESTR} & \left\langle \begin{bmatrix} \text{RELN} & \text{love} \\ \text{SIT} & s \\ \text{LOVER} & i \\ \text{LOVED} & j \end{bmatrix} \right\rangle \end{bmatrix} \end{bmatrix} \right\rangle$$

lexical information

$$\left\langle \text{loved}, \begin{bmatrix} \textit{part-lxm} \\ \text{SYN} & \begin{bmatrix} \text{HEAD} & \begin{bmatrix} \text{FORM} & \text{pass} \end{bmatrix} \end{bmatrix} \\ \text{ARG-ST} & \left\langle \text{Y}_j, \left(\begin{bmatrix} \text{PP} \\ \text{FORM} & \text{by} \\ \text{INDEX} & i \end{bmatrix} \right) \right\rangle \\ \text{SEM} & \begin{bmatrix} \text{INDEX} & s \\ \text{RESTR} & \left\langle \begin{bmatrix} \text{RELN} & \text{love} \\ \text{SIT} & s \\ \text{LOVER} & i \\ \text{LOVED} & j \end{bmatrix} \right\rangle \end{bmatrix} \end{bmatrix} \right\rangle$$

Actually...

verb-lexeme

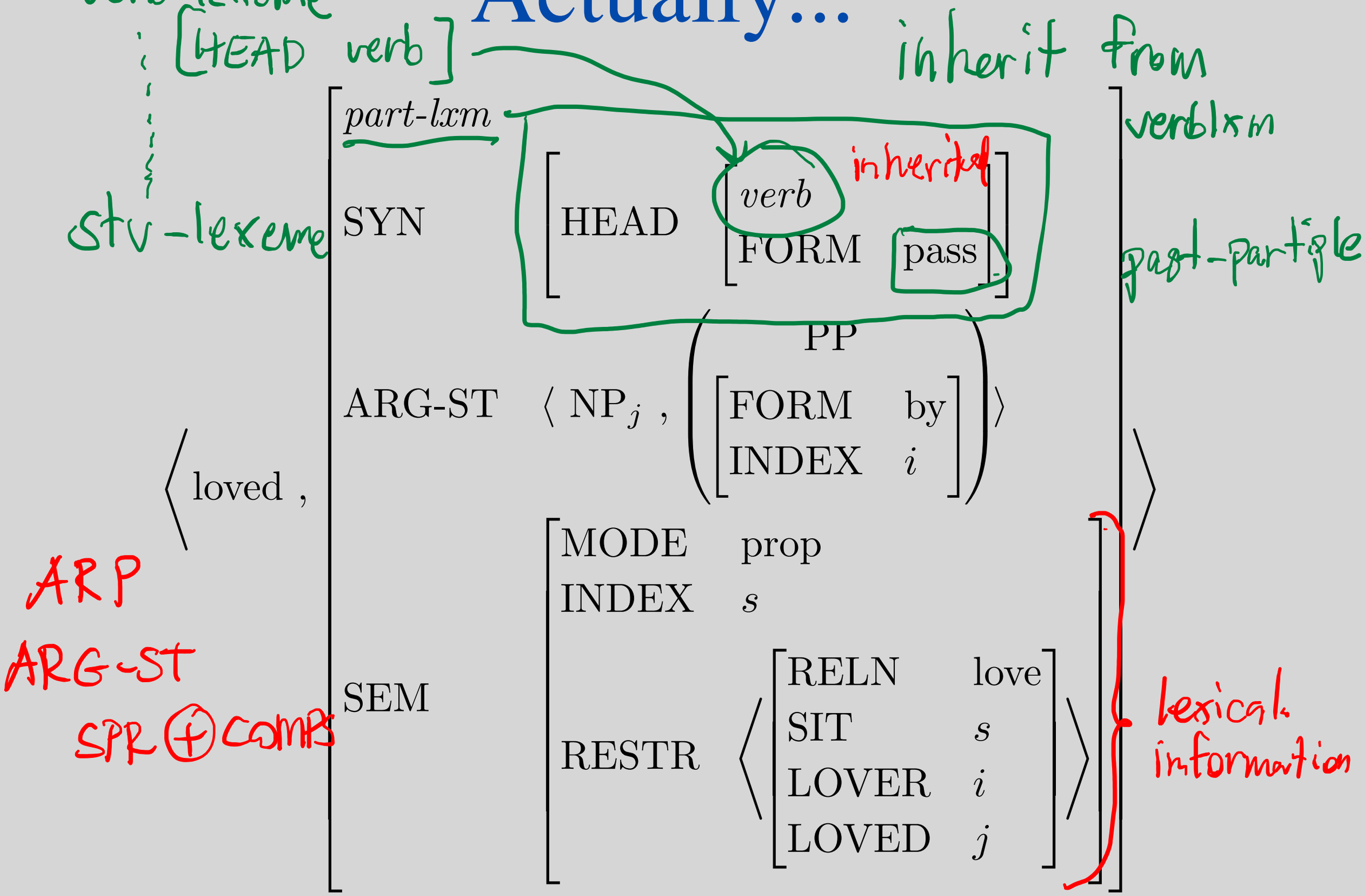
[HEAD verb]

stv-lexeme

inherit from

verblxm

past-partiple



The *be* that Occurs with Most Passives

verb-lxm

$$\left\langle \text{be} , \begin{bmatrix} \textit{be-lxm} \\ \text{ARG-ST} \quad \left\langle \boxed{1} , \begin{bmatrix} \text{SYN} & \begin{bmatrix} \text{HEAD} & \begin{bmatrix} \textit{verb} \\ \text{FORM} \quad \text{pass} \end{bmatrix} \\ \text{VAL} & \begin{bmatrix} \text{SPR} & \left\langle \boxed{1} \right\rangle \\ \text{COMPS} & \langle\, \rangle \end{bmatrix} \end{bmatrix} \\ \text{SEM} \quad \begin{bmatrix} \text{INDEX} & s \end{bmatrix} \end{bmatrix} \right\rangle \\ \text{SEM} \quad \begin{bmatrix} \text{INDEX} & s \\ \text{RESTR} & \langle\, \rangle \end{bmatrix} \end{bmatrix} \right\rangle$$

Questions About the Entry for *be*

$$\left\langle \text{be} , \left[\begin{array}{l} \textit{be-lxm} \\ \text{ARG-ST} \quad \left\langle \boxed{1}, \left[\begin{array}{ll} \text{SYN} & \left[\begin{array}{ll} \text{HEAD} & \left[\begin{array}{l} \textit{verb} \\ \text{FORM} \quad \text{pass} \end{array} \right] \\ \text{VAL} & \left[\begin{array}{ll} \text{SPR} & \langle \boxed{1} \rangle \\ \text{COMPS} & \langle\ \rangle \end{array} \right] \end{array} \right] \\ \text{SEM} & \left[\text{INDEX} \quad s \right] \end{array} \right] \right\rangle \\ \left[\begin{array}{ll} \text{SEM} & \left[\begin{array}{ll} \text{INDEX} & s \\ \text{RESTR} & \langle\ \rangle \end{array} \right] \end{array} \right] \end{array} \right] \right\rangle$$

- Why doesn't it include valence features?
- What is the category of its complement (i.e. its 2nd argument)?
- What is its contribution to the semantics of the sentences it appears in?
- Why is the first argument tagged as identical to the second argument's SPR value?

Passive tree

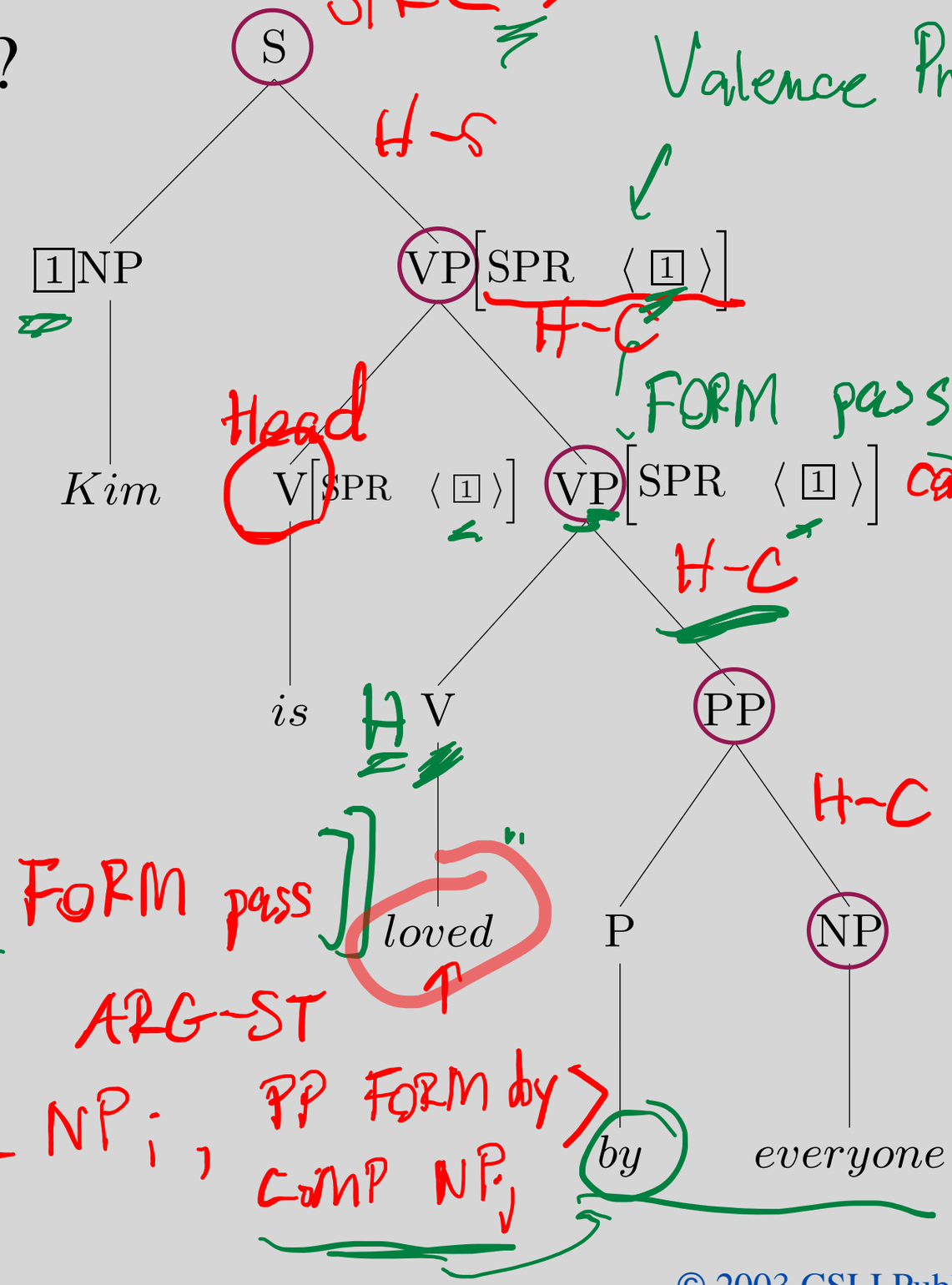
Which rule licenses each node?

What is the SPR value of the upper VP?

What is the SPR value of the lower VP?

What is the SPR value of *is*?

Any questions?



More Questions

by him
like him

Case constraint
Accusative
is in a complement position.

- Why do we get

  They are noticed by everyone

  and not

  **Them are noticed by everyone*?

- Why don't we get

  **They is noticed by everyone*?

SHAC + SPR rule
+ comp rule

- What would facts like these entail for a transformational analysis?