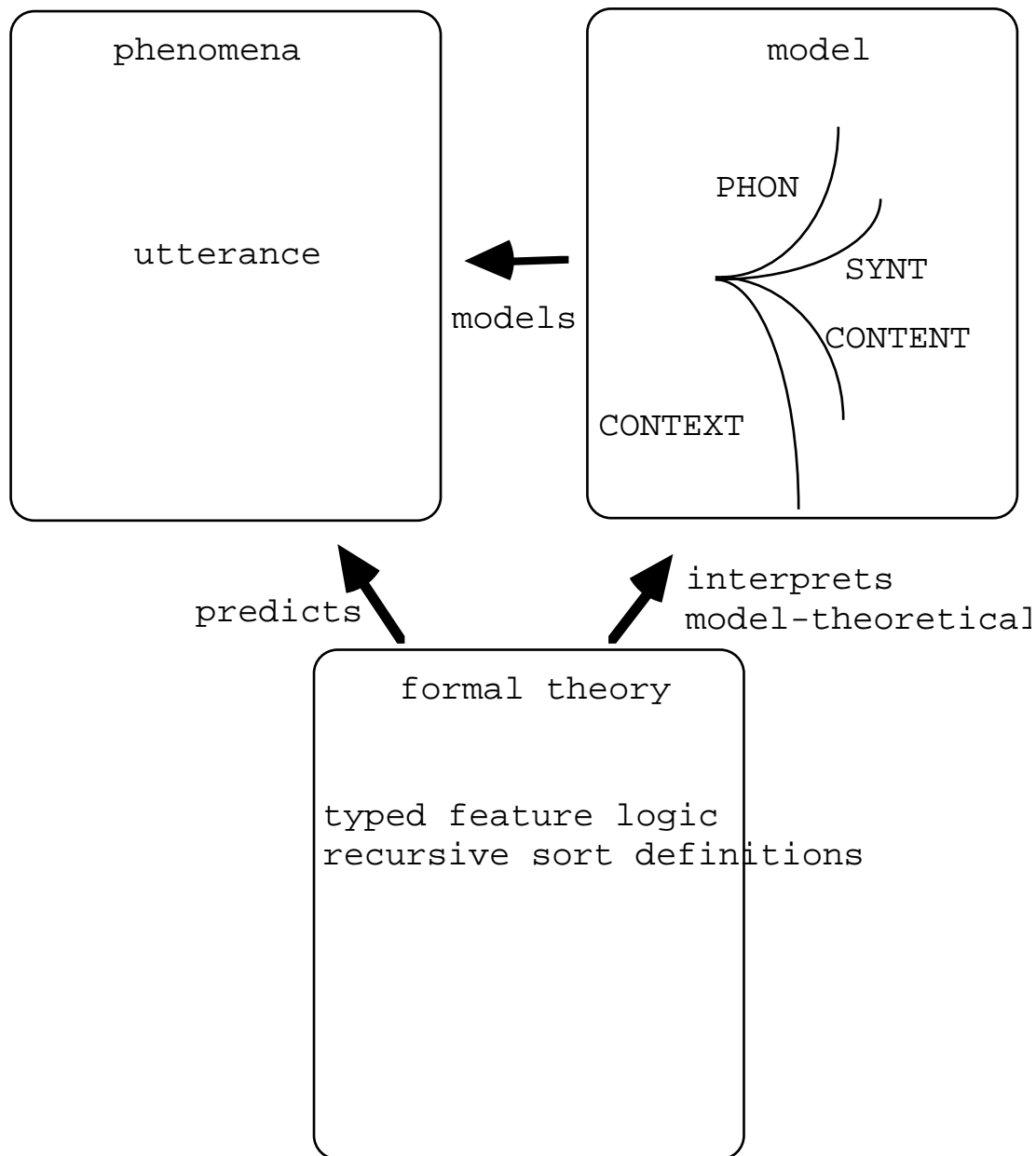


Theory, Model and Empirical Domain



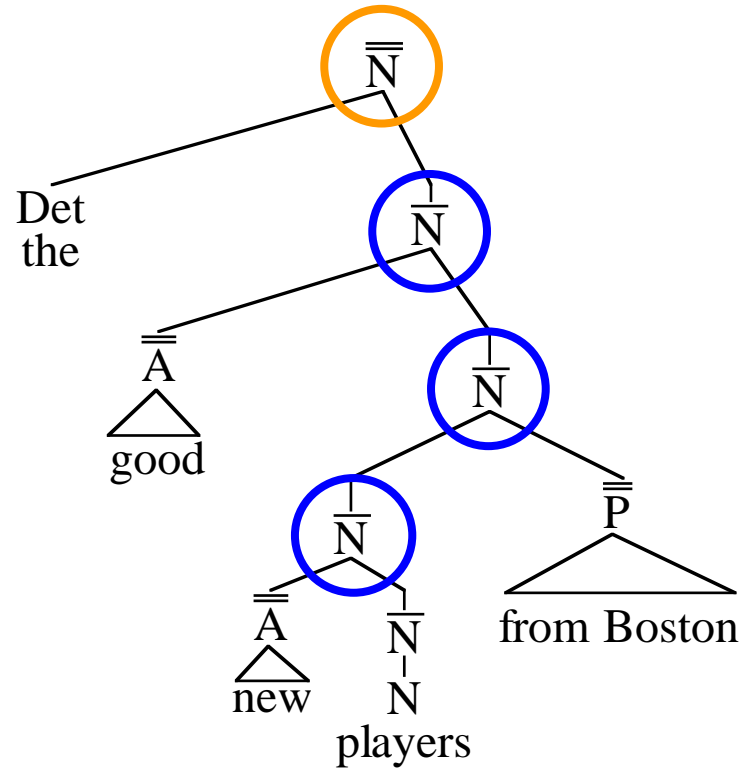
The sort *sign*

sign
└───┬───
word *phrase*

sign : [PHON *list(phonstring)*
SYNSEM *synsem*
QSTORE *set(quantifier)*
RETRIEVED *list(quantifier)*]

phrase : [DAUGHTERS *const-sruc*]

Adjuncts in NPs



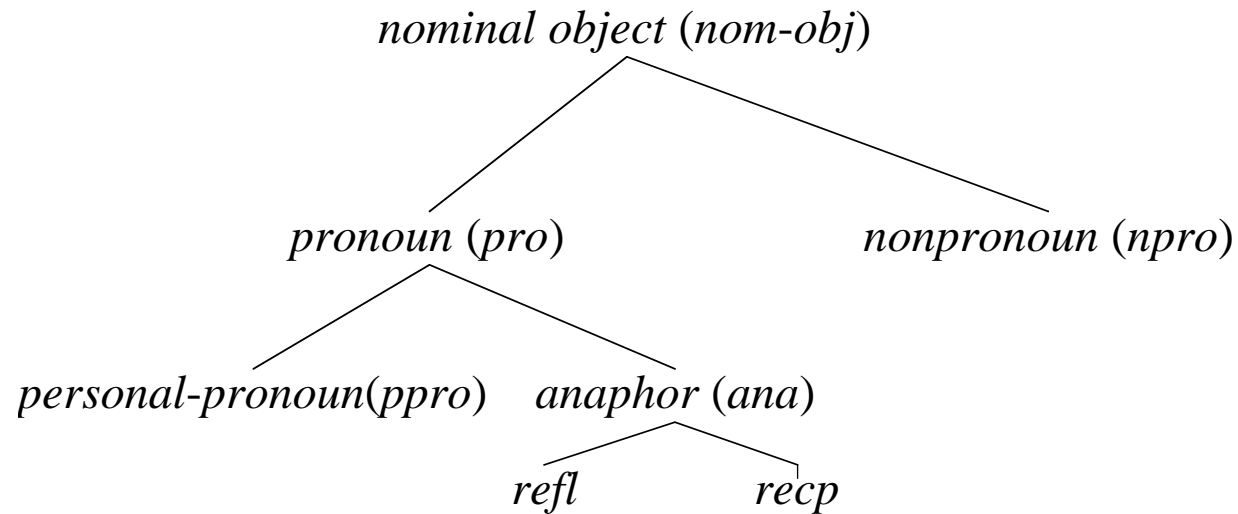
rule schema 1

rule schema 2

rule schema 4

Sort nominal object

There is no supersort for all values of CONTENT. For the CONTENT value nominal elements, the supersort is nominal object.



nom-obj : $\left[\begin{array}{l} \text{INDEX} \\ \text{RESTRICTION } \textit{set}(\textit{psoa}) \end{array} \right]$ $\left[\begin{array}{l} \text{PER } \textit{per} \\ \text{NUM } \textit{num} \\ \text{GEND } \textit{gend} \end{array} \right]$

Sort nominal object

(2)

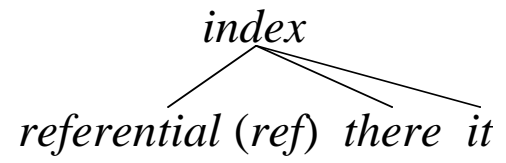
CONTENT value for 'book'

$$\left[\begin{array}{c} \text{INDEX} \quad \boxed{1} \left[\begin{array}{l} \text{PER } 3rd \\ \text{NUM } sing \\ \text{GEND } neut \end{array} \right] \\ \text{RESTRICTION} \left\{ \begin{array}{l} \text{RELN } book \\ \text{INSTANCE } \boxed{1} \end{array} \right\} \end{array} \right]_{npro}$$

CONTENT value for 'John'

$$\left[\begin{array}{c} \text{INDEX} \quad \boxed{1} \left[\begin{array}{l} \text{PER } 3rd \\ \text{NUM } sing \\ \text{GEND } neut \end{array} \right] \\ \text{RESTRICTION} \left\{ \begin{array}{l} \text{RELN } naming \\ \text{BEARER } \boxed{1} \\ \text{NAME } John \end{array} \right\} \end{array} \right]_{npro}$$

Sort index



index : $\left[\begin{array}{l} \text{PER } per \\ \text{NUM } num \\ \text{GEND } gend \end{array} \right]$

Sort context

$context : \left[\begin{array}{l} \text{BACKGROUND } set(psoa) \\ \text{CONTEXTUAL-INDICES } c\text{-inds} \end{array} \right]$

Sort c-inds

$c\text{-inds} : \left[\begin{array}{l} \text{SPEAKER } ref \\ \text{ADDRESSEE } ref \\ \text{UTTERANCE-LOCATION } ref \end{array} \right]$

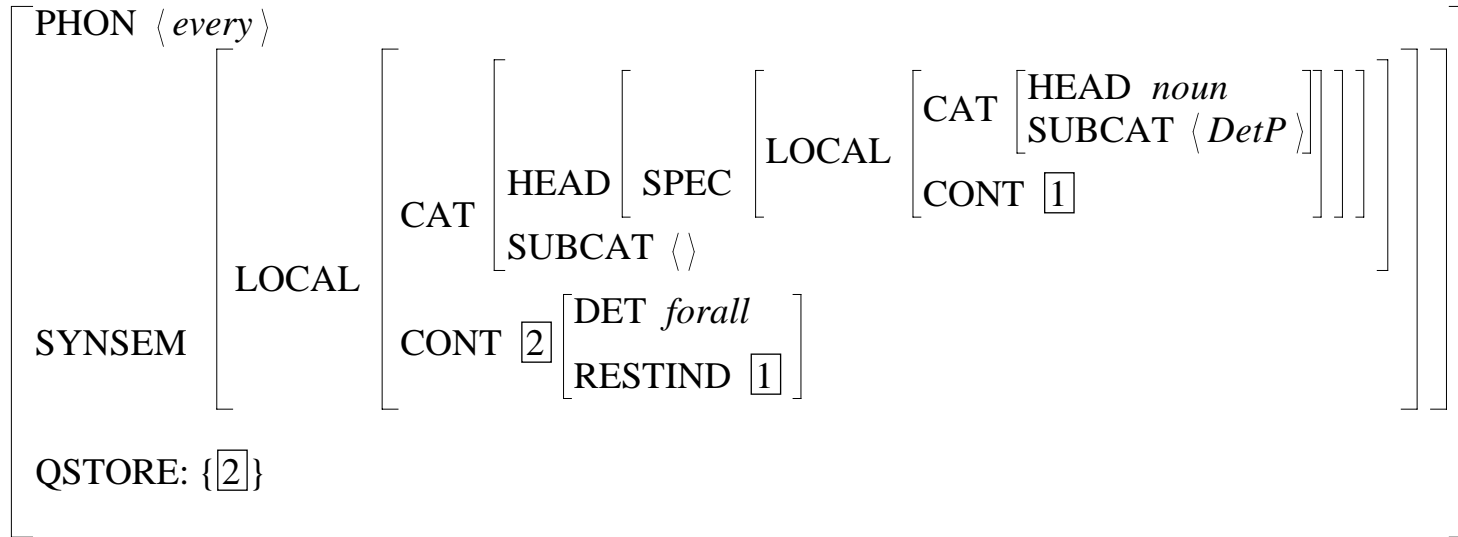
Quantifier Inheritance Principle

The QUANTIFIER-STORE (QSTORE) value of a phrasal node is the union of QSTORE values of the daughters less those quantifiers that are retrieved.

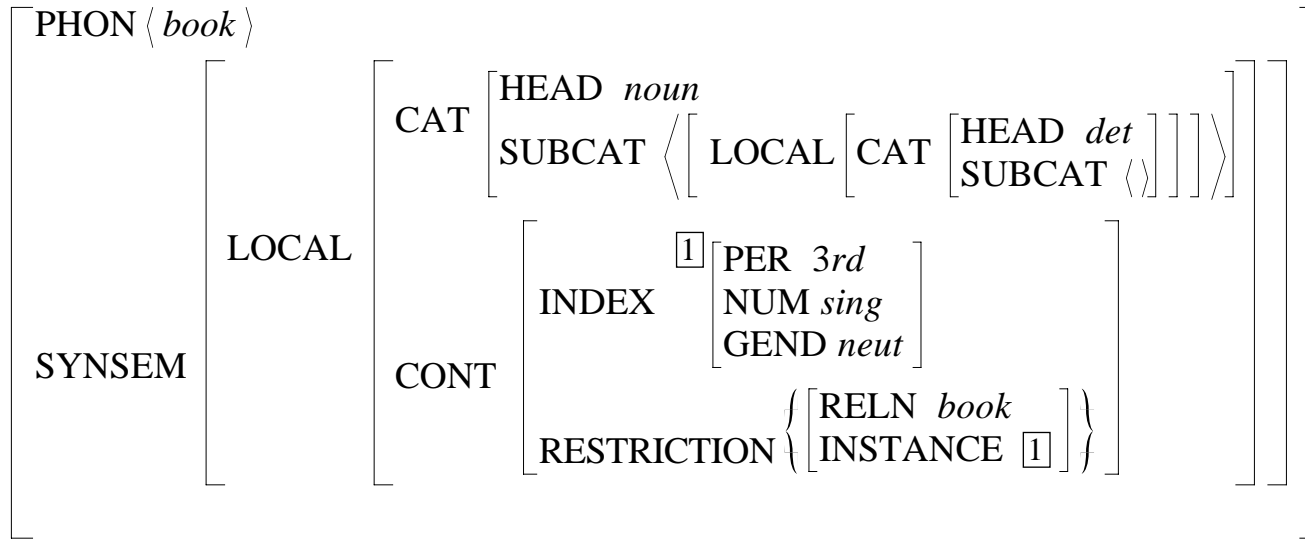
SPEC Principle

If a non-head daughter in a headed structure bears a SPEC value, it is the SYNSEM value of the head daughter.

AVM for the determiner 'every'



AVM for the noun 'book'



Problems for purely syntactic agreement

The hash browns at table six are getting cold.

The hash browns at table six is getting angry.

The volcano which has been dormant for a century erupted.

The volcano who just left the room was Bill's kid.

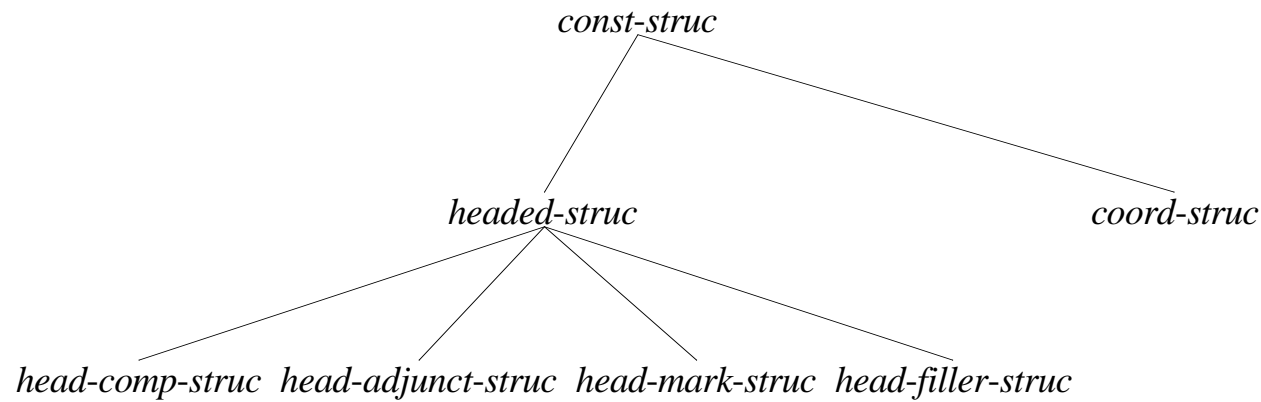
The soldiers which were made of lead were thrown away.

Eggs is my favorite breakfast.

Three types of agreement

- pronoun-antecedent
- subject-verb
- determiner-noun

The sort *const-struct*



phrase : [*DAUGHTERS const-struct*]

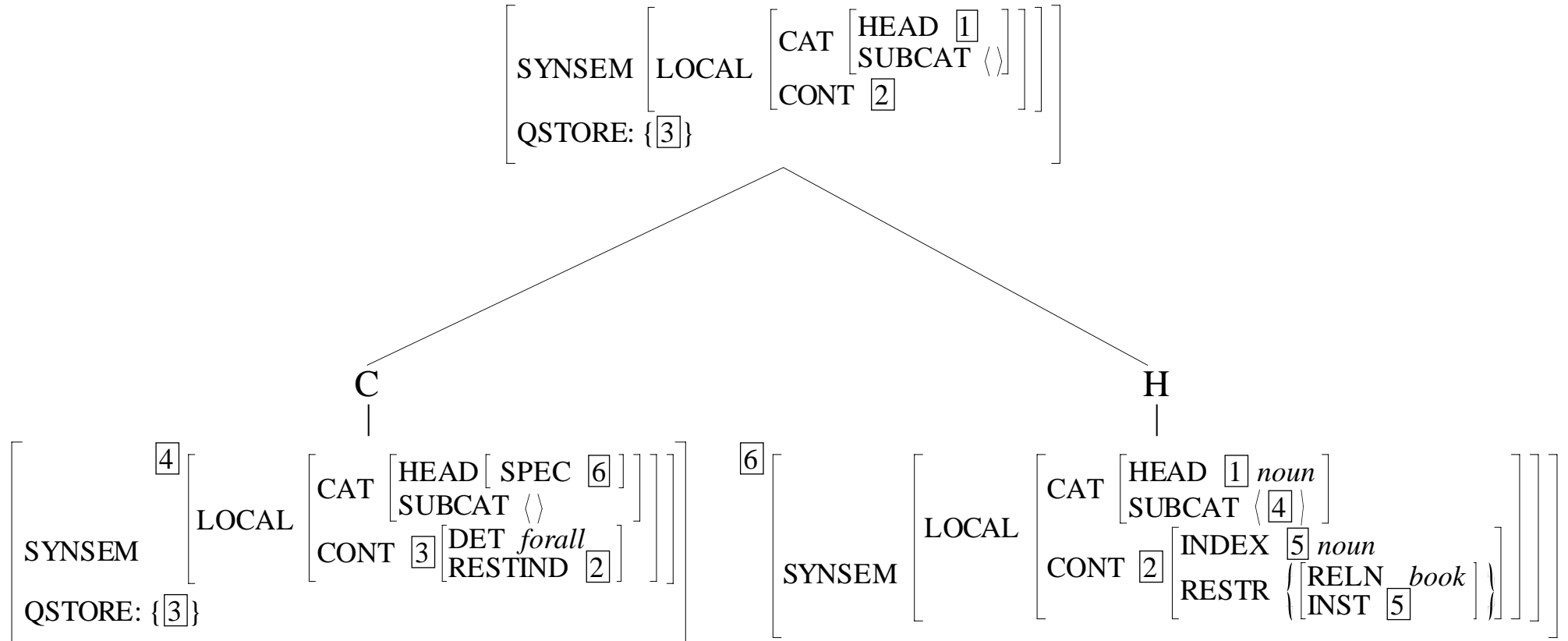
headed-struct : [*HEAD-DTR sign*
[*COMP-DTRS list(sign)*]]

head-mark-struct : [*HEAD-DTR phrase*
[*MARKER-DTR word*
[*COMP-DTRS elist*]]]

head-adjunct-struct : [*HEAD-DTR phrase*
[*ADJUNCT-DTR phrase*
[*COMP-DTRS elist*]]]

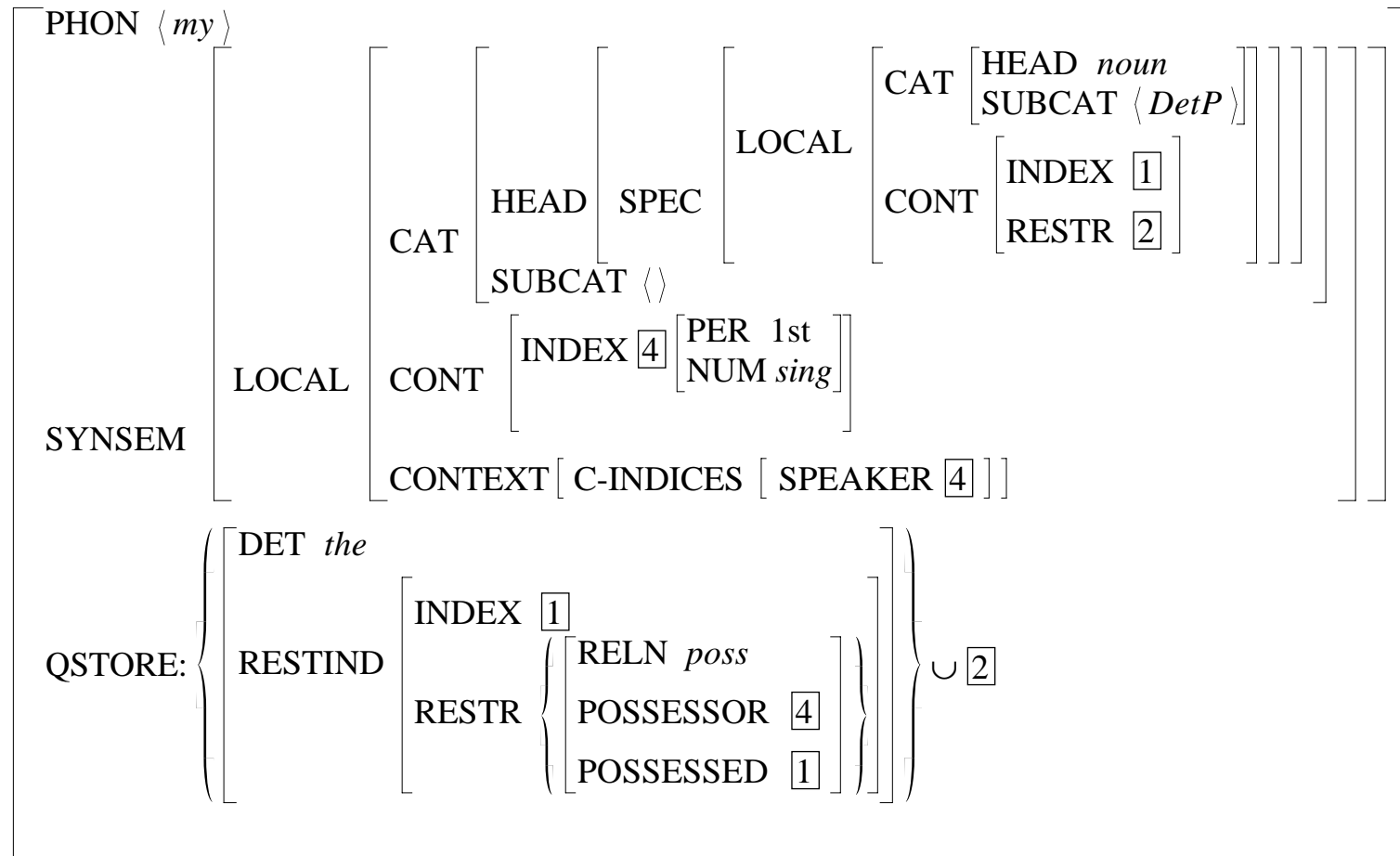
head-filler-struct : [*HEAD-DTR phrase*
[*FILLER-DTR phrase*
[*COMP-DTRS elist*]]]

NP 'every book'

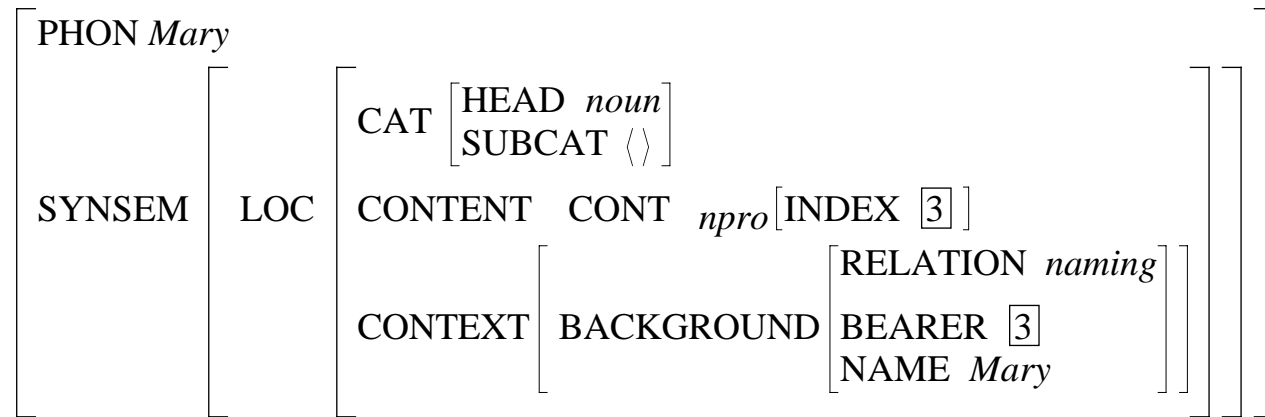


Possessives

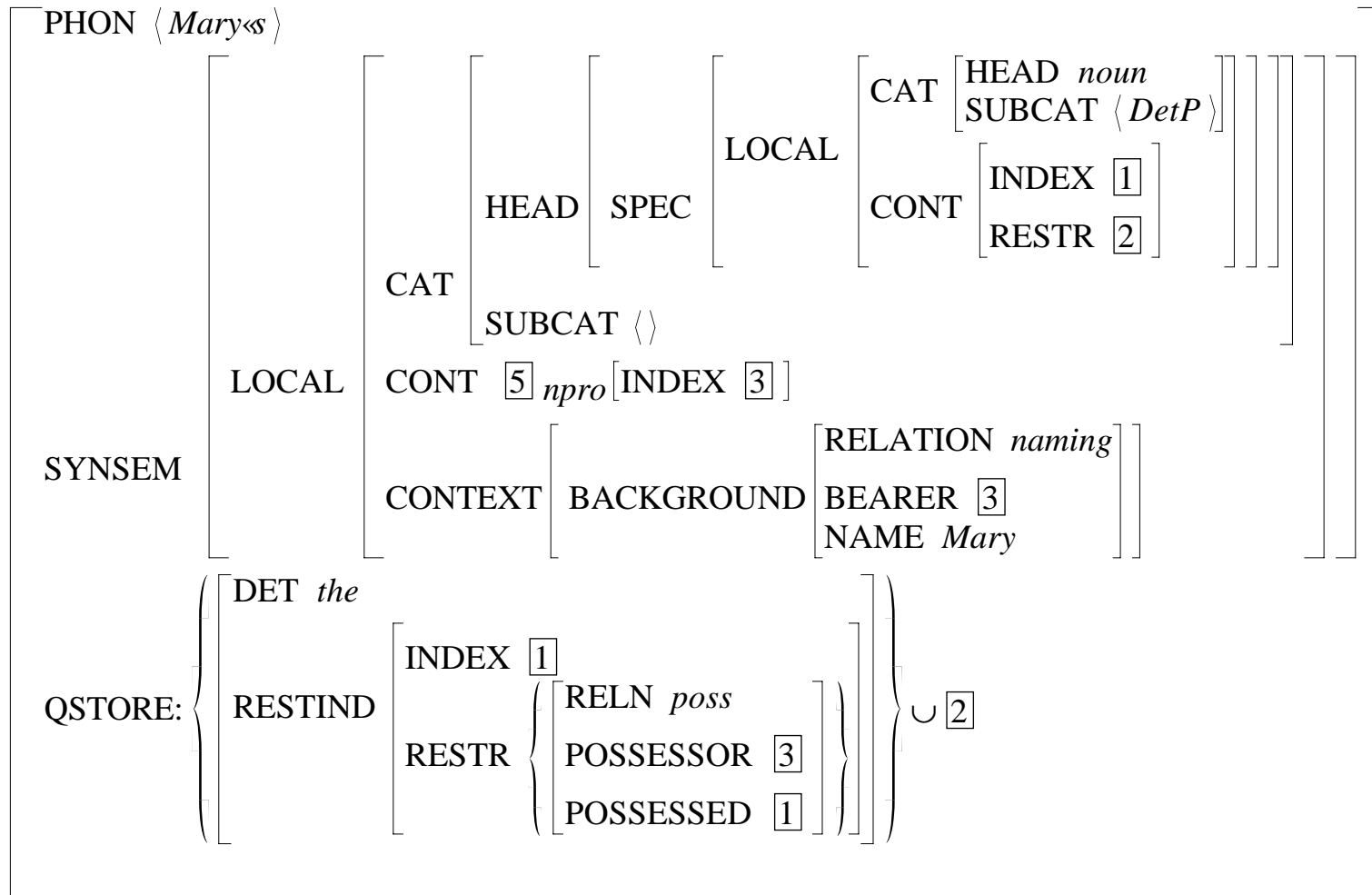
AVM for 'my'



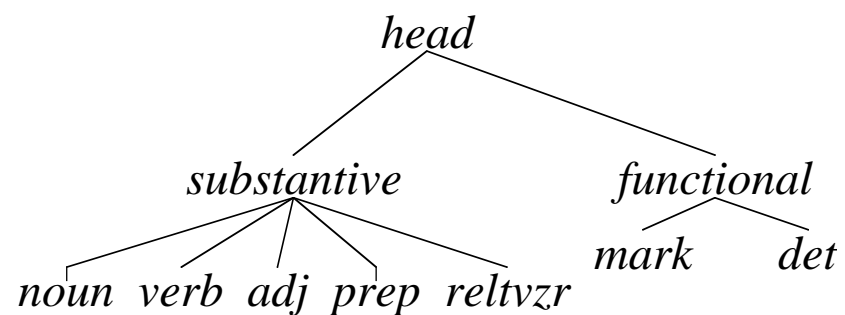
AVM for 'Mary'



AVM for 'Mary«s'



The sort *head*



substantive : $\left[\begin{array}{l} \text{PRD } \textit{boolean} \\ \text{MOD} : \textit{synsem} \vee \textit{minus} \end{array} \right]$

functional : $[\text{SPEC } \textit{synsem}]$

noun : $[\text{CASE } \textit{case}]$

verb : $\left[\begin{array}{l} \text{VFORM } \textit{vform} \\ \text{AUX } \textit{boolean} \\ \text{INV } \textit{boolean} \end{array} \right]$

preposition : $[\text{PFORM } \textit{pform}]$

verb $\left[\begin{array}{l} \text{VFORM } \textit{vform} \\ \text{AUX } \textit{boolean} \\ \text{INV } \textit{boolean} \\ \text{PRD } \textit{boolean} \\ \text{MOD} : \textit{synsem} \vee \textit{minus} \end{array} \right]$

Complement Extraction Lexical Rule

$$\left[\begin{array}{l} \text{comps: } \langle \dots [1], [2] \dots \rangle \\ \text{inherited:slash: } \{ \} \end{array} \right] \Rightarrow$$
$$\left[\begin{array}{l} \text{comps: } \langle \dots [2] \dots \rangle \\ \text{inherited:slash: } \{ [1] \} \end{array} \right]$$

Derivation of "The book is on the table"

