

Ling 566

Dec 9, 2010

Sign-Based Construction Grammar

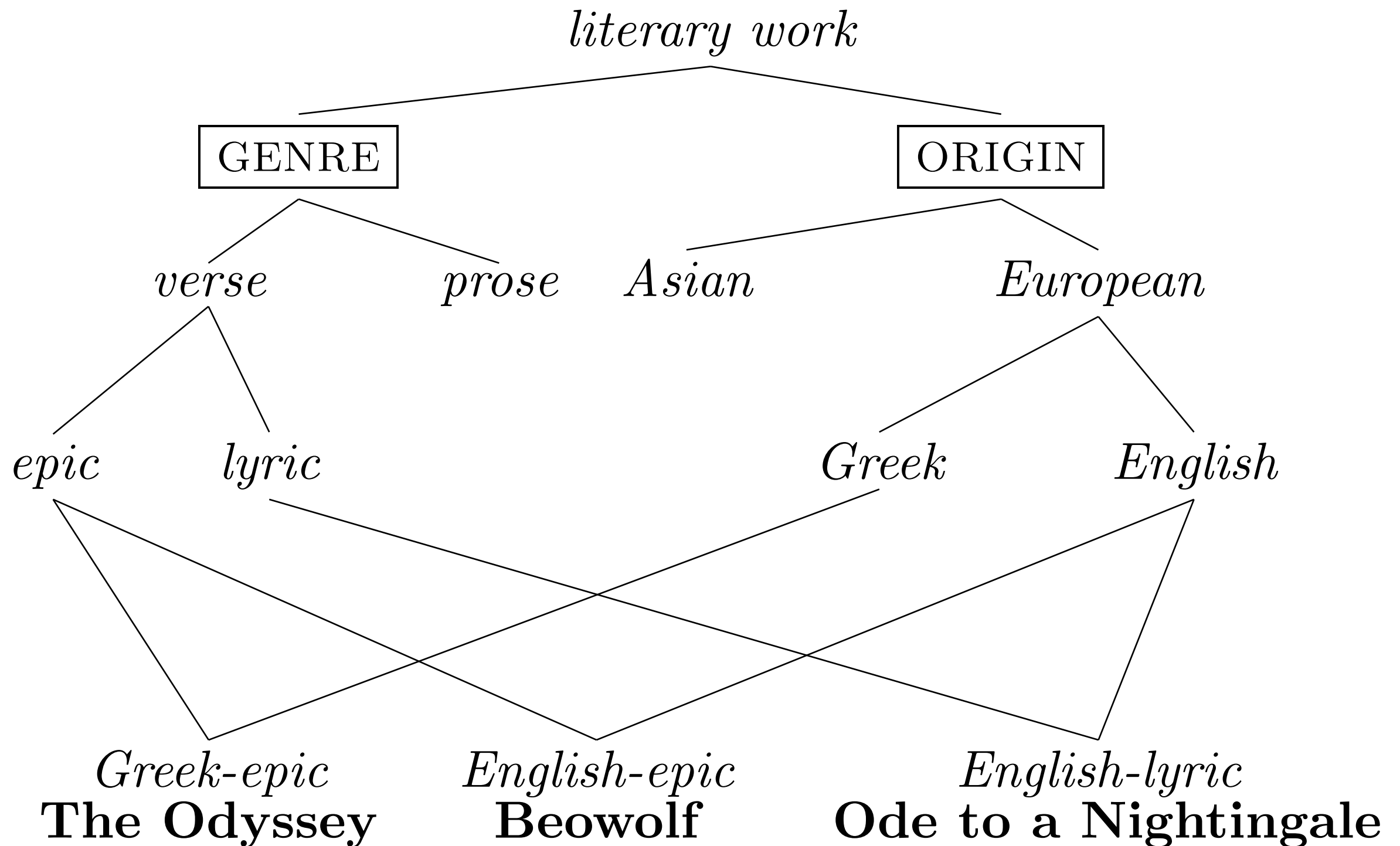
Overview

- Chapter 16 framework (same analyses, different underlying system)
- General wrap up

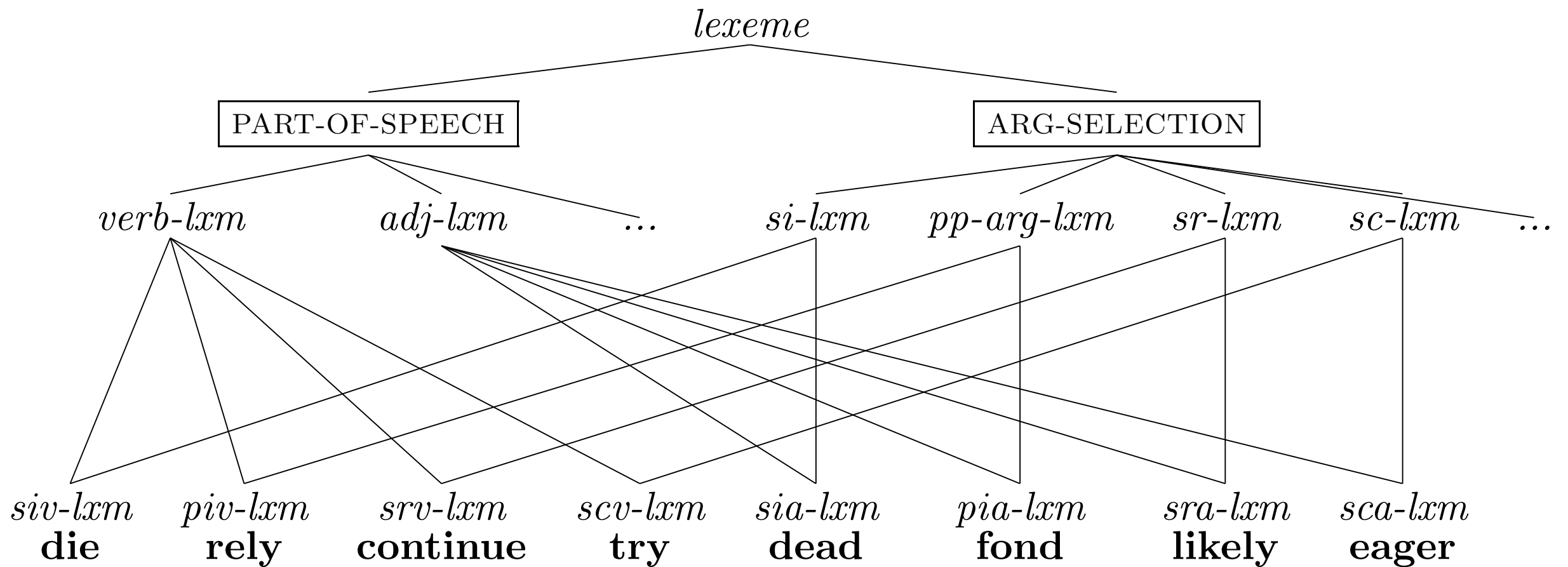
Overview of Differences

- Multiple Inheritance
- Signs
- Grammar rules form a hierarchy
- Every tree node has its own phonology
- Many principles become constraints on grammar rules
- The definition of well-formedness is simplified

Multiple Inheritance Hierarchies



Lexeme Hierarchy



Lexeme Abbreviations

- *si-lxm* : *strict-intransitive-lexeme*
- *pp-arg-lxm* : *PP-argument-lexeme*
- *sr-lxm* : *subject-raising-lexeme*
- *sc-lxm* : *subject-control-lexeme*
- *siv-lxm* : *strict-intransitive-verb-lexeme*
- *piv-lxm* : *PP-intransitive-verb-lexeme*
- *srv-lxm* : *subject-raising-verb-lexeme*
- *scv-lxm* : *subject-control-verb-lexeme*
- *sia-lxm* : *strict-intransitive-adjective-lexeme*
- *pia-lxm* : *PP-intransitive-adjective-lexeme*
- *sra-lxm* : *subject-raising-adjective-lexeme*
- *sca-lxm* : *subject-control-adjective-lexeme*

Lexeme Constraints

- $si-lxm : \left[\text{ARG-ST} \quad \langle X \rangle \right]$
- $pp-arg-lxm : \left[\text{ARG-ST} \quad \langle X, PP \rangle \right]$
- $sr-lxm : \left[\text{ARG-ST} \quad \left\langle \boxed{1}, \left[\text{SPR} \quad \langle \boxed{1} \rangle \right] \right\rangle \right]$
- $sc-lxm : \left[\text{ARG-ST} \quad \left\langle \text{NP}_i, \left[\text{SPR} \quad \langle \text{NP}_i \rangle \right] \right\rangle \right]$

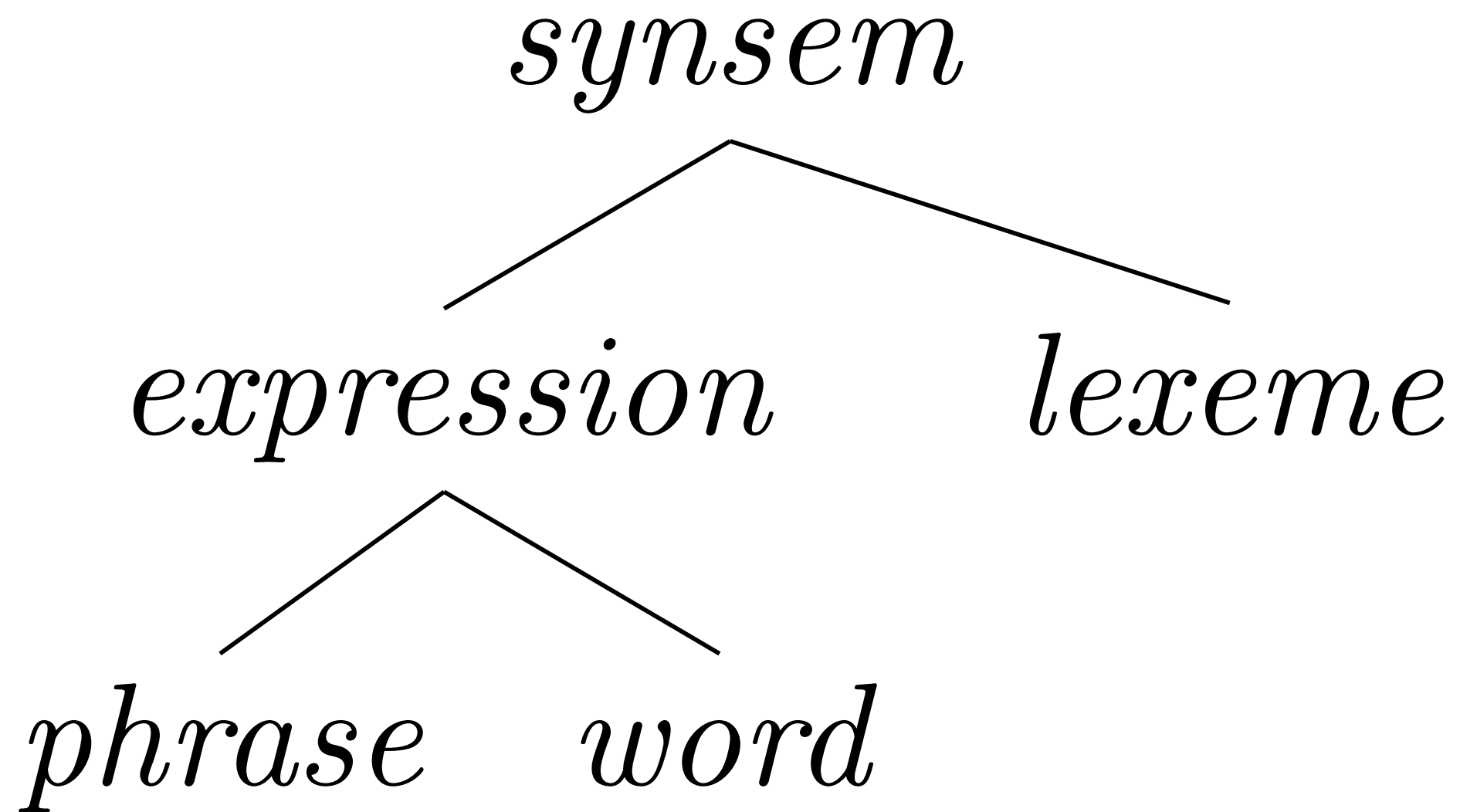
Another Lexeme Constraint

$$verb-lxm : \left[\begin{array}{l} SYN \\ \\ ARG-ST \\ \\ SEM \end{array} \left[\begin{array}{l} \left[\begin{array}{ll} HEAD & \left[\begin{array}{l} verb \\ PRED \\ INF / - \\ AUX / - \\ POL - \end{array} \right] \end{array} \right] \\ \left\langle \begin{array}{l} HEAD \quad nominal \\ VAL \quad \left[\begin{array}{ll} SPR & \langle \rangle \\ COMPS & \langle \rangle \end{array} \right] \end{array} \right\rangle, \dots \right\rangle \\ \left[\begin{array}{ll} MODE & prop \end{array} \right] \end{array} \right] \right]$$

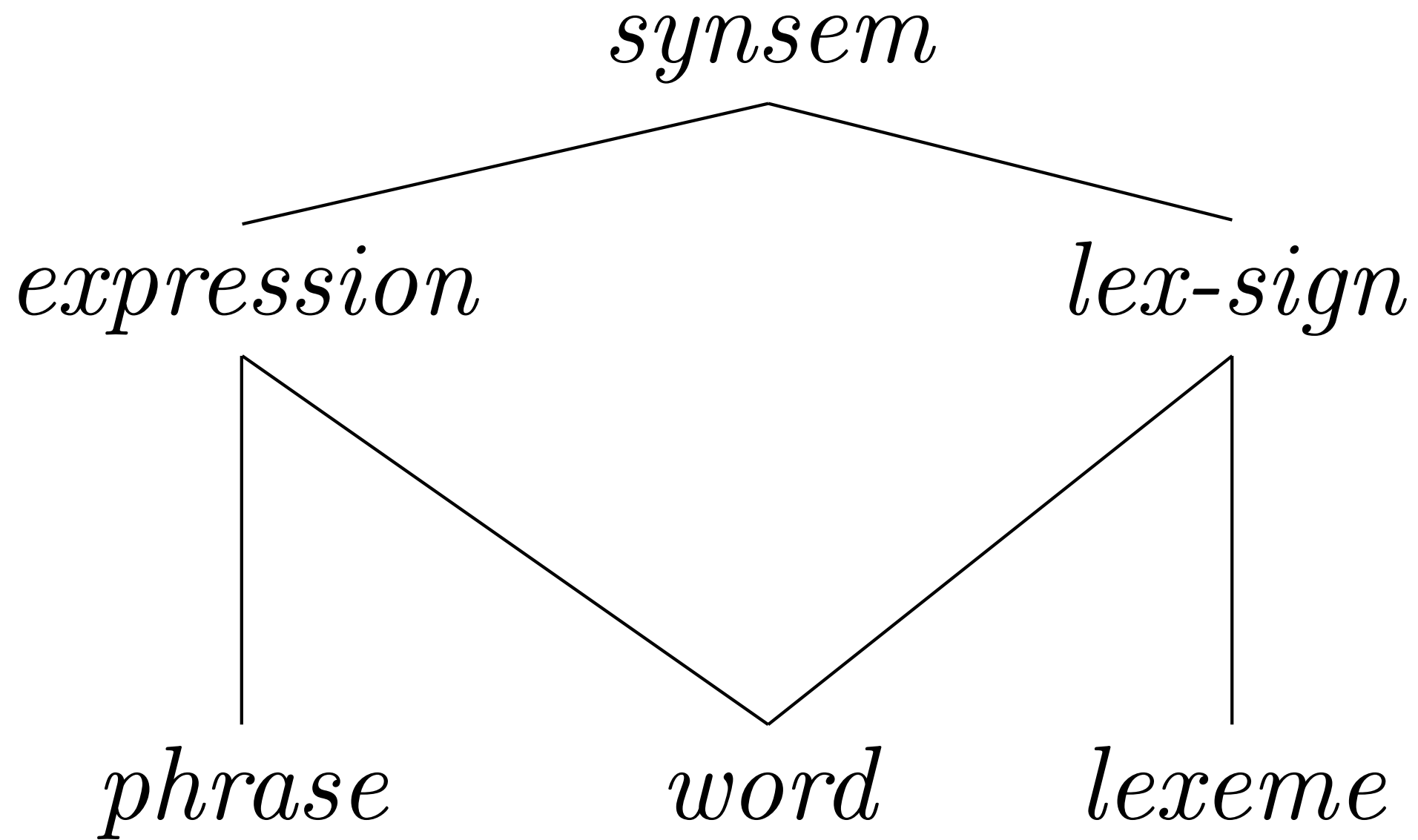
And Another

$$adj-lxm : \left[\begin{array}{l} SYN \left[\begin{array}{l} HEAD \quad adj \\ VAL \left[\begin{array}{l} SPR \quad \langle X \rangle \\ MOD \quad \langle [HEAD \quad noun] \rangle \end{array} \right] \end{array} \right] \\ ARG-ST \left\langle \begin{array}{l} HEAD \quad nominal \\ VAL \left[\begin{array}{l} SPR \quad \langle \rangle \\ COMPS \quad \langle \rangle \end{array} \right] \end{array} \right\rangle, \dots \rangle \\ SEM \left[\begin{array}{l} MODE \quad prop \end{array} \right] \end{array} \right]$$

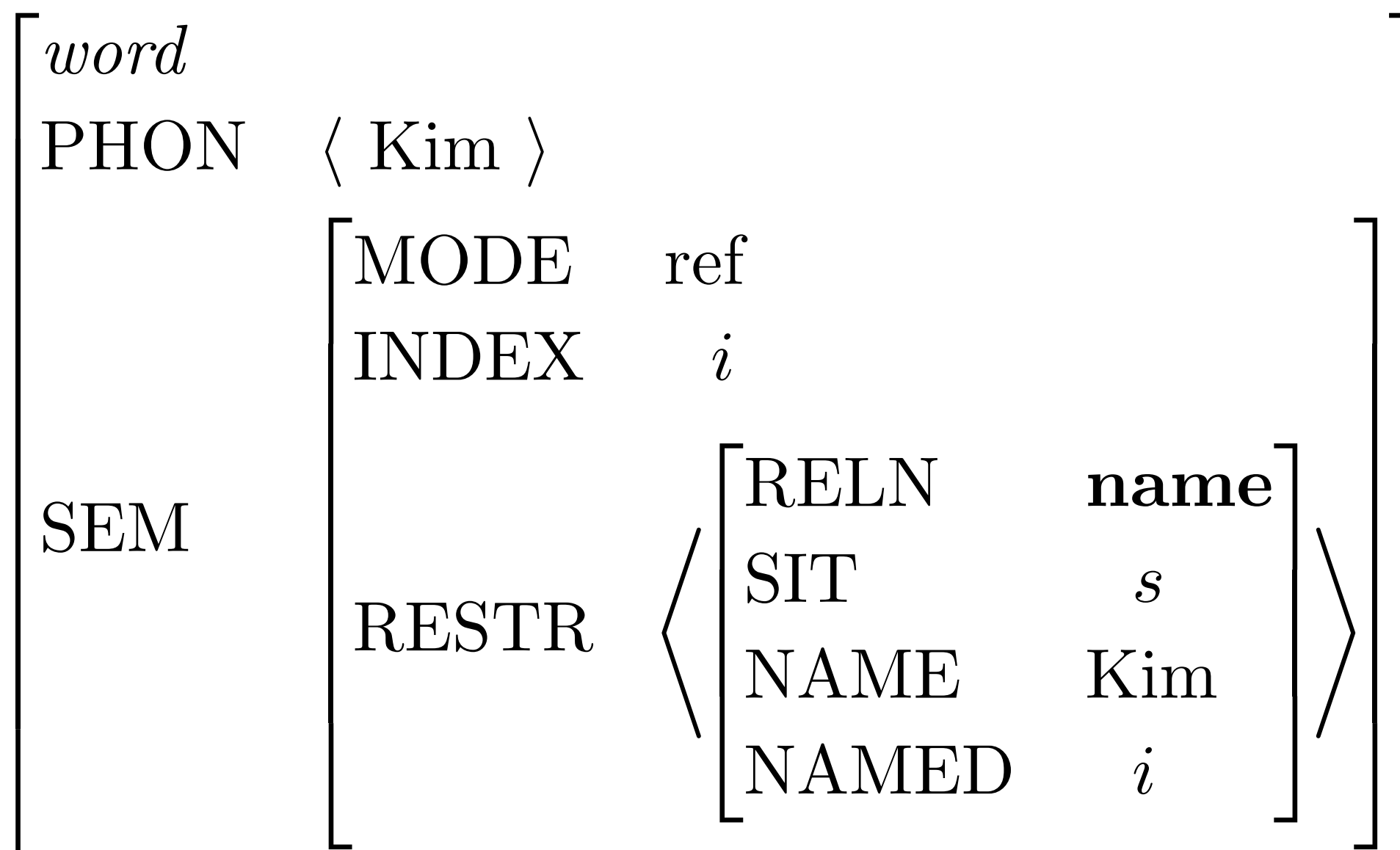
Synsem Types



Give ARG-ST a Unique Home



Words and Phrases as Saussurean Signs



Augmented Signs

<i>word</i>	
PHON	⟨ Kim ⟩
SYN	$\left[\begin{array}{l} \text{HEAD} \\ \text{AGR} \end{array} \begin{array}{l} \textit{noun} \\ \textit{3sing} \end{array} \right]$
ARG-ST	⟨ ⟩
SEM	$\left[\begin{array}{ll} \text{MODE} & \text{ref} \\ \text{INDEX} & i \\ \text{RESTR} & \left\langle \begin{array}{ll} \text{RELN} & \mathbf{name} \\ \text{SIT} & s \\ \text{NAME} & \text{Kim} \\ \text{NAMED} & i \end{array} \right\rangle \end{array} \right]$

Phrases as Signs

<i>phrase</i>	
PHON	⟨ Kim , walks ⟩
SYN	$\left[\begin{array}{l} \text{HEAD} \left[\begin{array}{l} \text{verb} \\ \text{FORM} \quad \text{fin} \end{array} \right] \\ \text{SPR} \quad \langle \rangle \\ \text{COMPS} \quad \langle \rangle \end{array} \right]$
SEM	$\left[\begin{array}{l} \text{MODE} \quad \text{prop} \\ \text{INDEX} \quad s \\ \text{RESTR} \quad \left\langle \left[\begin{array}{l} \text{RELN} \quad \mathbf{name} \\ \text{NAME} \quad \text{Kim} \\ \text{NAMED} \quad i \end{array} \right], \left[\begin{array}{l} \text{RELN} \quad \mathbf{walk} \\ \text{SIT} \quad s \\ \text{WALKER} \quad i \end{array} \right], \dots \right\rangle \end{array} \right]$

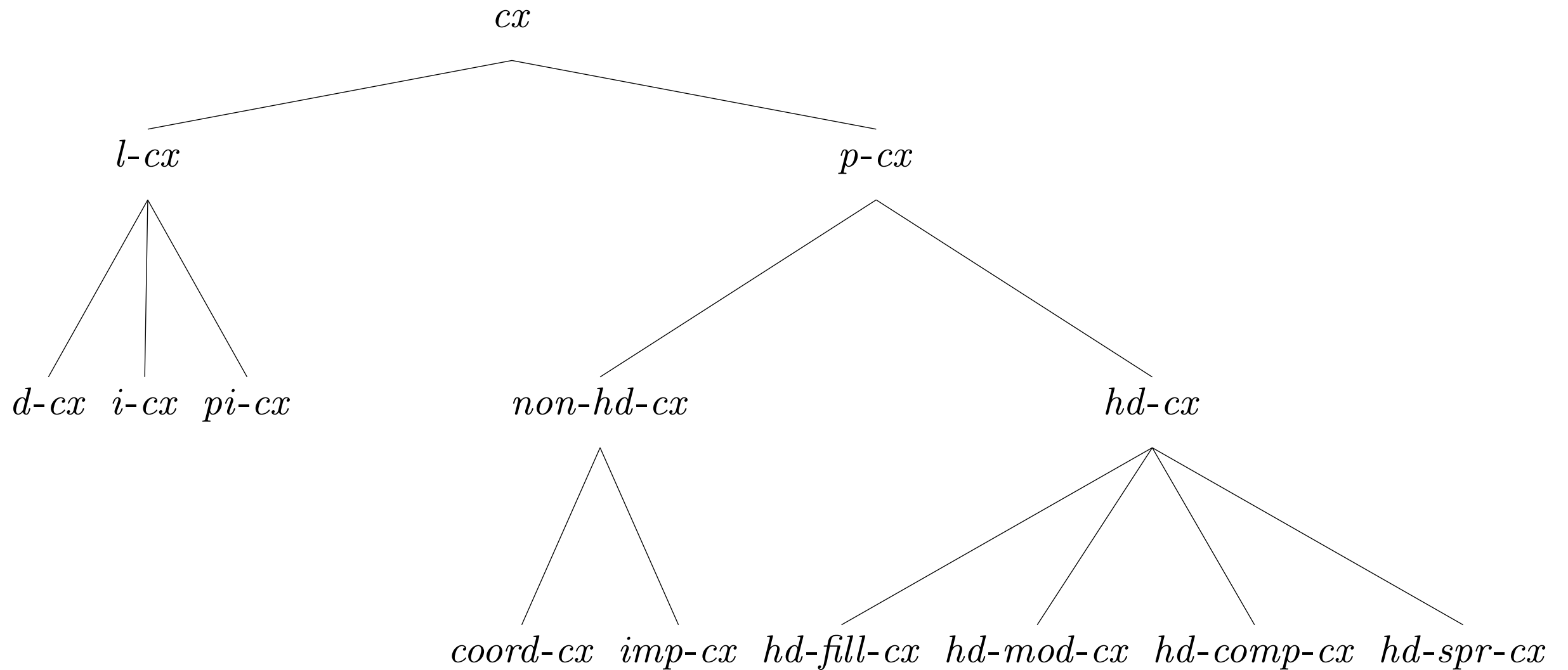
Types and Constraints

TYPE	FEATURES/VALUE TYPES	IST
<i>sign</i>	$\left[\begin{array}{ll} \text{PHON} & \textit{list(form)} \\ \text{SYN} & \textit{syn-cat} \\ \text{SEM} & \textit{sem-cat} \end{array} \right]$	<i>feat-struct</i>
<i>expression</i>		<i>sign</i>
<i>lex-sign</i>	$\left[\text{ARG-ST} \quad \textit{list(expression)} \right]$	<i>sign</i>
<i>phrase</i>		<i>expression</i>
<i>word</i>		<i>expression & lex-sign</i>
<i>lexeme</i>		<i>lex-sign</i>

Constructions: Some Abbreviations

<i>cx</i>	<i>construction</i>
<i>l-cx</i>	<i>lexical-construction</i>
<i>d-cx</i>	<i>derivational-construction</i>
<i>i-cx</i>	<i>inflectional-construction</i>
<i>pi-cx</i>	<i>postinflectional-construction</i>
<i>p-cx</i>	<i>phrasal-construction</i>
<i>non-hd-cx</i>	<i>non-headed-construction</i>
<i>hd-cx</i>	<i>headed-construction</i>
<i>coord-cx</i>	<i>coordinate-construction</i>
<i>imp-cx</i>	<i>imperative-construction</i>
<i>hd-fill-cx</i>	<i>head-filler-construction</i>
<i>hd-comp-cx</i>	<i>head-complement-construction</i>
<i>hd-spr-cx</i>	<i>head-specifier-construction</i>
<i>hd-mod-cx</i>	<i>head-modifier-construction</i>

The World of Constructions



Properties of Constructions

TYPE	FEATURES/VALUE TYPES	IST
cx	$\left[\begin{array}{ll} \text{MOTHER} & \textit{sign} \\ \text{DTRS} & \textit{list(sign)} \end{array} \right]$	$\textit{feat-struct}$
$l-cx$	$\left[\begin{array}{ll} \text{MOTHER} & \textit{lex-sign} \\ \text{DTRS} & \langle \textit{lex-sign} \rangle \end{array} \right]$	cx
$p-cx$	$\left[\begin{array}{ll} \text{MOTHER} & \textit{phrase} \\ \text{DTRS} & \textit{list(expression)} \end{array} \right]$	cx

Well-Formed Tree Structure

Φ is a Well-Formed Structure according to a grammar G if and only if

1. there is some construction C in G , such that
2. there is a feature structure I that is an instantiation of C , such that Φ is the value of the MOTHER feature of I .

A Well-Formed Feature Structure

The grammar licenses a feature structure of type *phrase* whose PHON value is $\langle ate, a, pizza \rangle$ because there is a feature structure instantiating the head-complement construction that has that feature structure as its MOTHER value. This phrasal construct satisfies the following description:

$$\left[\begin{array}{l} \textit{phrase} \\ \text{PHON} \quad \langle ate, a, pizza \rangle \\ \text{SYN} \quad \left[\begin{array}{l} \text{HEAD} \quad \left[\begin{array}{l} \textit{verb} \\ \text{FORM} \quad \textit{fin} \end{array} \right] \\ \text{VAL} \quad \left[\begin{array}{l} \text{SPR} \quad \langle NP \rangle \\ \text{COMPS} \quad \langle \rangle \\ \text{MOD} \quad \langle \rangle \end{array} \right] \\ \text{GAP} \quad \langle \rangle \end{array} \right] \\ \text{SEM} \quad \left[\begin{array}{l} \text{MODE} \quad \textit{prop} \\ \text{INDEX} \quad \textit{s} \\ \text{RESTR} \quad \left\langle \left[\begin{array}{l} \text{RELN} \quad \textbf{eat} \\ \text{SIT} \quad \textit{s} \\ \text{EATER} \quad \textit{i} \\ \text{EATEN} \quad \textit{j} \end{array} \right], \left[\begin{array}{l} \text{RELN} \quad \textbf{a} \\ \text{BV} \quad \textit{j} \end{array} \right], \left[\begin{array}{l} \text{RELN} \quad \textbf{pizza} \\ \text{INST} \quad \textit{j} \end{array} \right], \right\rangle \end{array} \right] \end{array} \right]$$

Another Well-Formed Feature Structure

<i>lexeme</i>																	
PHON	⟨ driver ⟩																
SYN	<table> <tr> <td>HEAD</td> <td> <table> <tr> <td colspan="2"><i>noun</i></td> </tr> <tr> <td>AGR</td> <td>[PER 3rd]</td> </tr> </table> </td> </tr> <tr> <td>VAL</td> <td> <table> <tr> <td>SPR</td> <td>⟨ DP ⟩</td> </tr> <tr> <td>COMPS</td> <td>⟨ ⟩</td> </tr> <tr> <td>MOD</td> <td>⟨ ⟩</td> </tr> </table> </td> </tr> <tr> <td>GAP</td> <td>⟨ ⟩</td> </tr> </table>	HEAD	<table> <tr> <td colspan="2"><i>noun</i></td> </tr> <tr> <td>AGR</td> <td>[PER 3rd]</td> </tr> </table>	<i>noun</i>		AGR	[PER 3rd]	VAL	<table> <tr> <td>SPR</td> <td>⟨ DP ⟩</td> </tr> <tr> <td>COMPS</td> <td>⟨ ⟩</td> </tr> <tr> <td>MOD</td> <td>⟨ ⟩</td> </tr> </table>	SPR	⟨ DP ⟩	COMPS	⟨ ⟩	MOD	⟨ ⟩	GAP	⟨ ⟩
	HEAD	<table> <tr> <td colspan="2"><i>noun</i></td> </tr> <tr> <td>AGR</td> <td>[PER 3rd]</td> </tr> </table>	<i>noun</i>		AGR	[PER 3rd]											
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SIT	<i>s</i>																
DRIVER	<i>i</i>																

Two Constraints

Root Constraint:

$$\left[\begin{array}{c} \text{SYN} \\ \left[\begin{array}{cc} \text{HEAD} & \left[\begin{array}{c} \textit{verb} \\ \text{FORM} \quad \text{fin} \end{array} \right] \\ \text{VAL} & \left[\begin{array}{c} \text{COMPS} \quad \langle \rangle \\ \text{SPR} \quad \langle \rangle \end{array} \right] \\ \text{GAP} & \langle \rangle \end{array} \right] \end{array} \right]$$

Principle of Order:

$$cx : \left[\begin{array}{cc} \text{MOTHER} & [\text{PHON } \boxed{A1} \oplus \dots \oplus \boxed{An}] \\ \text{DTRS} & \langle [\text{PHON } \boxed{A1}], \dots, [\text{PHON } \boxed{An}] \rangle \end{array} \right]$$

Semantic Compositionality Principle

$$cx : \left[\begin{array}{l} \text{MOTHER} \\ \text{DTRS} \end{array} \begin{array}{l} [\text{SEM} [\text{RESTR } \boxed{A1} \oplus \dots \oplus \boxed{An}]] \\ \langle [\text{SEM} [\text{RESTR } \boxed{A1}]] , \dots , [\text{SEM} [\text{RESTR } \boxed{An}]] \rangle \end{array} \right]$$

Alternative Version:

$$cx : \left[\begin{array}{l} \text{MOTHER} \\ \text{DTRS} \\ \text{CX-SEM} \end{array} \begin{array}{l} [\text{SEM} [\text{RESTR } \boxed{A0} \oplus \boxed{A1} \oplus \dots \oplus \boxed{An}]] \\ \langle [\text{SEM} [\text{RESTR } \boxed{A1}]] , \dots , [\text{SEM} [\text{RESTR } \boxed{An}]] \rangle \\ \boxed{A0} \end{array} \right]$$

Headed Constructions

TYPE	FEATURES/VALUE TYPES	IST
<i>hd-cx</i>	[HD-DTR <i>sign</i>]	<i>cx</i>

Head Feature Principle:

$$hd-cx : \left[\begin{array}{ll} \text{MOTHER} & [\text{SYN} \text{ } [\text{HEAD} \text{ } \boxed{1}]] \\ \text{HD-DTR} & [\text{SYN} \text{ } [\text{HEAD} \text{ } \boxed{1}]] \end{array} \right]$$

Two More Principles

Semantic Inheritance Principle:

$$hd-cx : \left[\begin{array}{c} \text{MOTHER} \\ \text{HD-DTR} \end{array} \left[\begin{array}{c} \text{SEM} \\ \text{SEM} \end{array} \left[\begin{array}{cc} \text{MODE} & \boxed{1} \\ \text{INDEX} & \boxed{2} \end{array} \right] \right] \right]$$

Valence Principle:

$$hd-cx : \left[\begin{array}{c} \text{MOTHER} \\ \text{HD-DTR} \end{array} \left[\begin{array}{c} \text{[SYN [VAL / } \boxed{1} \text{]]} \\ \text{[SYN [VAL / } \boxed{1} \text{]]} \end{array} \right] \right]$$

The GAP Principle

hd-cx:

$$\left[\begin{array}{l} \text{MOTHER} \\ \text{HD-DTR} \\ \text{DTRS} \end{array} \begin{array}{l} [\text{SYN} [\text{GAP} (\boxed{A1} \oplus \dots \oplus \boxed{An}) \ominus \boxed{A0}]] \\ [\text{SYN} [\text{STOP-GAP} \boxed{A0}]] \\ \langle [\text{SYN} [\text{GAP} \boxed{A1}]] , \dots , [\text{SYN} [\text{GAP} \boxed{An}]] \rangle \end{array} \right]$$

The Head-Complement Construction

$$hd-comp-cx : \left[\begin{array}{l} \text{MOTHER} \quad [\text{SYN} \quad [\text{VAL} \quad [\text{COMPS} \quad \langle \rangle]]] \\ \text{HD-DTR} \quad \boxed{0} \left[\begin{array}{l} \textit{word} \\ \text{SYN} \quad [\text{VAL} \quad [\text{COMPS} \quad \boxed{A}]] \end{array} \right] \\ \text{DTRS} \quad \langle \boxed{0} \rangle \oplus \boxed{A} \textit{nelist} \end{array} \right]$$

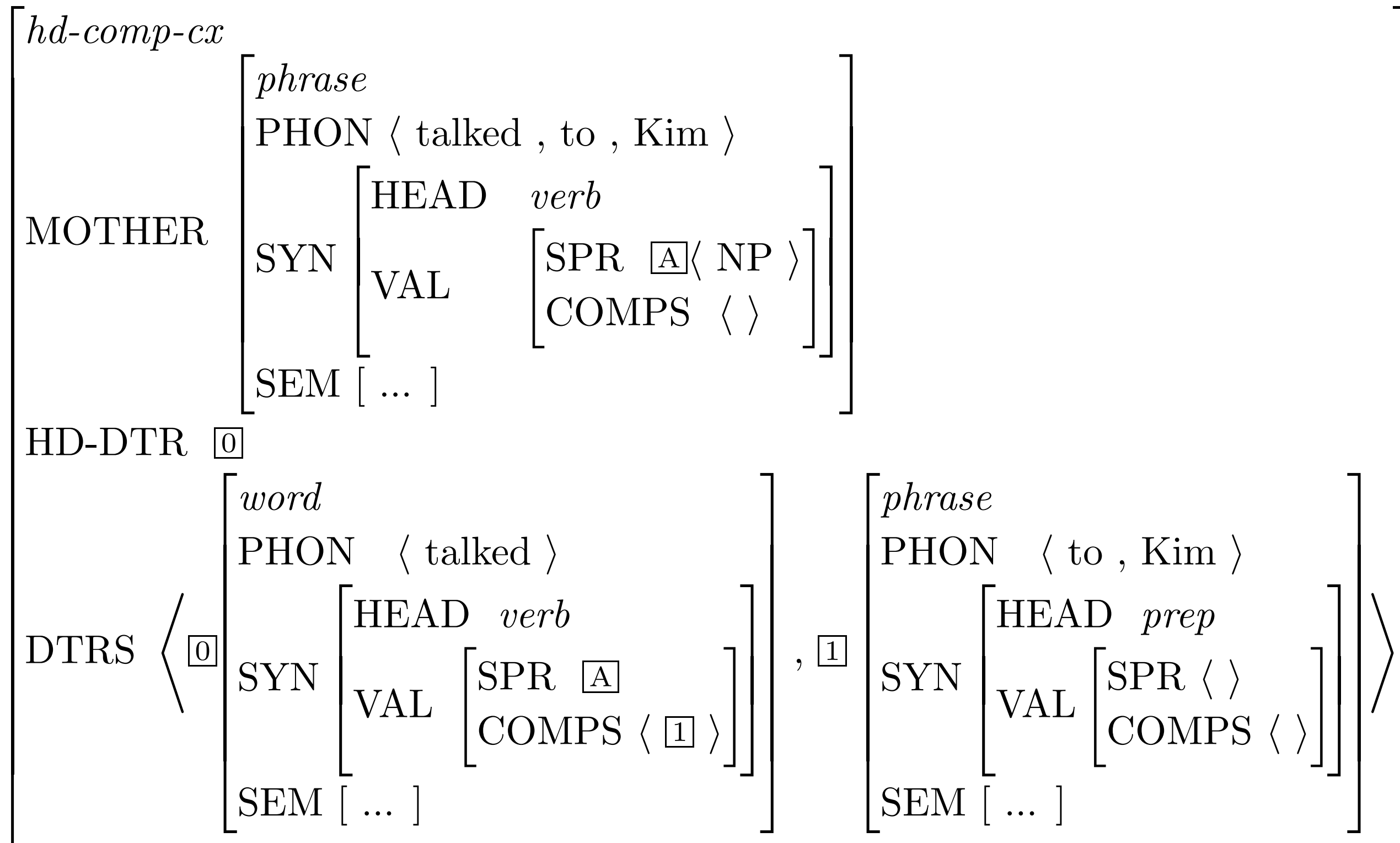
And with inherited constraints....

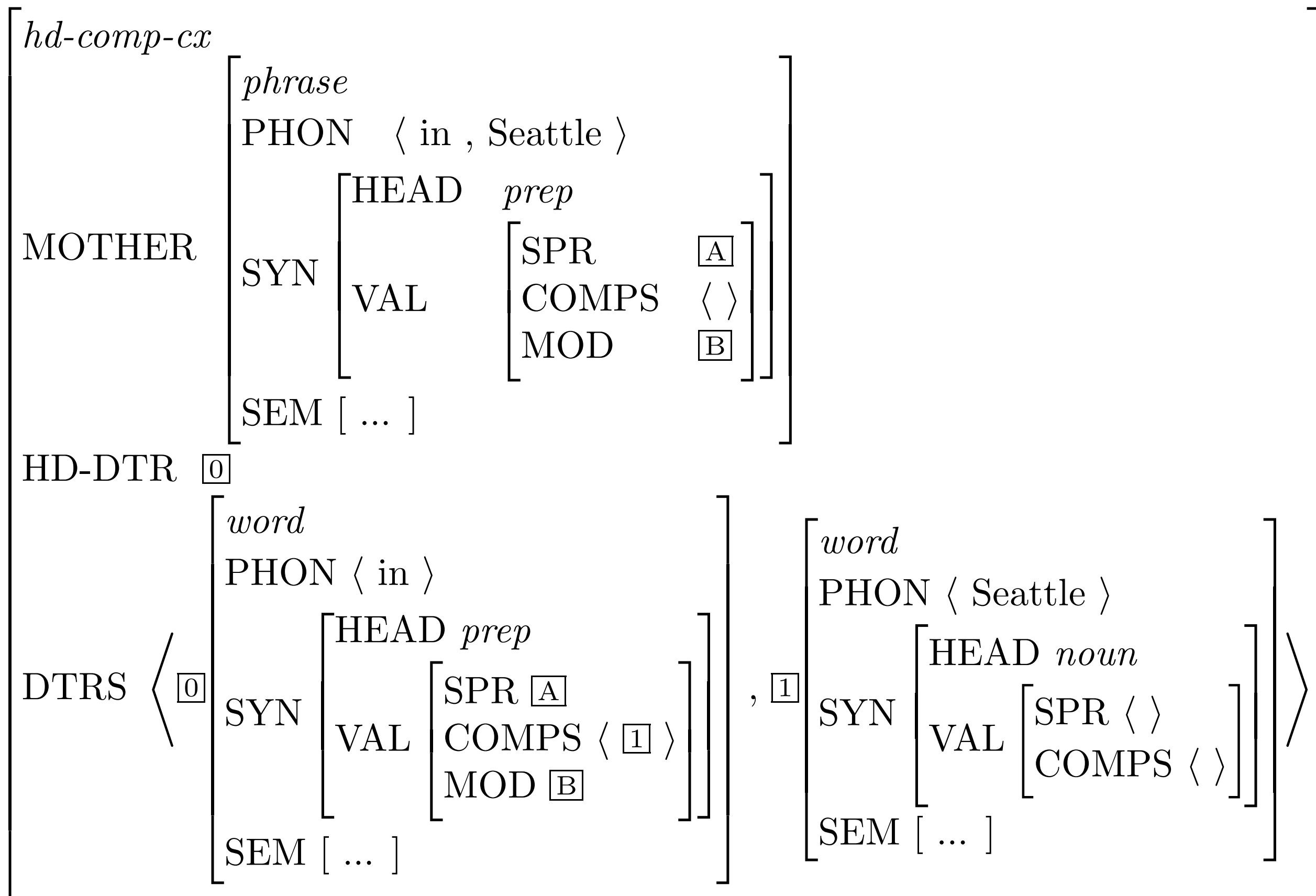
$$\left[\begin{array}{l} \text{MOTHER} \\ \text{HD-DTR } \boxed{4} \\ \text{DTRS } \left\langle \boxed{4} \left[\begin{array}{l} \text{PHON } \boxed{A1} \\ \text{RESTR } \boxed{C1} \end{array} \right], \boxed{5} \left[\begin{array}{l} \text{PHON } \boxed{A2} \\ \text{RESTR } \boxed{C2} \end{array} \right], \dots, \boxed{m} \left[\begin{array}{l} \text{PHON } \boxed{A_n} \\ \text{RESTR } \boxed{C_n} \end{array} \right] \right\rangle \end{array} \right]$$

$$\left[\begin{array}{l} \text{PHON } \boxed{A1} \oplus \dots \oplus \boxed{A_n} \\ \text{SYN } \left[\begin{array}{l} \text{HEAD } \boxed{1} \\ \text{VAL } \left[\begin{array}{l} \text{COMPS } \langle \rangle \\ \text{SPR } \boxed{D} \\ \text{MOD } \boxed{E} \end{array} \right] \end{array} \right] \\ \text{SEM } \left[\begin{array}{l} \text{MODE } \boxed{2} \\ \text{INDEX } \boxed{3} \\ \text{RESTR } \boxed{C1} \oplus \dots \oplus \boxed{C_n} \end{array} \right] \end{array} \right]$$

$$\left[\begin{array}{l} \text{word} \\ \text{SYN } \left[\begin{array}{l} \text{HEAD } \boxed{1} \\ \text{VAL } \left[\begin{array}{l} \text{COMPS } \langle \boxed{5}, \dots, \boxed{m} \rangle \\ \text{SPR } \boxed{D} \\ \text{MOD } \boxed{E} \end{array} \right] \end{array} \right] \\ \text{SEM } \left[\begin{array}{l} \text{MODE } \boxed{2} \\ \text{INDEX } \boxed{3} \end{array} \right] \end{array} \right]$$

An Instance of the HCC



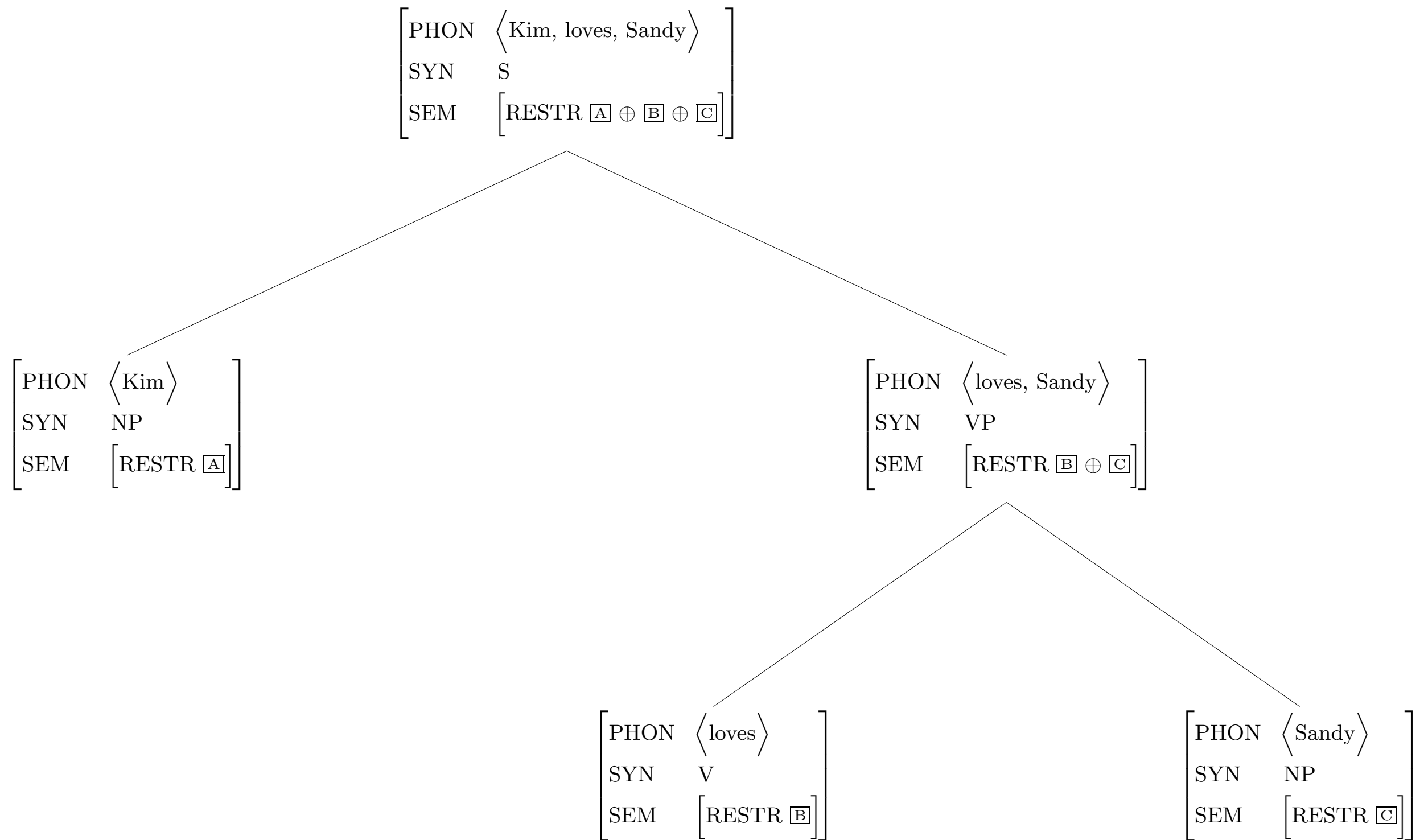


Two More Constructions

$$hd-spr-cx : \left[\begin{array}{l} \text{MOTHER} \left[\text{SYN} \left[\text{SPR} \langle \rangle \right] \right] \\ \text{HD-DTR} \boxed{0} \left[\text{SYN} \left[\begin{array}{l} \text{SPR} \langle \boxed{1} \rangle \\ \text{COMPS} \langle \rangle \\ \text{STOP-GAP} \langle \rangle \end{array} \right] \right] \\ \text{DTRS} \langle \boxed{1}, \boxed{0} \rangle \end{array} \right]$$

$$hd-mod-cx : \left[\begin{array}{l} \text{HD-DTR} \boxed{1} \left[\text{SYN} \left[\begin{array}{l} \text{VAL} \left[\text{COMPS} \langle \rangle \right] \\ \text{STOP-GAP} \langle \rangle \end{array} \right] \right] \\ \text{DTRS} \left\langle \boxed{1}, \left[\text{SYN} \left[\text{VAL} \left[\begin{array}{l} \text{COMPS} \langle \rangle \\ \text{MOD} \langle \boxed{1} \rangle \end{array} \right] \right] \right] \right\rangle \end{array} \right]$$

A Tree

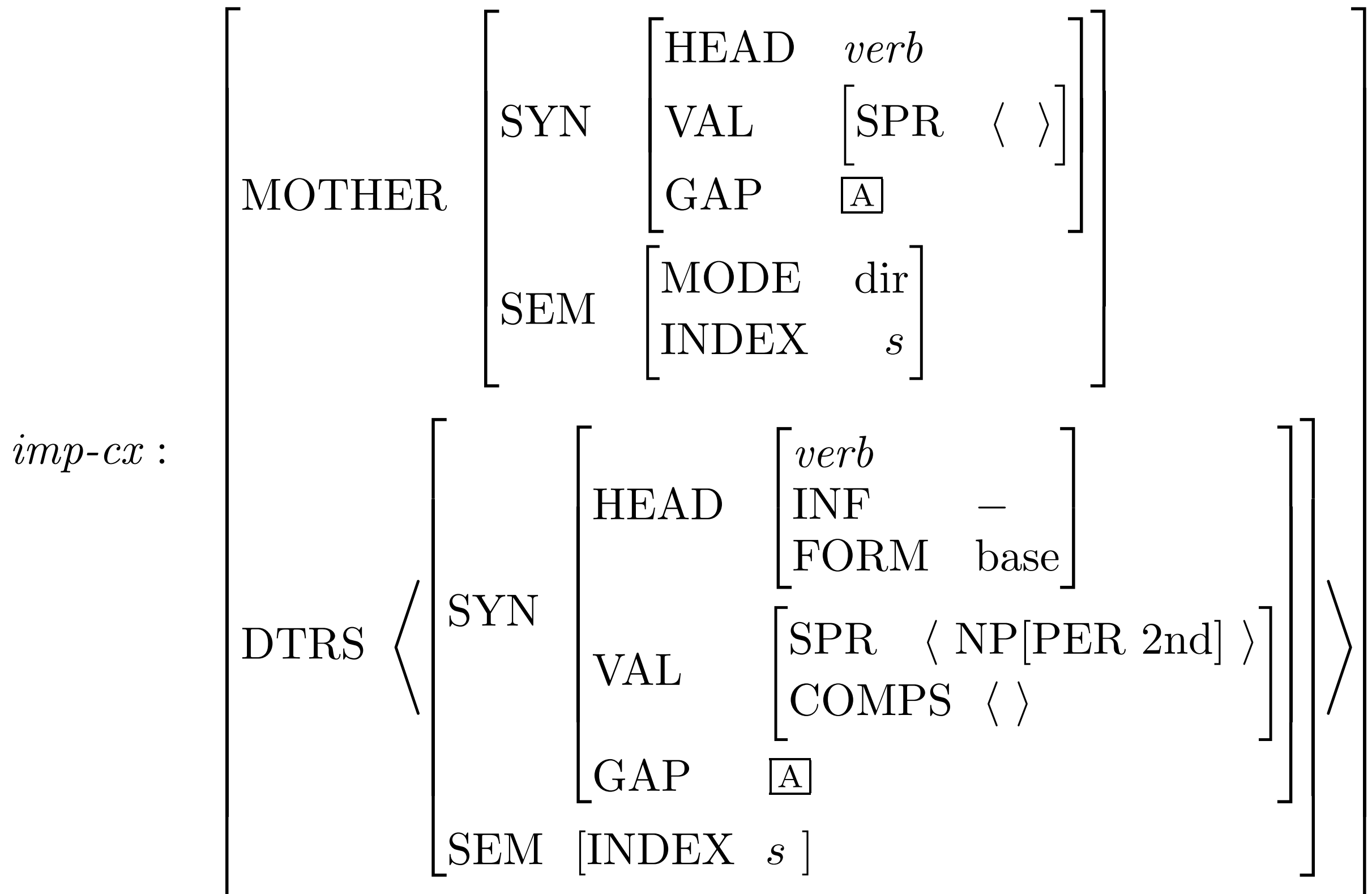


The Head-Filler Construction

$$\begin{array}{l}
 \text{hd-fill-cx :} \left[\begin{array}{l} \text{HD-DTR} \\ \text{DTRS} \end{array} \left[\begin{array}{l} \boxed{0} \text{ SYN} \\ \langle \boxed{1} [\text{GAP} \langle \rangle] , \boxed{0} \rangle \end{array} \left[\begin{array}{l} \text{HEAD} \left[\begin{array}{l} \text{verb} \\ \text{FORM fin} \end{array} \right] \\ \text{VAL} \left[\begin{array}{l} \text{SPR} \langle \rangle \\ \text{COMPS} \langle \rangle \end{array} \right] \\ \text{GAP} \langle \boxed{1} \rangle \\ \text{STOP-GAP} \langle \boxed{1} \rangle \end{array} \right] \right] \right]
 \end{array}$$

$$\begin{array}{l}
 \left[\begin{array}{l}
 \textit{hd-fill-cx} \\
 \text{MOTHER} \left[\begin{array}{l}
 \text{PHON} \langle \text{Bagels} , \text{I} , \text{think} , \text{she} , \text{likes} \rangle \\
 \text{SYN} \left[\begin{array}{l}
 \text{HEAD} \boxed{2} \left[\begin{array}{l} \textit{verb} \\ \text{FORM} \text{ fin} \end{array} \right] \\
 \text{VAL} \left[\begin{array}{l} \text{SPR} \langle \rangle \\ \text{COMPS} \langle \rangle \end{array} \right] \\
 \text{GAP} \langle \rangle
 \end{array} \right] \\
 \text{SEM} [\dots]
 \end{array} \right] \\
 \text{HD-DTR} \boxed{0} \\
 \text{DTRS} \left\langle \boxed{1} \left[\begin{array}{l}
 \text{PHON} \langle \text{Bagels} \rangle \\
 \text{SYN} \left[\begin{array}{l}
 \text{HEAD} \textit{noun} \\
 \text{VAL} \left[\begin{array}{l} \text{SPR} \langle \rangle \\ \text{COMPS} \langle \rangle \end{array} \right] \\
 \text{SEM} [\dots]
 \end{array} \right] \\
 \text{SEM} [\dots]
 \end{array} \right] , \boxed{0} \left[\begin{array}{l}
 \text{PHON} \langle \text{I, think, she, likes} \rangle \\
 \text{SYN} \left[\begin{array}{l}
 \text{HEAD} \boxed{2} \\
 \text{VAL} \left[\begin{array}{l} \text{SPR} \langle \rangle \\ \text{COMPS} \langle \rangle \end{array} \right] \\
 \text{GAP} \langle \boxed{1} \rangle \\
 \text{STOP-GAP} \langle \boxed{1} \rangle \\
 \text{SEM} [\dots]
 \end{array} \right]
 \end{array} \right] \right\rangle
 \end{array}
 \right.
 \end{array}$$

The Imperative Construction



Coordination Construction

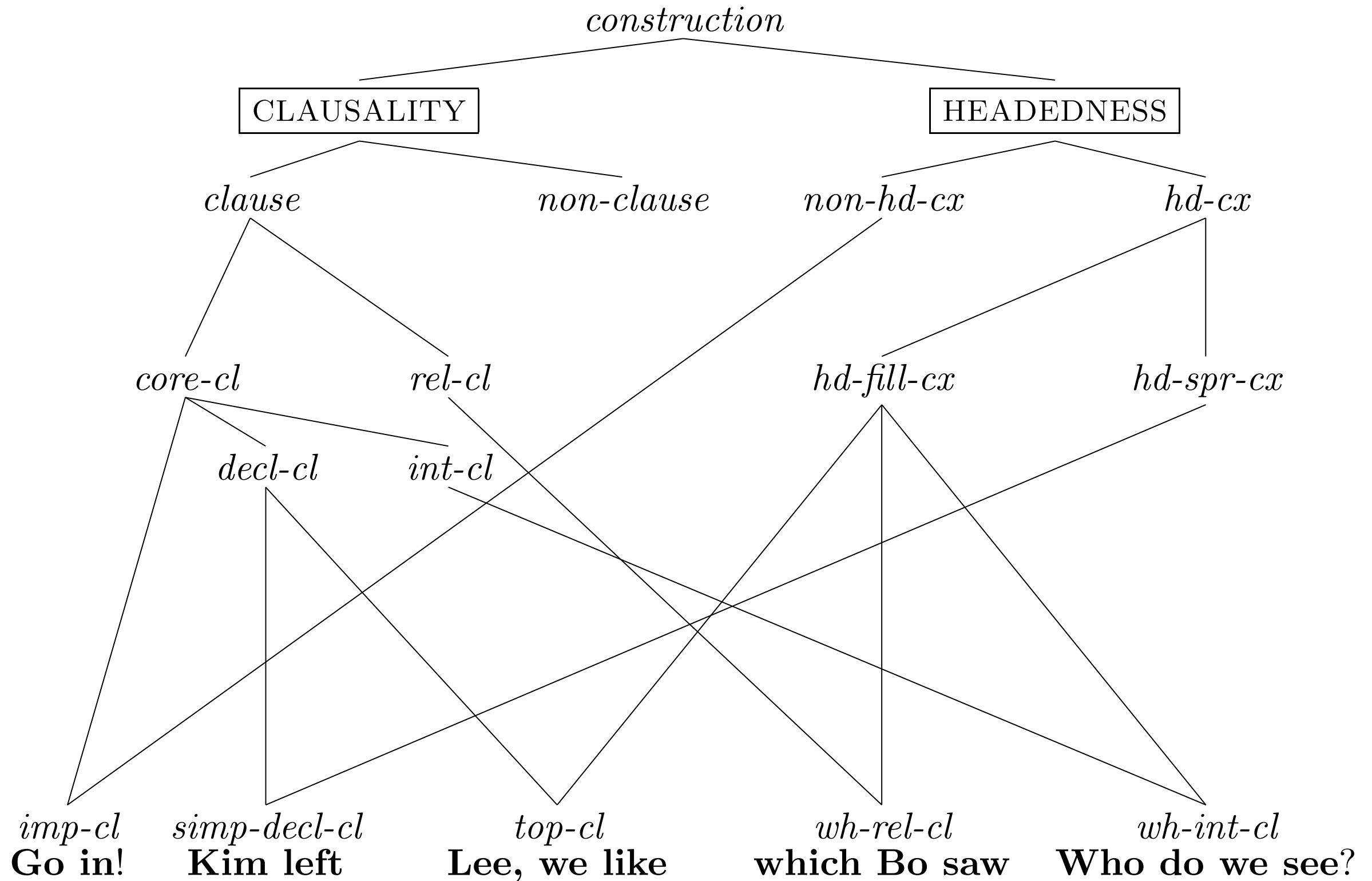
$$\left[\begin{array}{l} \text{MOTHER} \left[\begin{array}{l} \text{SYN} \left[\begin{array}{l} \text{HEAD} \quad [\text{FORM } \boxed{1}] \\ \text{VAL} \quad \boxed{2} \\ \text{GAP} \quad \boxed{A} \end{array} \right] \\ \text{SEM} \quad [\text{IND} \quad s_0] \end{array} \right] \\ \\ \text{DTRS} \left\langle \left[\begin{array}{l} \text{SYN} \left[\begin{array}{l} \text{HEAD} \quad [\text{FORM } \boxed{1}] \\ \text{VAL} \quad \boxed{2} \\ \text{GAP} \quad \boxed{A} \end{array} \right] \\ \text{SEM} \quad [\text{IND} \quad s_1] \end{array} \right] \dots \left[\begin{array}{l} \text{SYN} \left[\begin{array}{l} \text{HEAD} \quad [\text{FORM } \boxed{1}] \\ \text{VAL} \quad \boxed{2} \\ \text{GAP} \quad \boxed{A} \end{array} \right] \\ \text{SEM} \quad [\text{IND} \quad s_{n-1}] \end{array} \right] \right\rangle, \\ \\ \left[\begin{array}{l} \text{HEAD} \quad conj \\ \text{IND} \quad s_0 \\ \text{RESTR} \left\langle [\text{ARGS} \quad \langle s_1 \dots s_n \rangle] \right\rangle \end{array} \right], \left[\begin{array}{l} \text{SYN} \left[\begin{array}{l} \text{HEAD} \quad [\text{FORM } \boxed{1}] \\ \text{VAL} \quad \boxed{2} \\ \text{GAP} \quad \boxed{A} \end{array} \right] \\ \text{SEM} \quad [\text{IND} \quad s_n] \end{array} \right] \right\rangle \end{array} \right]$$

$$\left[\begin{array}{l} \text{MOTHER} \left[\begin{array}{l} \text{PHON} \langle \text{Kim} , \text{sleeps} , \text{and} , \text{Pat} , \text{works} \rangle \\ \text{SYN} \left[\begin{array}{l} \text{HEAD} \textit{verb} \\ \text{VAL} \left[\begin{array}{l} \text{SPR} \langle \rangle \\ \text{COMPS} \langle \rangle \end{array} \right] \end{array} \right] \\ \text{SEM} [\dots] \end{array} \right] \\ \\ \text{DTRS} \langle \left[\begin{array}{l} \text{PHON} \langle \text{Kim} , \text{sleeps} \rangle \\ \text{SYN} \left[\begin{array}{l} \text{HEAD} \textit{verb} \\ \text{VAL} \left[\begin{array}{l} \text{SPR} \langle \rangle \\ \text{COMPS} \langle \rangle \end{array} \right] \end{array} \right] \\ \text{SEM} [\dots] \end{array} \right] , \left[\begin{array}{l} \text{PHON} \langle \text{and} \rangle \\ \text{SYN} \left[\text{HEAD} \textit{conj} \right] \\ \text{SEM} [\dots] \end{array} \right] , \\ \\ \left[\begin{array}{l} \text{PHON} \langle \text{Pat} , \text{works} \rangle \\ \text{SYN} \left[\begin{array}{l} \text{HEAD} \textit{verb} \\ \text{VAL} \left[\begin{array}{l} \text{SPR} \langle \rangle \\ \text{COMPS} \langle \rangle \end{array} \right] \end{array} \right] \\ \text{SEM} [\dots] \end{array} \right] \rangle \end{array} \right]$$

Some More Abbreviations

<i>imp-cl</i>	<i>imperative-clause</i>
<i>decl-cl</i>	<i>declarative-clause</i>
<i>simp-decl-cl</i>	<i>simple-declarative-clause</i>
<i>top-cl</i>	<i>topicalized-clause</i>
<i>wh-rel-cl</i>	<i>wh-relative-clause</i>
<i>wh-int-cl</i>	<i>wh-interrogative-clause</i>
<i>core-cl</i>	<i>core-clause</i>

A Construction Hierarchy



Locality

- Like CFG rules, constructions involve only mothers and daughters.
- A lexical head can place constraints on its sisters or on an appropriate maternal dependent.
- Unbounded dependencies are localized.
Sandy is hard ((for us) to continue) to please____
Getting it done is hard for us to imagine them considering____
- Our principles provide a theory of what information (reflected in terms of HEAD, VAL, GAP, etc.) is passed up within the domain projected by a lexical head (including subjects and modifiers) and hence a theory of what information is locally accessible at any given point in a tree.

Course overview

- Survey of some phenomena central to syntactic theory
- Introduction to the HPSG framework
- Process over product: How to build a grammar fragment
- Value of precise formulation (and of getting a computer to do the tedious part for you!)

Reflection

- What was the most surprising thing in this class?
- What do you think is most likely wrong?
- What do you think is the coolest result?
- What do you think you're most likely to remember?
- How do you think this course will influence your work as a computational linguist?

Overview

- Chapter 16 framework (same analyses, different underlying system)
- General wrap up