

# HPSG | Mündliche Prüfung | Bereich 1 *Argumentabbildung*

Roland Schäfer

February 8, 2023

## 1 Material

(1) Schläft das Kind?

## 2 Lexikoneinträge

### 2.1 Verb

PHON	<i>schläft</i>
HEAD	$\begin{bmatrix} \textit{verb} \\ \text{VFORM} & \textit{fin} \end{bmatrix}$
SUBCAT	$\left\langle \begin{bmatrix} \text{HEAD} & \begin{bmatrix} \textit{noun} \\ \text{CASE} & \textit{nom} \end{bmatrix} \\ \text{SUBCAT} & \langle \rangle \end{bmatrix} \right\rangle$

### 2.2 Substantiv/Nomen

PHON	<i>Kind</i>
HEAD	$\begin{bmatrix} \textit{noun} \\ \text{CASE} & \boxed{1} \textit{nom} \end{bmatrix}$
SUBCAT	$\left\langle \begin{bmatrix} \text{HEAD} & \begin{bmatrix} \textit{det} \\ \text{CASE} & \boxed{1} \end{bmatrix} \\ \text{SUBCAT} & \langle \rangle \end{bmatrix} \right\rangle$

### 2.3 Determinierer

PHON	<i>das</i>
HEAD	$\begin{bmatrix} \textit{det} \\ \text{CASE} & \textit{nom} \end{bmatrix}$
SUBCAT	$\langle \rangle$

### 3 Schemata und Prinzipien

#### 3.1 Kopf-Argument-Schema

$$hd\text{-}arg\text{-}phrase \Rightarrow \left[ \begin{array}{ll} \text{SUBCAT} & \boxed{1} \\ \text{HD-DTR} | \text{SUBCAT} & \boxed{1} \oplus \langle \boxed{2} \rangle \\ \text{NHD-DTR} & \boxed{2} \end{array} \right]$$

#### 3.2 Kopfmerkmalprinzip

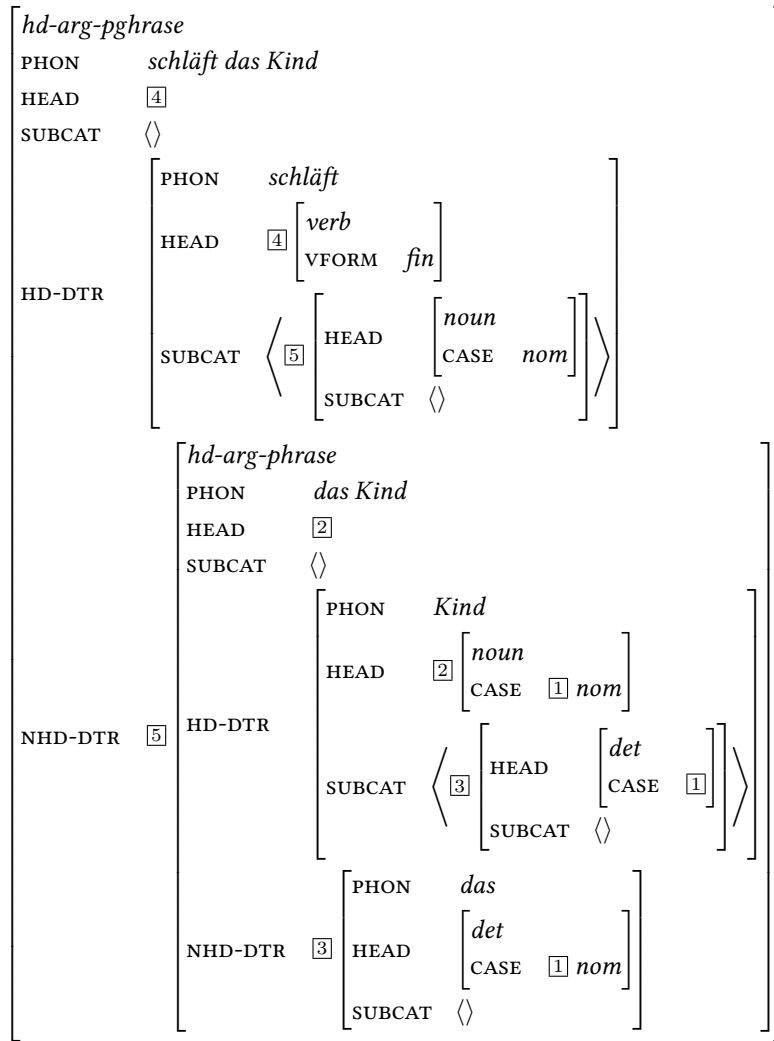
$$headed\text{-}phrase \Rightarrow \left[ \begin{array}{ll} \text{HEAD} & \boxed{1} \\ \text{HD-DTR} | \text{HEAD} & \boxed{1} \end{array} \right]$$

### 4 Phrasenbildung

#### 4.1 Die Nominalphrase

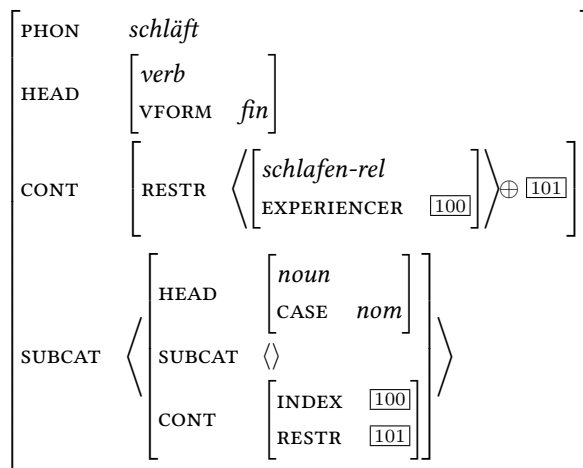
$$\left[ \begin{array}{ll} hd\text{-}arg\text{-}phrase & \\ \text{PHON} & \text{das Kind} \\ \text{HEAD} & \boxed{2} \\ \text{SUBCAT} & \langle \rangle \\ \text{HD-DTR} & \left[ \begin{array}{ll} \text{PHON} & \text{Kind} \\ \text{HEAD} & \boxed{2} \left[ \begin{array}{ll} \text{noun} & \\ \text{CASE} & \boxed{1} \text{ nom} \end{array} \right] \\ \text{SUBCAT} & \langle \boxed{3} \left[ \begin{array}{ll} \text{HEAD} & \left[ \begin{array}{ll} \text{det} & \\ \text{CASE} & \boxed{1} \end{array} \right] \\ \text{SUBCAT} & \langle \rangle \end{array} \right] \rangle \end{array} \right] \\ \text{NHD-DTR} & \boxed{3} \left[ \begin{array}{ll} \text{PHON} & \text{das} \\ \text{HEAD} & \left[ \begin{array}{ll} \text{det} & \\ \text{CASE} & \boxed{1} \text{ nom} \end{array} \right] \\ \text{SUBCAT} & \langle \rangle \end{array} \right] \end{array} \right]$$

## 4.2 Verbalphrase/Satz



## 5 Satzanalyse mit Semantik

## 5.1 Verb



## 5.2 Semantikprinzip

$$\textit{headed-phrase} \Rightarrow \begin{bmatrix} \text{CONT} & \boxed{1} \\ \text{HD-DTR|CONT} & \boxed{1} \end{bmatrix}$$

### 5.3 Satz

<i>hd-arg-pphrase</i>																																															
PHON	<i>schläft das Kind</i>																																														
HEAD	[4]																																														
CONT	[6]																																														
SUBCAT	⟨ ⟩																																														
HD-DTR	<table><tr><td>PHON</td><td><i>schläft</i></td></tr><tr><td>HEAD</td><td>[4] <table><tr><td><i>verb</i></td></tr><tr><td>VFORM <i>fin</i></td></tr></table></td></tr><tr><td>CONT</td><td>[6] RESTR <table><tr><td>⟨</td><td><table><tr><td><i>schlafen-rel</i></td></tr><tr><td>EXPERIENCER [8]</td></tr></table></td><td>⟩</td><td>⊕</td><td>[9]</td></tr></table></td></tr><tr><td>SUBCAT</td><td>⟨ [5] <table><tr><td>HEAD</td><td><table><tr><td><i>noun</i></td></tr><tr><td>CASE <i>nom</i></td></tr></table></td></tr><tr><td>SUBCAT</td><td>⟨ ⟩</td></tr><tr><td>CONT</td><td><table><tr><td>INDEX [8]</td></tr><tr><td>RESTR [9]</td></tr></table></td></tr></table> ⟩</td></tr></table>	PHON	<i>schläft</i>	HEAD	[4] <table><tr><td><i>verb</i></td></tr><tr><td>VFORM <i>fin</i></td></tr></table>	<i>verb</i>	VFORM <i>fin</i>	CONT	[6] RESTR <table><tr><td>⟨</td><td><table><tr><td><i>schlafen-rel</i></td></tr><tr><td>EXPERIENCER [8]</td></tr></table></td><td>⟩</td><td>⊕</td><td>[9]</td></tr></table>	⟨	<table><tr><td><i>schlafen-rel</i></td></tr><tr><td>EXPERIENCER [8]</td></tr></table>	<i>schlafen-rel</i>	EXPERIENCER [8]	⟩	⊕	[9]	SUBCAT	⟨ [5] <table><tr><td>HEAD</td><td><table><tr><td><i>noun</i></td></tr><tr><td>CASE <i>nom</i></td></tr></table></td></tr><tr><td>SUBCAT</td><td>⟨ ⟩</td></tr><tr><td>CONT</td><td><table><tr><td>INDEX [8]</td></tr><tr><td>RESTR [9]</td></tr></table></td></tr></table> ⟩	HEAD	<table><tr><td><i>noun</i></td></tr><tr><td>CASE <i>nom</i></td></tr></table>	<i>noun</i>	CASE <i>nom</i>	SUBCAT	⟨ ⟩	CONT	<table><tr><td>INDEX [8]</td></tr><tr><td>RESTR [9]</td></tr></table>	INDEX [8]	RESTR [9]																			
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## 6 Zusatz: Lexioneintrag für *gibt*

### 6.1 Konform zum Buch

PHON	<i>gibt</i>
HEAD	$\begin{bmatrix} \textit{verb} \\ \text{VFORM} & \textit{fin} \end{bmatrix}$
CONT	$\begin{bmatrix} \text{RESTR} & \begin{bmatrix} \textit{geben-rel} \\ \text{AGENT} & \boxed{200} \\ \text{THEME} & \boxed{201} \\ \text{GOAL} & \boxed{202} \end{bmatrix} \end{bmatrix}$
SUBCAT	$\left\langle \begin{bmatrix} \text{HEAD} & \begin{bmatrix} \textit{noun} \\ \text{CASE} & \textit{nom} \end{bmatrix} \\ \text{SUBCAT} & \langle \rangle \\ \text{CONT IND} & \boxed{200} \end{bmatrix}, \begin{bmatrix} \text{HEAD} & \begin{bmatrix} \textit{noun} \\ \text{CASE} & \textit{acc} \end{bmatrix} \\ \text{SUBCAT} & \langle \rangle \\ \text{CONT IND} & \boxed{201} \end{bmatrix}, \begin{bmatrix} \text{HEAD} & \begin{bmatrix} \textit{noun} \\ \text{CASE} & \textit{dat} \end{bmatrix} \\ \text{SUBCAT} & \langle \rangle \\ \text{CONT IND} & \boxed{202} \end{bmatrix} \right\rangle$

### 6.2 Version mit Semantiktrick

PHON	<i>gibt</i>
HEAD	$\begin{bmatrix} \textit{verb} \\ \text{VFORM} & \textit{fin} \end{bmatrix}$
CONT	$\begin{bmatrix} \text{RESTR} & \left\langle \begin{bmatrix} \textit{geben-rel} \\ \text{AGENT} & \boxed{200} \\ \text{THEME} & \boxed{201} \\ \text{GOAL} & \boxed{202} \end{bmatrix} \right\rangle \oplus \boxed{300} \oplus \boxed{301} \oplus \boxed{302} \end{bmatrix}$
SUBCAT	$\left\langle \begin{bmatrix} \text{HEAD} & \begin{bmatrix} \textit{noun} \\ \text{CASE} & \textit{nom} \end{bmatrix} \\ \text{SUBCAT} & \langle \rangle \\ \text{CONT} & \begin{bmatrix} \text{INDEX} & \boxed{200} \\ \text{RESTR} & \boxed{300} \end{bmatrix} \end{bmatrix}, \begin{bmatrix} \text{HEAD} & \begin{bmatrix} \textit{noun} \\ \text{CASE} & \textit{acc} \end{bmatrix} \\ \text{SUBCAT} & \langle \rangle \\ \text{CONT} & \begin{bmatrix} \text{INDEX} & \boxed{201} \\ \text{RESTR} & \boxed{301} \end{bmatrix} \end{bmatrix}, \begin{bmatrix} \text{HEAD} & \begin{bmatrix} \textit{noun} \\ \text{CASE} & \textit{dat} \end{bmatrix} \\ \text{SUBCAT} & \langle \rangle \\ \text{CONT} & \begin{bmatrix} \text{INDEX} & \boxed{202} \\ \text{RESTR} & \boxed{302} \end{bmatrix} \end{bmatrix} \right\rangle$

HPSG | Mündliche Prüfung | Bereich 2 *Argumentabbildung mit Linking*

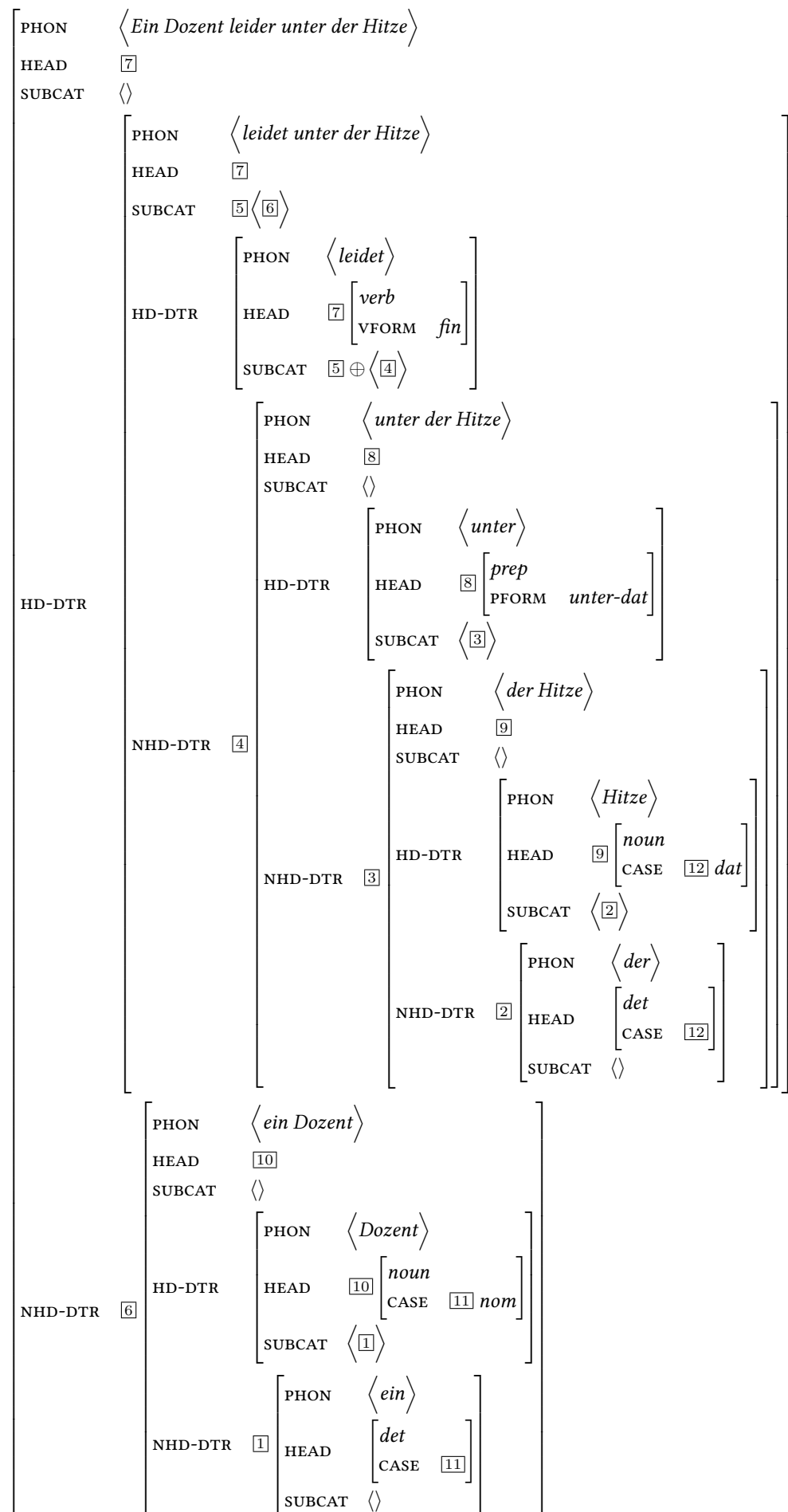
Roland Schäfer

February 8, 2023

## 1 Material

(1) Ein Dozent leider unter der Hitze.

## 2 Version ohne Semantik für den ersten Überblick



### 3 Version mit Semantik

[illegible]

### 3.1 Semantischer Beitrag des gesamten Satzes

$$\left[ \begin{array}{l} \text{PHON} \quad \langle \textit{Ein Dozent leidet unter der Hitze} \rangle \\ \\ \text{CONT} \quad \boxed{17} \left[ \begin{array}{l} \text{INDEX} \quad \langle \rangle \\ \text{RESTR} \quad \left\langle \left[ \begin{array}{l} \textit{leiden-unter-rel} \\ \text{EXP} \quad \boxed{19} \\ \text{SOURCE} \quad \boxed{18} \end{array} \right] \right\rangle \oplus \boxed{15} \left\langle \left[ \begin{array}{l} \textit{hitze-rel} \\ \text{INSTANCE} \quad \boxed{18} \end{array} \right] \right\rangle \oplus \boxed{16} \left\langle \left[ \begin{array}{l} \textit{dozent-rel} \\ \text{INSTANCE} \quad \boxed{19} \end{array} \right] \right\rangle \end{array} \right] \end{array} \right]$$

$$\left[ \begin{array}{l} \text{PHON} \quad \langle \textit{Ein Dozent leidet unter der Hitze} \rangle \\ \\ \text{CONT} \quad \left[ \begin{array}{l} \text{INDEX} \quad \langle \rangle \\ \text{RESTR} \quad \left\langle \left[ \begin{array}{l} \textit{leiden-unter-rel} \\ \text{EXP} \quad \boxed{19} \\ \text{SOURCE} \quad \boxed{18} \end{array} \right], \left[ \begin{array}{l} \textit{hitze-rel} \\ \text{INSTANCE} \quad \boxed{18} \end{array} \right], \left[ \begin{array}{l} \textit{dozent-rel} \\ \text{INSTANCE} \quad \boxed{19} \end{array} \right] \right\rangle \end{array} \right] \end{array} \right]$$

$$\left[ \begin{array}{l} \text{PHON} \quad \langle \textit{Ein Dozent leidet unter der Hitze} \rangle \\ \\ \text{CONT} \quad \left[ \begin{array}{l} \text{INDEX} \quad \langle \rangle \\ \text{RESTR} \quad \left\langle \left[ \begin{array}{l} \textit{leiden-unter-rel} \\ \text{EXP} \quad \boxed{19} \\ \text{SOURCE} \quad \boxed{18} \end{array} \right], \left[ \begin{array}{l} \textit{hitze-rel} \\ \text{INSTANCE} \quad \boxed{18} \end{array} \right] \left[ \begin{array}{l} \textit{index} \\ \text{PER} \quad 3 \\ \text{NUM} \quad \textit{sg} \\ \text{GEN} \quad \textit{f} \end{array} \right], \left[ \begin{array}{l} \textit{dozent-rel} \\ \text{INSTANCE} \quad \boxed{19} \end{array} \right] \left[ \begin{array}{l} \textit{index} \\ \text{PER} \quad 3 \\ \text{NUM} \quad \textit{sg} \\ \text{GEN} \quad \textit{m} \end{array} \right] \right\rangle \end{array} \right] \end{array} \right]$$

### 3.2 Lexikoneintrag für das Verb

$$\left[ \begin{array}{l} \text{PHON} \quad \langle \textit{leidet} \rangle \\ \text{HEAD} \quad \left[ \begin{array}{l} \textit{verb} \\ \text{VFORM} \quad \textit{fin} \end{array} \right] \\ \\ \text{SUBCAT} \quad \left\langle \left[ \begin{array}{l} \text{HEAD} \quad \left[ \begin{array}{l} \textit{noun} \\ \text{CASE} \quad \textit{nom} \end{array} \right] \\ \text{SUBCAT} \quad \langle \rangle \\ \text{CONT} \quad \left[ \begin{array}{l} \text{INDEX} \quad \boxed{19} \\ \text{RESTR} \quad \boxed{16} \end{array} \right] \end{array} \right], \left[ \begin{array}{l} \text{HEAD} \quad \left[ \begin{array}{l} \textit{prep} \\ \text{PFORM} \quad \textit{unter-dat} \end{array} \right] \\ \text{SUBCAT} \quad \langle \rangle \\ \text{CONT} \quad \left[ \begin{array}{l} \text{IND} \quad \boxed{18} \\ \text{RESTR} \quad \boxed{15} \end{array} \right] \end{array} \right] \right\rangle \\ \\ \text{CONT} \quad \left[ \text{RESTR} \quad \left\langle \left[ \begin{array}{l} \textit{leiden-unter-rel} \\ \text{EXP} \quad \boxed{19} \\ \text{SOURCE} \quad \boxed{18} \end{array} \right] \right\rangle \oplus \boxed{15} \oplus \boxed{16} \right] \end{array} \right]$$

### 3.3 Lexikoneintrag der Präposition

$$\left[ \begin{array}{l} \text{PHON} \quad \langle \textit{unter} \rangle \\ \text{HEAD} \quad \left[ \begin{array}{l} \textit{prep} \\ \text{PFORM} \quad \textit{unter-dat} \end{array} \right] \\ \\ \text{SUBCAT} \quad \left\langle \left[ \begin{array}{l} \text{HEAD} \quad \left[ \begin{array}{l} \textit{noun} \\ \text{CASE} \quad \textit{dat} \end{array} \right] \\ \text{SUBCAT} \quad \langle \rangle \\ \text{CONT} \quad \boxed{21} \end{array} \right] \right\rangle \\ \text{CONT} \quad \boxed{21} \end{array} \right]$$



3.4 Beispieleintrag für ein Substantiv

$$\left[ \begin{array}{l} \text{PHON} \\ \text{HEAD} \\ \text{SUBCAT} \\ \text{CONT} \end{array} \left\langle \begin{array}{l} \textit{Dozent} \\ \left[ \begin{array}{l} \textit{noun} \\ \text{CASE } \boxed{11} \textit{ nom} \end{array} \right] \\ \left\langle \left[ \begin{array}{l} \text{HEAD} \\ \left[ \begin{array}{l} \textit{det} \\ \text{CASE } \boxed{11} \end{array} \right] \end{array} \right] \right\rangle \\ \left[ \begin{array}{l} \text{INDEX } \boxed{19} \\ \text{RESTR } \left\langle \left[ \begin{array}{l} \textit{dozent-rel} \\ \text{INSTANCE } \boxed{19} \end{array} \right] \right\rangle \end{array} \right] \end{array} \right\rangle \right]$$

3.5 Schemata

$$hd\text{-}arg\text{-}phrase \Rightarrow \left[ \begin{array}{l} \text{SUBCAT} \\ \text{HD-DTR|SUBCAT} \\ \text{NHD-DTR} \end{array} \begin{array}{l} \boxed{1} \\ \boxed{1} \oplus \left\langle \boxed{2} \right\rangle \\ \boxed{2} \end{array} \right]$$

3.6 Prinzipien

Kopf-Argument-Phrase    *headed-phrase*  $\Rightarrow$   $\left[ \begin{array}{l} \text{HEAD} \\ \text{HD-DTR|HEAD} \end{array} \begin{array}{l} \boxed{1} \\ \boxed{1} \end{array} \right]$

Semantics Principle (SP)    *headed-phrase*  $\Rightarrow$   $\left[ \begin{array}{l} \text{CONT} \\ \text{HD-DTR|CONT} \end{array} \begin{array}{l} \boxed{1} \\ \boxed{1} \end{array} \right]$

4 Aufgaben

Finden Sie in der Analyse jeweils die folgenden Numerierungen für Strukturteilung und erklären Sie, warum sie an mehreren Stellen stehen. *Erklären* heißt hier nur, das Schema, das Prinzip und/oder den Lexikoneintrag zu benennen, die es erlauben, die jeweilige Strukturteilung anzunehmen. Geben Sie zusätzlich an, in welchen Lexikoneinträgen die konkreten Merkmale hinter den Numerierungen explizit genannt werden. (Das können jeweils mehrere sein.)

Es kommen wirklich nur die hier genannten Arten von Einträgen, Schemata und Prinzipien zum Einsatz. Diese erzeugen bereits die beträchtliche Komplexität der Analyse.

Die zu erklärenden Strukturteilungen werden hier schon thematisch gruppiert.

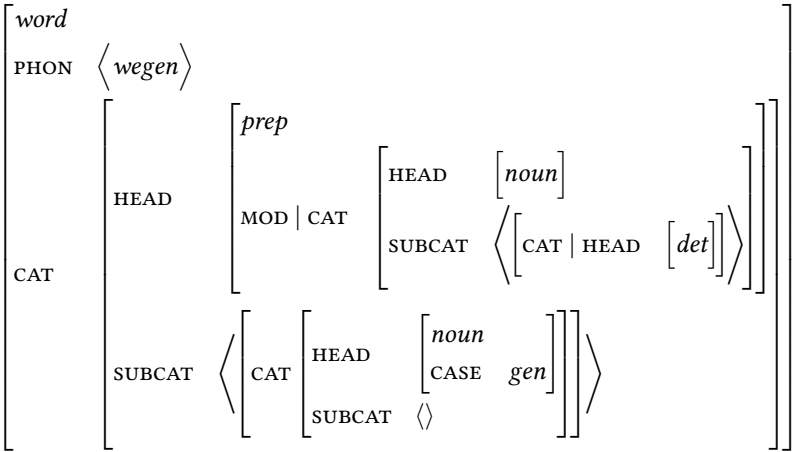
- 1. 7, 8, 9, 10
- 2. 1, 2, 3, 4, 6
- 3. 18, 19
- 4. 15, 16
- 5. 11, 12
- 6. 17, 20, 21

1
 Material

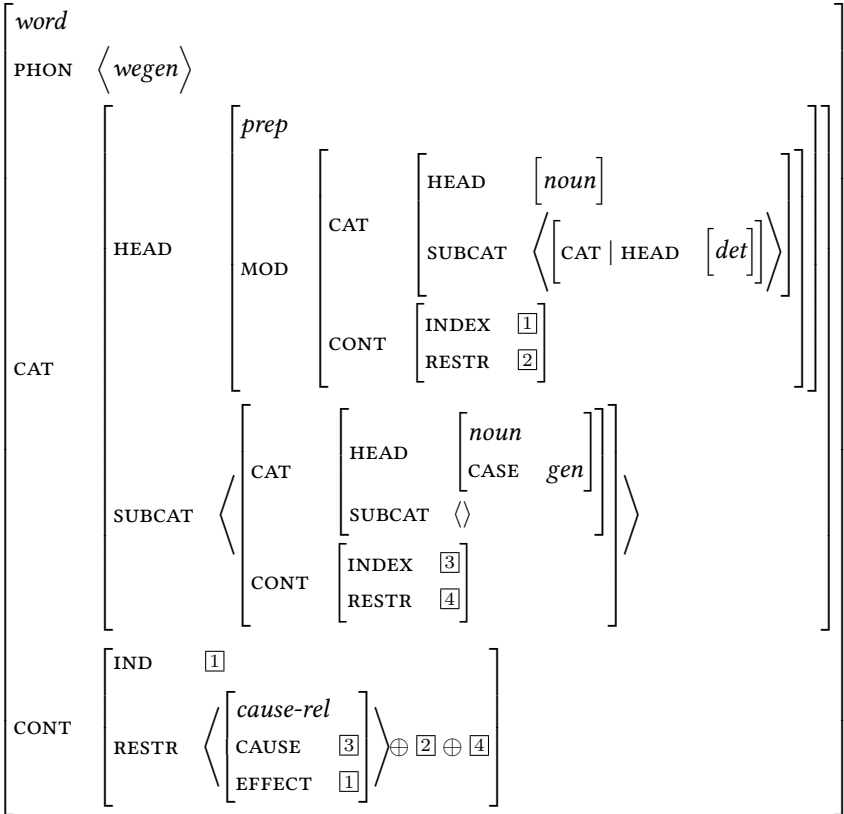
- (1) Die Freude wegen der Geschenke macht glücklich.

2
 Eintrag für *wegen*

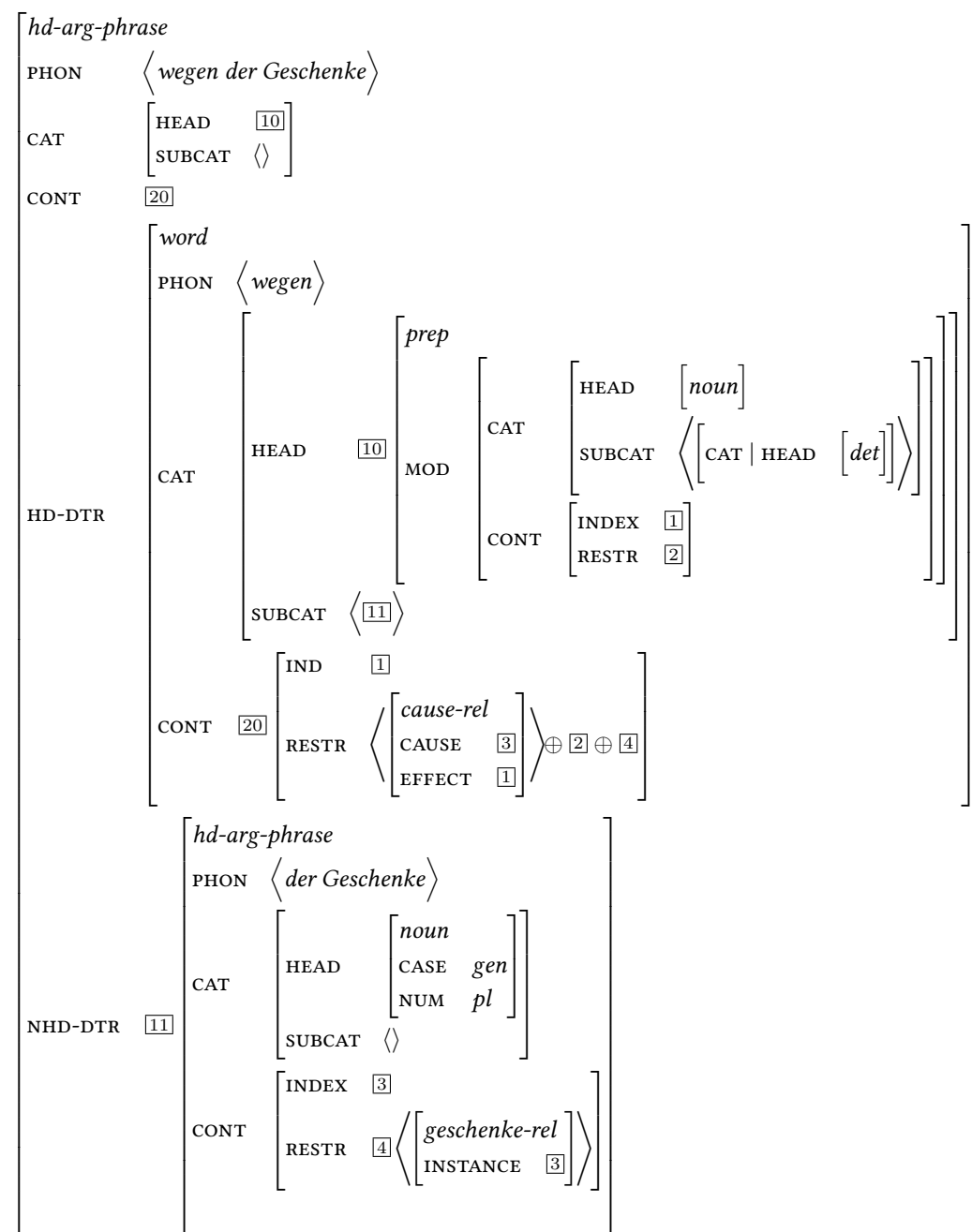
2.1
 Ohne Semantik (wie an der Tafel)



2.2
 Mit Semantik



## 2.3 PP



### 3 $\bar{N}$ mit PP-Modifikator

<i>hd-mod-phrase</i>	
PHON	$\langle Freude\ wegen\ der\ Geschenke \rangle$
CAT	$\begin{bmatrix} \text{HEAD} & \boxed{31} \\ \text{SUBCAT} & \boxed{32} \end{bmatrix}$
CONT	$\boxed{20}$
HD-DTR	$\boxed{30}$
	<i>word</i>
	PHON $\langle Freude \rangle$
	$\begin{bmatrix} \text{HEAD} & \boxed{31} & \begin{bmatrix} \textit{noun} \\ \text{CASE} & \textit{nom} \\ \text{NUM} & \textit{sg} \end{bmatrix} \\ \text{SUBCAT} & \boxed{32} & \langle \begin{bmatrix} \text{CAT} \mid \text{HEAD} & \begin{bmatrix} \textit{det} \end{bmatrix} \end{bmatrix} \rangle \end{bmatrix}$
	CONT $\begin{bmatrix} \text{INDEX} & \boxed{1} \\ \text{RESTR} & \boxed{2} \end{bmatrix}$
<i>hd-arg-phrase</i>	
PHON	$\langle wegen\ der\ Geschenke \rangle$
CAT	$\begin{bmatrix} \text{HEAD} & \boxed{10} \\ \text{SUBCAT} & \langle \rangle \end{bmatrix}$
CONT	$\boxed{20}$
HD-DTR	<i>word</i>
	PHON $\langle wegen \rangle$
	$\begin{bmatrix} \text{HEAD} & \boxed{10} & \begin{bmatrix} \textit{prep} \\ \text{MOD} & \boxed{30} \end{bmatrix} \\ \text{SUBCAT} & \langle \boxed{11} \rangle \end{bmatrix}$
NHD-DTR	CONT $\boxed{20}$
	$\begin{bmatrix} \text{IND} & \boxed{1} \\ \text{RESTR} & \langle \begin{bmatrix} \textit{cause-rel} \\ \text{CAUSE} & \boxed{3} \\ \text{EFFECT} & \boxed{1} \end{bmatrix} \rangle \oplus \boxed{2} \oplus \boxed{4} \end{bmatrix}$
<i>hd-arg-phrase</i>	
PHON	$\langle der\ Geschenke \rangle$
CAT	$\begin{bmatrix} \text{HEAD} & \begin{bmatrix} \textit{noun} \\ \text{CASE} & \textit{gen} \\ \text{NUM} & \textit{pl} \end{bmatrix} \\ \text{SUBCAT} & \langle \rangle \end{bmatrix}$
NHD-DTR	$\boxed{11}$
CONT	$\begin{bmatrix} \text{INDEX} & \boxed{3} \\ \text{RESTR} & \boxed{4} & \langle \begin{bmatrix} \textit{geschenke-rel} \\ \text{INSTANCE} & \boxed{3} \end{bmatrix} \rangle \end{bmatrix}$

### 4 Spezifikation

#### 4.1 Lexikoneintrag einfacher Determinierer

<i>word</i>	
PHON	$\langle die \rangle$
CAT	$\begin{bmatrix} \text{HEAD} & \begin{bmatrix} \textit{det} \\ \text{SPEC} & \textit{none} \end{bmatrix} \end{bmatrix}$

#### 4.2 Lexikoneintrag *Ischariot*

Der Typ *proper-name* sei ein Untertyp von *noun*.

<i>stem</i>	
PHON	$\langle Ischariot \rangle$
CAT	$\begin{bmatrix} \text{HEAD} & \begin{bmatrix} \textit{proper-name} \end{bmatrix} \end{bmatrix}$
CONT	$\begin{bmatrix} \text{INDEX} & \boxed{1} & \begin{bmatrix} \text{GEN} & \textit{masc} \\ \text{INDIV} & \textit{ischariot} \end{bmatrix} \end{bmatrix}$

4.3 DLR für Eigennamengenitiv

<i>proper-name-genitive-lex-rule</i>				
PHON	$\boxed{1} \oplus \langle s \rangle$			
CAT	HEAD	$\left[ \begin{array}{l} det \\ CASE \quad gen \end{array} \right]$		
		$SPEC \quad \left[ \text{CONT IND} \quad \boxed{3} \right]$		
CONT	RESTR	$\left\langle \left[ \begin{array}{l} attribution-rel \\ ATTRIBUTE \quad \boxed{2} \\ ATTRIBUTED \quad \boxed{3} \end{array} \right] \right\rangle$		
LEX-DTR	$\left[ \begin{array}{l} stem \\ PHON \quad \boxed{1} \end{array} \right]$			
	CAT	$\left[ \text{HEAD} \quad \left[ proper-name \right] \right]$		
		CONT IND	$\boxed{2}$	

4.4 Anwendung der DLR auf *Ischariot*

Das Ergebnis kann dann als Determinierer verwendet werden.

<i>proper-name-genitive-lex-rule</i>				
PHON	$\langle Ischariot, s \rangle$			
CAT	HEAD	$\left[ \begin{array}{l} det \\ CASE \quad gen \end{array} \right]$		
		SPEC $\left[ \begin{array}{l} CONT IND \quad \boxed{3} \end{array} \right]$		
CONT	RESTR	$\left\langle \left[ \begin{array}{l} attribution-rel \\ ATTRIBUTE \quad \boxed{2} \\ ATTRIBUTED \quad \boxed{3} \end{array} \right] \right\rangle$		
LEX-DTR	$\left[ \begin{array}{l} stem \\ PHON \quad \langle Ischariot \rangle \end{array} \right]$			
	CAT	$\left[ \begin{array}{l} HEAD \quad \left[ proper-name \right] \end{array} \right]$		
	CONT	INDEX $\boxed{2}$	$\left[ \begin{array}{ll} GEN & masc \\ INDIV & ischariot \end{array} \right]$	

**Zusatzaufgabe** Es geht auch eleganter und ohne, dass man aus einem Nominalstamm einen Determinierer machen muss, was etwas unnatürlich ist. Es wäre eine lexikalische Anpassung von Kopfnomina erforderlich. Überlegen Sie, wie das gehen würde.

4.5 NP mit modifizierender PP und Genitiv-SPEC

<i>hd-arg-phrase</i>	
PHON	$\langle \text{Ischariots Freude über die Geschenke} \rangle$
CAT	$\begin{bmatrix} \text{HEAD} & \boxed{31} \\ \text{SUBCAT} & \langle \rangle \end{bmatrix}$
CONT	$\boxed{20}$
NHD-DTR	$\boxed{400}$
	<i>proper-name-genitive-lex-rule</i>
	PHON $\langle \text{Ischariots} \rangle$
	CAT $\begin{bmatrix} \text{HEAD} & \begin{bmatrix} \textit{det} \\ \text{CASE} & \textit{gen} \\ \text{SPEC} & \boxed{300} \end{bmatrix} \end{bmatrix}$
LEX-DTR	CONT $\begin{bmatrix} \text{RESTR} & \langle \begin{bmatrix} \textit{attribution-rel} \\ \text{ATTRIBUTE} & \boxed{200} \\ \text{ATTRIBUTED} & \boxed{1} \end{bmatrix} \rangle \end{bmatrix}$
	<i>stem</i>
	PHON $\langle \text{Ischariot} \rangle$
	CAT $\begin{bmatrix} \text{HEAD} & \textit{proper-name} \end{bmatrix}$
HD-DTR	CONT $\begin{bmatrix} \text{INDEX} & \boxed{200} \\ \text{GEN} & \textit{masc} \\ \text{INDIV} & \textit{ischariot} \end{bmatrix}$
<i>hd-mod-phrase</i>	
PHON	$\langle \text{Freude wegen der Geschenke} \rangle$
CAT	$\begin{bmatrix} \text{HEAD} & \boxed{31} \\ \text{SUBCAT} & \boxed{32} \langle \boxed{400} \rangle \end{bmatrix}$
CONT	$\boxed{20}$
HD-DTR	$\boxed{30}$
	<i>word</i>
	PHON $\langle \text{Freude} \rangle$
	CAT $\begin{bmatrix} \text{HEAD} & \boxed{31} \\ \text{SUBCAT} & \boxed{32} \end{bmatrix}$
NHD-DTR	CONT $\begin{bmatrix} \text{INDEX} & \boxed{1} \\ \text{RESTR} & \boxed{2} \end{bmatrix}$
<i>hd-arg-phrase</i>	
PHON	$\langle \text{wegen der Geschenke} \rangle$
CAT	$\begin{bmatrix} \text{HEAD} & \boxed{10} \\ \text{SUBCAT} & \langle \rangle \end{bmatrix}$
CONT	$\boxed{20}$
HD-DTR	$\boxed{300}$
	<i>word</i>
	PHON $\langle \text{wegen} \rangle$
	CAT $\begin{bmatrix} \text{HEAD} & \boxed{10} \\ \text{SUBCAT} & \langle \boxed{11} \rangle \end{bmatrix}$
NHD-DTR	CONT $\begin{bmatrix} \text{IND} & \boxed{1} \\ \text{RESTR} & \langle \begin{bmatrix} \textit{cause-rel} \\ \text{CAUSE} & \boxed{3} \\ \text{EFFECT} & \boxed{1} \end{bmatrix} \rangle \oplus \boxed{2} \oplus \boxed{4} \end{bmatrix}$
<i>hd-arg-phrase</i>	
PHON	$\langle \text{der Geschenke} \rangle$
CAT	$\begin{bmatrix} \text{HEAD} & \begin{bmatrix} \textit{noun} \\ \text{CASE} & \textit{gen} \\ \text{NUM} & \textit{pl} \end{bmatrix} \\ \text{SUBCAT} & \langle \rangle \end{bmatrix}$
CONT	$\begin{bmatrix} \text{INDEX} & \boxed{3} \\ \text{RESTR} & \boxed{4} \langle \begin{bmatrix} \textit{geschenke-rel} \\ \text{INSTANCE} & \boxed{3} \end{bmatrix} \rangle \end{bmatrix}$

**Zusatzaufgabe** Wenn Sie genau hinsehen, können Sie feststellen, dass noch etwas fehlt. Die Semantik der gesamten Phrase (also  $\boxed{20}$ ) wird noch nicht korrekt modelliert. Überlegen Sie, warum das so ist, und was man tun könnte, um das Problem zu lösen.

1 Material

(1) Liest Kiki Die Strudlhofstiege?

2 Lexikoneinträge

word

PHON

$\langle Kiki \vee Die\ Strudlhofstiege \rangle$

LOC|CAT

HEAD

noun

CAS

$nom \vee acc$

NUM

sg

SUBCAT

$\langle \rangle$

word

PHON

$\langle liest \rangle$

LOC|CAT

HEAD

verb

VFORM

fin

INITIAL

—

SUBCAT

$\langle$

LOC|CAT

HEAD

noun

CAS

nom

NUM

sg

SUBCAT

$\langle \rangle$

$\rangle$

,

LOC|CAT

HEAD

noun

CAS

acc

SUBCAT

$\langle \rangle$

$\rangle$

3 V1-LR als DLR

lex-rule

LOC|CAT

HEAD

verb

VFORM

fin

INITIAL

+

SUBCAT

$\langle$

LOC|CAT

HEAD

verb

DSL

$\boxed{1}$

SUBCAT

$\langle \rangle$

$\rangle$

LEX-DTR

LOC

$\boxed{1}$

CAT|HEAD

verb

VFORM

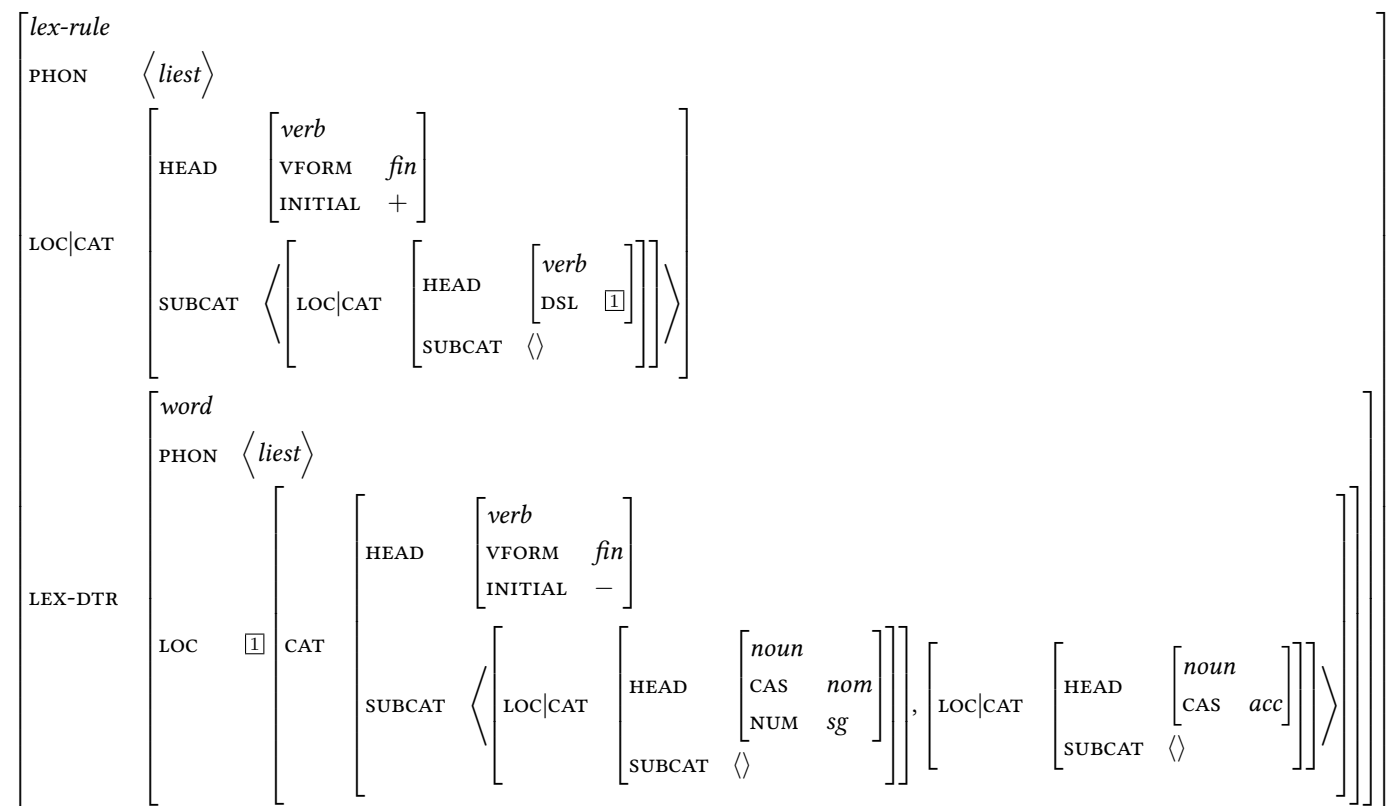
fin

INITIAL

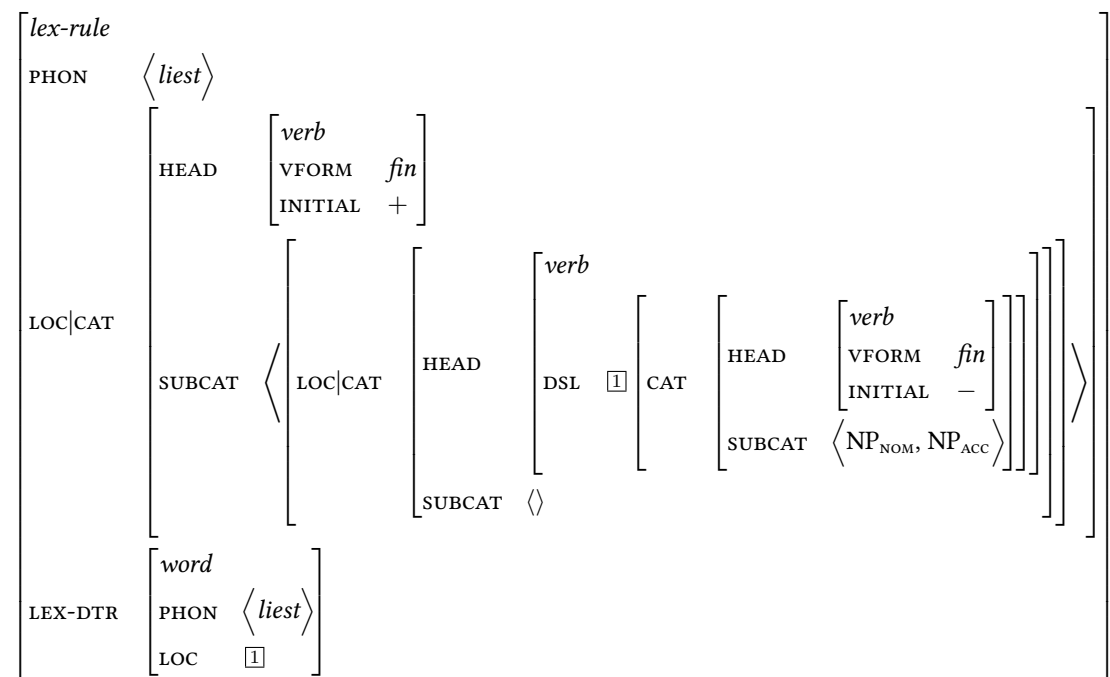
—

## 4 Aufbau des Satzes

#### 4.1 Anwendung der V1-LR auf das lexikalische Verb



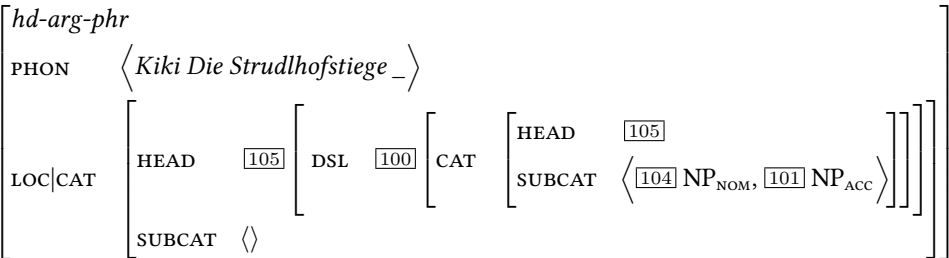
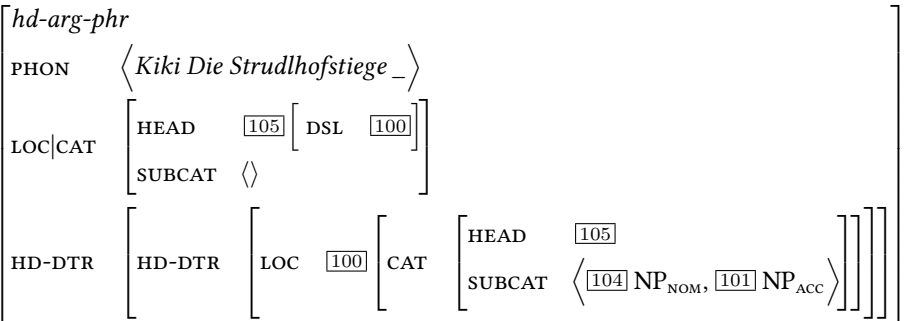
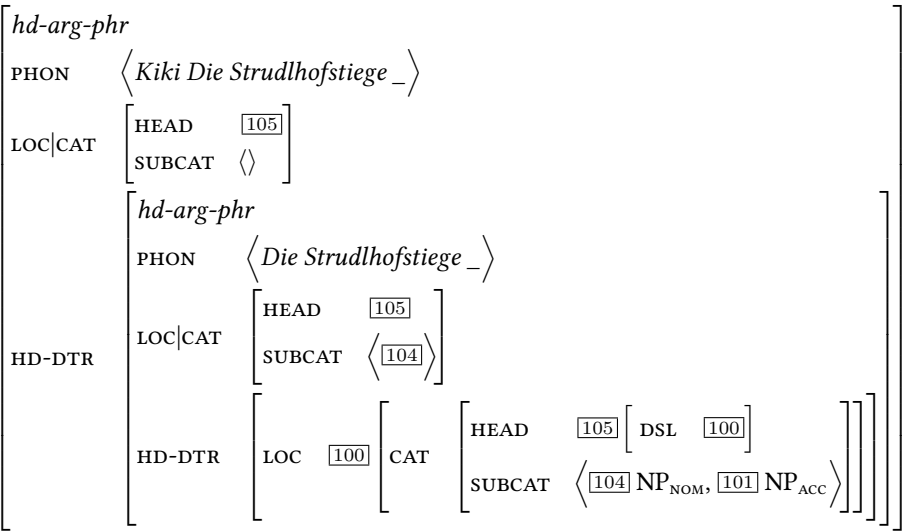
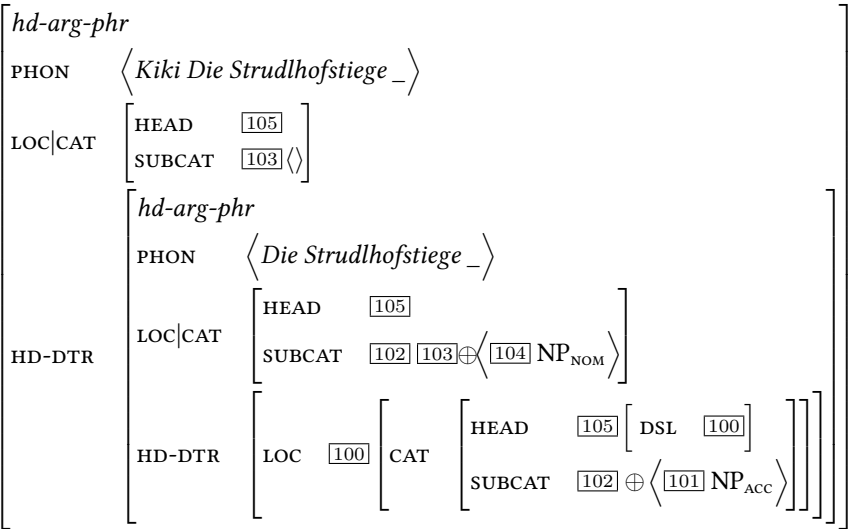
#### 4.2 Verbindung des V1-Verbs mit der VP



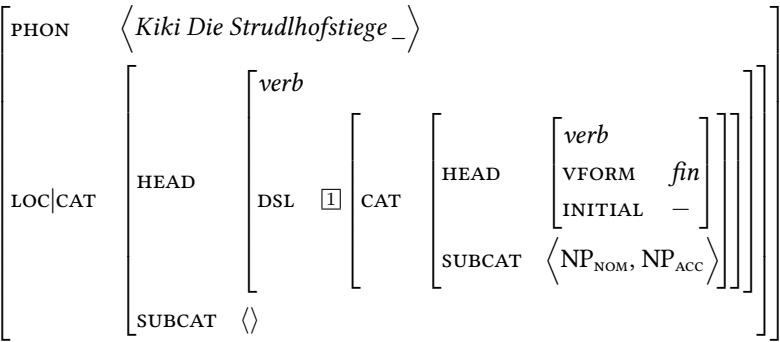


$$\begin{array}{l}
 \text{hd-arg-phr} \\
 \text{PHON} \quad \langle \text{Die Strudlhofstiege} \_ \rangle \\
 \text{LOC|CAT} \quad \left[ \begin{array}{l} \text{HEAD} \quad [105] \\ \text{SUBCAT} \quad [102] \end{array} \right] \\
 \text{HD-DTR} \quad \left[ \begin{array}{l} \text{PHON} \quad \langle \rangle \\ \text{LOC} \quad [100] \quad \text{CAT} \quad \left[ \begin{array}{l} \text{HEAD} \quad [105] \quad \text{DSL} \quad [100] \\ \text{SUBCAT} \quad [102] \oplus \langle [101] \rangle \end{array} \right] \end{array} \right] \\
 \text{NHD-DTR} \quad [101] \quad \left[ \begin{array}{l} \text{word} \\ \text{PHON} \quad \langle \text{Die Strudlhofstiege} \rangle \\ \text{LOC|CAT} \quad \left[ \begin{array}{l} \text{HEAD} \quad \left[ \begin{array}{l} \text{noun} \\ \text{CAS} \quad \text{acc} \\ \text{NUM} \quad \text{sg} \end{array} \right] \\ \text{SUBCAT} \quad \langle \rangle \end{array} \right] \end{array} \right]
 \end{array}$$





Die geforderte gespurte VP in Abschnitt 4.2 sah folgendermaßen aus (s. dort die SUBCAT):



Die beiden Strukturen unifizieren ganz offensichtlich mit  $\boxed{1} = \boxed{100}$ .

### 4.5 Aufgabe

Zeigen Sie parallel zu dieser Musterlösung, dass (2) nicht ableitbar ist. Behandeln Sie dabei *des Buchs* wie *Die Strudlhofstiege* als eine nicht weiter analysierte NP, allerdings im Genitiv. Kürzen Sie die nominalen Einträge auf der SUBCAT des Verbs von Anfang an stark ab.

(2)     \* Liest<sub>1</sub> Kiki des Buchs t<sub>1</sub>.

1 Material

(1) Kiki liest Die Strudlhofstiege.

2 Lexikoneinträge

$\left[ \begin{array}{l} \textit{word} \\ \text{PHON} \quad \langle Kiki \vee Die \textit{Strudlhofstiege} \rangle \\ \\ \text{LOC CAT} \quad \left[ \begin{array}{l} \text{HEAD} \quad \left[ \begin{array}{l} \textit{noun} \\ \text{CAS} \quad \textit{nom} \vee \textit{acc} \\ \text{NUM} \quad \textit{sg} \end{array} \right] \\ \text{SUBCAT} \quad \langle \rangle \end{array} \right] \end{array} \right]$	
$\left[ \begin{array}{l} \textit{word} \\ \text{PHON} \quad \langle \textit{liest} \rangle \\ \\ \text{LOC CAT} \quad \left[ \begin{array}{l} \text{HEAD} \quad \left[ \begin{array}{l} \textit{verb} \\ \text{VFORM} \quad \textit{fin} \\ \text{INITIAL} \quad - \end{array} \right] \\ \text{SUBCAT} \quad \langle \left[ \begin{array}{l} \text{LOC CAT} \quad \left[ \begin{array}{l} \text{HEAD} \quad \left[ \begin{array}{l} \textit{noun} \\ \text{CAS} \quad \textit{nom} \\ \text{NUM} \quad \textit{sg} \end{array} \right] \\ \text{SUBCAT} \quad \langle \rangle \end{array} \right] \right] , \left[ \begin{array}{l} \text{LOC CAT} \quad \left[ \begin{array}{l} \text{HEAD} \quad \left[ \begin{array}{l} \textit{noun} \\ \text{CAS} \quad \textit{acc} \end{array} \right] \\ \text{SUBCAT} \quad \langle \rangle \end{array} \right] \right] \rangle \end{array} \right] \end{array} \right]$	

3 V1-LR als DLR

$\left[ \begin{array}{l} \textit{lex-rule} \\ \\ \text{LOC CAT} \quad \left[ \begin{array}{l} \text{HEAD} \quad \left[ \begin{array}{l} \textit{verb} \\ \text{VFORM} \quad \textit{fin} \\ \text{INITIAL} \quad + \end{array} \right] \\ \text{SUBCAT} \quad \langle \left[ \begin{array}{l} \text{LOC CAT} \quad \left[ \begin{array}{l} \text{HEAD} \quad \left[ \begin{array}{l} \textit{verb} \\ \text{DSL} \quad \boxed{1} \end{array} \right] \\ \text{SUBCAT} \quad \langle \rangle \end{array} \right] \right] \rangle \end{array} \right] \\ \\ \text{LEX-DTR} \quad \left[ \text{LOC} \quad \boxed{1} \left[ \text{CAT HEAD} \quad \left[ \begin{array}{l} \textit{verb} \\ \text{VFORM} \quad \textit{fin} \\ \text{INITIAL} \quad - \end{array} \right] \right] \right] \end{array} \right]$	
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3.1 Spuren

3.1.1 Verbspur

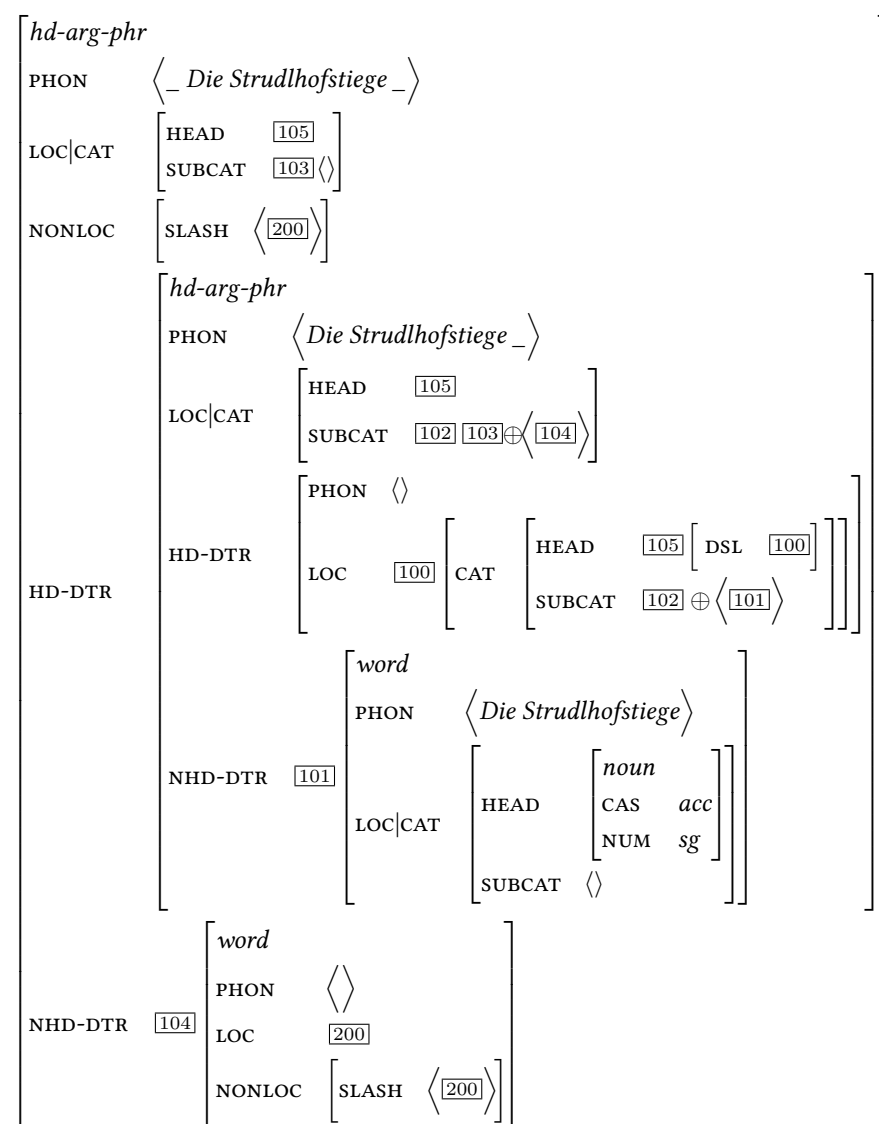
$\left[ \begin{array}{l} \text{PHON} \quad \langle \rangle \\ \text{LOC} \quad \boxed{100} \left[ \text{CAT HEAD DSL} \quad \boxed{100} \right] \end{array} \right]$	
--	--

3.1.2 Argumentspur

$\left[ \begin{array}{l} \textit{word} \\ \text{PHON} \quad \langle \rangle \\ \text{LOC} \quad \boxed{200} \\ \text{NONLOC} \quad \left[ \text{SLASH} \quad \langle \boxed{200} \rangle \right] \end{array} \right]$	
---	--

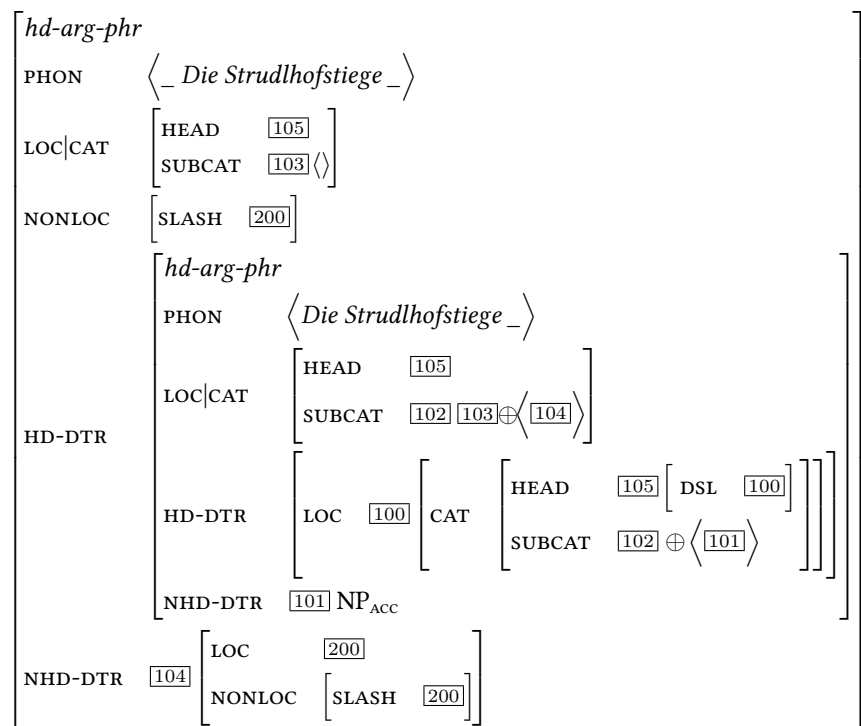
<i>hd-arg-phr</i>									
PHON	$\langle \text{Die Strudlhofstiege}_- \rangle$								
LOC CAT	$\left[ \begin{array}{l} \text{HEAD} \quad [105] \\ \text{SUBCAT} \quad [102] \end{array} \right]$								
HD-DTR	$\left[ \begin{array}{l} \text{PHON} \quad \langle \rangle \\ \text{LOC} \quad [100] \quad \text{CAT} \quad \left[ \begin{array}{l} \text{HEAD} \quad [105] \quad \text{DSL} \quad [100] \\ \text{SUBCAT} \quad [102] \oplus \langle [101] \rangle \end{array} \right] \end{array} \right]$								
NHD-DTR	[101]	$\left[ \begin{array}{l} \text{word} \\ \text{PHON} \quad \langle \text{Die Strudlhofstiege} \rangle \\ \text{LOC CAT} \quad \left[ \begin{array}{l} \text{HEAD} \quad \left[ \begin{array}{l} \text{noun} \\ \text{CAS} \quad \text{acc} \\ \text{NUM} \quad \text{sg} \end{array} \right] \\ \text{SUBCAT} \quad \langle \rangle \end{array} \right] \end{array} \right]$							

### 4.3.2 Verbindung mit der Argumentspur

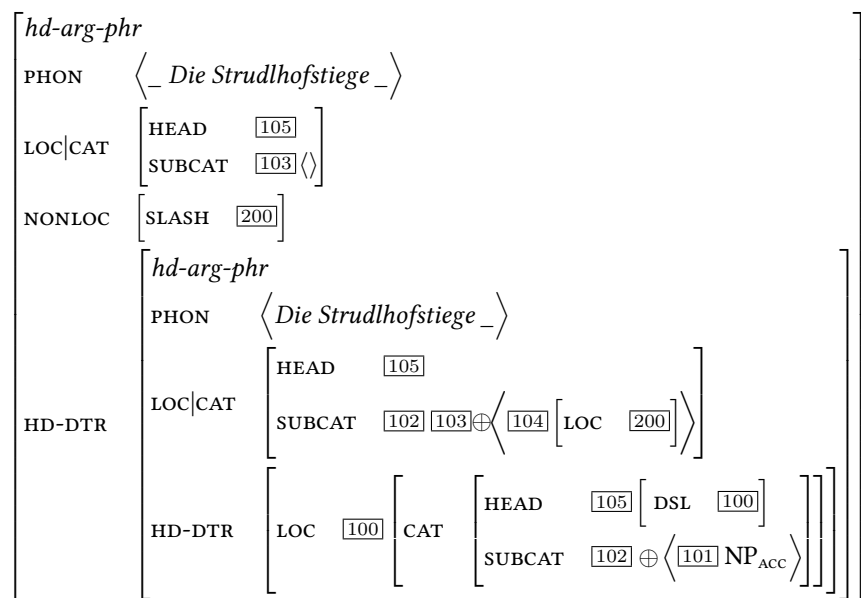


#### 4.4 Unifizierung der VP mit dem bewegten Verb

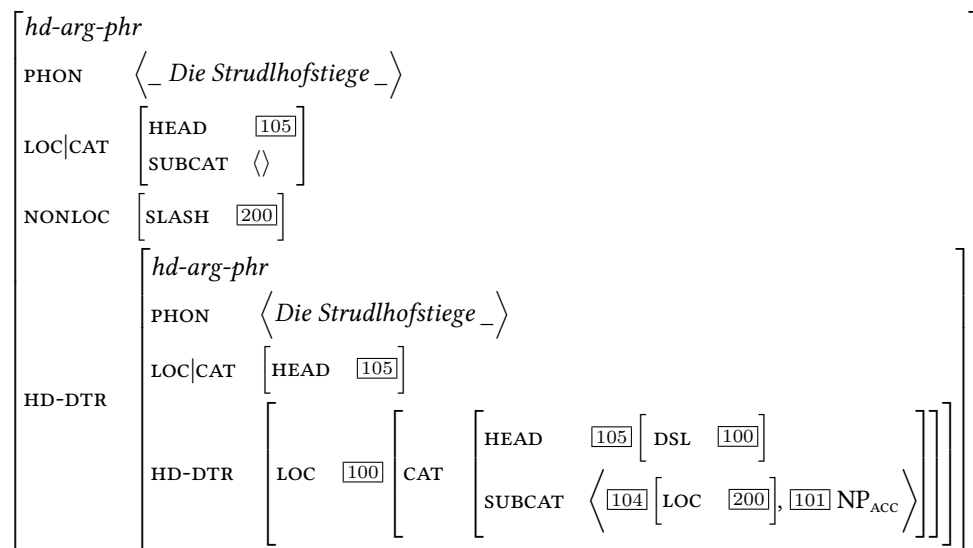
#### 4.4.1 Abkürzung der NPs in der doppelt gespurten VP



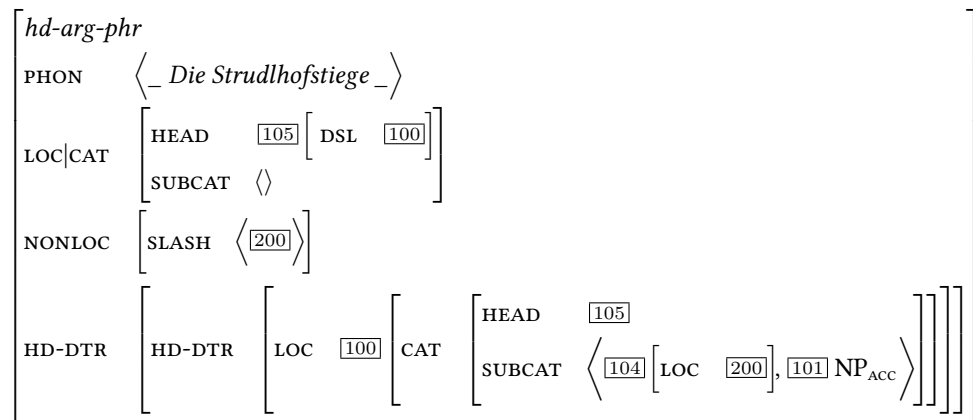
#### 4.4.2 Umstellung | NP<sub>ACC</sub>



#### 4.4.3 Umstellung | Information der Spur



#### 4.4.4 Reduktion der gespurten VP aufs Wesentliche



Wieder gilt, dass diese Struktur mit dem SUBCAT-Eintrag des bewegten Verbs aus Abschnitt 4.2 unifiziert.

$$\left[ \begin{array}{c} \text{LOC} | \text{CAT} \\ \text{HEAD} \\ \text{SUBCAT} \langle \rangle \end{array} \left[ \begin{array}{c} \text{DSL} \left[ \begin{array}{c} \text{verb} \\ \boxed{1} \end{array} \right] \text{CAT} \left[ \begin{array}{c} \text{HEAD} \left[ \begin{array}{c} \text{verb} \\ \text{VFORM} \quad \textit{fin} \\ \text{INITIAL} \quad - \end{array} \right] \\ \text{SUBCAT} \langle \text{NP}_{\text{NOM}}, \text{NP}_{\text{ACC}} \rangle \end{array} \right] \end{array} \right] \right]$$

Beachten Sie, dass die folgenden beiden Strukturen unifizierbar sind, solange wir (wie hier) über 200 noch rein gar nichts gesagt haben. Einerseits die Information über die Spur, die auf der SUBCAT der Spur steht:

104 LOC 200

Und die Anforderung des bewegten Verbs, dass es eine NP<sub>NOM</sub> als erstes Element auf der SUBCAT hat:

$$\left[ \text{LOC} \left[ \text{CAT} \left[ \begin{array}{ll} \text{HEAD} & \left[ \begin{array}{ll} \textit{noun} & \textit{nom} \end{array} \right] \\ \text{SUBCAT} & \langle \rangle \end{array} \right] \right] \right]$$

Wir erhalten ganz einfach:

$$\boxed{104} \left[ \text{LOC} \quad \boxed{200} \left[ \text{CAT} \left[ \begin{array}{ll} \text{HEAD} & \left[ \begin{array}{ll} \textit{noun} & \\ \text{CAS} & \textit{nom} \end{array} \right] \\ \text{SUBCAT} & \langle \rangle \end{array} \right] \right] \right]$$

#### 4.4.5 Kombination der V<sub>1</sub>-VP

*hd-arg-phrase*

PHON  $\langle \text{Liest\_Die Strudlhofstiege\_} \rangle$

LOC|CAT  $\left[ \begin{array}{cc} \text{HEAD} & \boxed{3} \\ \text{SUBCAT} & \boxed{4} \langle \rangle \end{array} \right]$

NONLOC  $\left[ \begin{array}{cc} \text{SLASH} & \boxed{200} \end{array} \right]$

HD-DTR  $\left[ \begin{array}{c} \text{lex-rule} \\ \text{PHON} \quad \langle \text{liest} \rangle \\ \text{LOC|CAT} \quad \left[ \begin{array}{cc} \text{HEAD} & \boxed{3} \left[ \begin{array}{cc} \text{verb} & \\ \text{VFORM} & \text{fin} \\ \text{INITIAL} & + \end{array} \right] \\ \text{SUBCAT} & \boxed{4} \oplus \langle \boxed{2} \rangle \end{array} \right] \\ \text{LEX-DTR} \quad \left[ \begin{array}{c} \text{word} \\ \text{PHON} \quad \langle \text{liest} \rangle \\ \text{LOC} \quad \boxed{1} \end{array} \right] \end{array} \right]$

NHD-DTR  $\boxed{2} \left[ \begin{array}{c} \text{PHON} \quad \langle \_ \text{Die Strudlhofstiege\_} \rangle \\ \text{LOC|CAT} \quad \left[ \begin{array}{c} \text{HEAD} \quad \left[ \begin{array}{c} \text{verb} \\ \text{DSL} \quad \boxed{1} \end{array} \right] \text{CAT} \left[ \begin{array}{c} \text{HEAD} \quad \left[ \begin{array}{cc} \text{verb} & \\ \text{VFORM} & \text{fin} \\ \text{INITIAL} & - \end{array} \right] \\ \text{SUBCAT} \quad \langle \boxed{104} \left[ \text{LOC} \quad \boxed{200} \left[ \text{HEAD} \quad \left[ \begin{array}{cc} \text{CASE} & \text{nom} \\ \text{NUM} & \text{sg} \end{array} \right] \right], \boxed{101} \text{NP}_{\text{ACC}} \rangle \end{array} \right] \end{array} \right] \end{array} \right]$

#### 4.4.6 Bau der Head-Filler Phrase

Das wäre dann die Basis-Hausaufgabe. Hier ist der Anfang:





1 Material

(1) Meistens filmt Dan.

2 Lexikoneinträge

$\left[ \begin{array}{l} word \\ PHON \quad \langle Dan \rangle \\ LOC CAT \quad \left[ \begin{array}{l} HEAD \quad \left[ \begin{array}{l} noun \\ CAS \quad nom \vee acc \vee dat \\ NUM \quad sg \end{array} \right] \\ SUBCAT \quad \langle \rangle \end{array} \right] \end{array} \right]$
$\left[ \begin{array}{l} word \\ PHON \quad \langle filmt \rangle \\ LOC CAT \quad \left[ \begin{array}{l} HEAD \quad \left[ \begin{array}{l} verb \\ VFORM \quad fin \\ INITIAL \quad - \end{array} \right] \\ SUBCAT \quad \langle \left[ \begin{array}{l} LOC CAT \quad \left[ \begin{array}{l} HEAD \quad \left[ \begin{array}{l} noun \\ CAS \quad nom \\ NUM \quad sg \end{array} \right] \\ SUBCAT \quad \langle \rangle \end{array} \right] \rangle \rangle \rangle \end{array} \right] \end{array} \right]$
$\left[ \begin{array}{l} word \\ PHON \quad \langle meistens \rangle \\ LOC \quad \left[ \begin{array}{l} CAT \quad \left[ \begin{array}{l} HEAD \quad \left[ \begin{array}{l} MOD \quad \boxed{100} \left[ \begin{array}{l} LOC \quad \left[ \begin{array}{l} CAT HEAD \quad \left[ \begin{array}{l} verb \\ CONT \quad \boxed{1} \end{array} \right] \end{array} \right] \end{array} \right] \end{array} \right] \\ SUBCAT \quad \langle \rangle \end{array} \right] \\ CONT \quad \left[ \begin{array}{l} psoa \\ RESTR \quad \left[ \begin{array}{l} most-of-the-time-rel \\ PSO-ARG \quad \boxed{1} \end{array} \right] \end{array} \right] \end{array} \right] \end{array} \right]$

2.1 Spuren

2.1.1 Verbspur

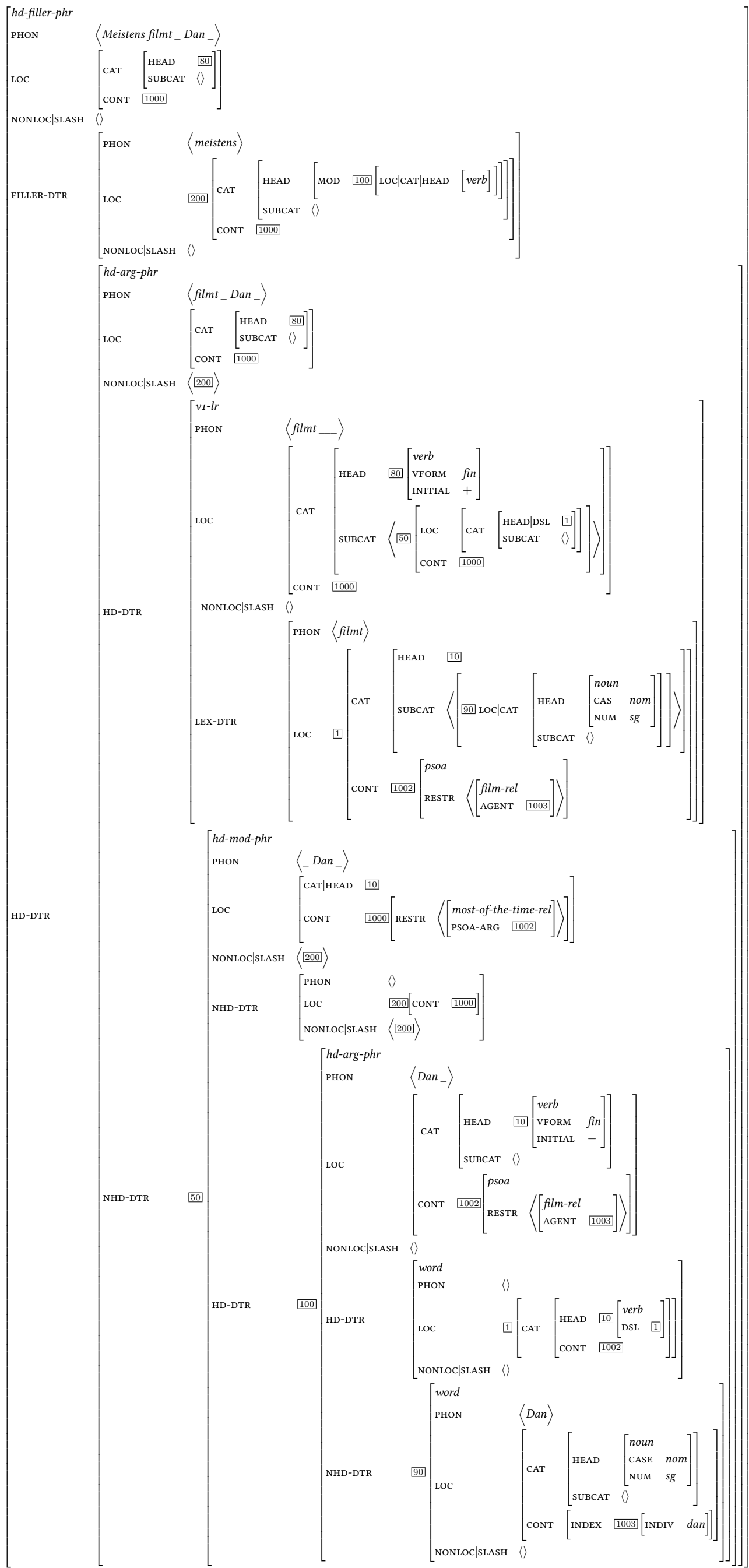
$\left[ \begin{array}{l} PHON \quad \langle \rangle \\ LOC \quad \boxed{100} \left[ \begin{array}{l} CAT HEAD DSL \quad \boxed{100} \end{array} \right] \end{array} \right]$
--

2.1.2 Argumentspur

$\left[ \begin{array}{l} word \\ PHON \quad \langle \rangle \\ LOC \quad \boxed{200} \\ NONLOC \quad \left[ \begin{array}{l} SLASH \quad \langle \boxed{200} \rangle \end{array} \right] \end{array} \right]$
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### 3 Aufbau des Satzes

### 3.1 Struktur mit Semantik-Skizze



# HPSG | Mündliche Prüfung | Bereich 7 *Morphologie vs. Syntax*

Roland Schäfer

February 9, 2023

## 1 Lexikoneintrag

Der Typ *mass-noun* sei ein Unter- oder Nebentyp von *noun* mit leerer SUBCAT und Stoffsemantik.

word	
PHON	$\langle \text{Zement} \rangle$
CAT	$\left[ \begin{array}{l} \text{HEAD} \quad [mass-noun] \\ \text{SUBCAT} \quad \langle \rangle \end{array} \right]$
CONT	$\left[ \begin{array}{l} \text{INDEX} \quad [1] \\ \text{RESTR} \quad \left\langle \left[ \begin{array}{l} cement-substance-rel \\ \text{INSTANCE} \quad [1] \end{array} \right] \right\rangle \end{array} \right]$

## 2 Lösungsstrategien

### 2.1 Morphologie mit DLR

mass-sortal-noun-lex-rule	
CAT	$\left[ \begin{array}{l} \text{HEAD} \quad [noun] \\ \text{SUBCAT} \quad \left\langle [CAT HEAD \quad [det]] \right\rangle \end{array} \right]$
CONT	$\left[ \begin{array}{l} \text{RESTR} \quad \left\langle [sort-of-mass-rel] \right\rangle \\ \text{PSOA-ARG} \quad [3] \end{array} \right]$
LEX-DTR	$\left[ \begin{array}{l} \text{CAT} \quad \left[ \begin{array}{l} \text{HEAD} \quad [mass-noun] \end{array} \right] \\ \text{CONT} \quad [3] \end{array} \right]$

### 2.2 Syntax mit unärer Projektion

Für eine syntaktische *unary-phrase* nehmen wir an, dass im Obertyp *unary-phrase* bereits festgelegt wurde, dass PHON und CAT|HEAD der Phrase gleich dem der SINGLE-DTR sind.

*unary-phrase*  $\Rightarrow$

PHON	[1]
CAT HEAD	[2]
SINGLE-DTR	$\left[ \begin{array}{l} \text{PHON} \quad [1] \\ \text{CAT HEAD} \quad [2] \end{array} \right]$

*mass-sortal-noun-unary-phrase*  $\Rightarrow$

$$\left[ \begin{array}{l} \text{CAT} \\ \text{CONT} \\ \text{SINGLE-DTR} \end{array} \left[ \begin{array}{l} \text{SUBCAT} \left\langle \left[ \text{CAT|HEAD} \left[ \textit{det} \right] \right] \right\rangle \\ \left[ \begin{array}{l} \text{INDEX} \boxed{1} \\ \text{RESTR} \left\langle \left[ \textit{sort-of-mass-rel} \right] \right\rangle \\ \text{PSOA-ARG} \boxed{3} \end{array} \right] \\ \left[ \begin{array}{l} \text{CAT} \left[ \text{HEAD} \left[ \textit{mass-noun} \right] \right] \\ \text{CONT} \boxed{3} \left[ \text{INDEX} \boxed{1} \right] \end{array} \right] \end{array} \right] \right]$$

### 2.3 Syntax mit Nullartikel

$$\left[ \begin{array}{l} \text{PHON} \\ \text{CAT|HEAD} \end{array} \left[ \begin{array}{l} \langle \rangle \\ \left[ \begin{array}{l} \textit{det} \\ \text{SPEC|CAT|HEAD} \left[ \textit{mass-noun} \right] \end{array} \right] \end{array} \right] \right]$$

$$\left[ \begin{array}{l} \text{PHON} \\ \text{CAT} \\ \text{HD-DTR} \\ \text{NON-HD-DTR} \end{array} \left[ \begin{array}{l} \langle \textit{Zement} \rangle \\ \left[ \begin{array}{l} \text{HEAD} \boxed{1} \\ \text{SUBCAT} \langle \rangle \end{array} \right] \\ \left[ \begin{array}{l} \text{PHON} \langle \textit{Zement} \rangle \\ \text{CAT} \left[ \begin{array}{l} \text{HEAD} \boxed{1} \\ \text{SUBCAT} \left\langle \boxed{2} \left[ \text{CAT|HEAD} \left[ \textit{det} \right] \right] \right\rangle \end{array} \right] \end{array} \right] \\ \left[ \begin{array}{l} \text{PHON} \langle \rangle \\ \text{CAT} \left[ \begin{array}{l} \text{HEAD} \left[ \begin{array}{l} \textit{det} \\ \text{SPEC|CAT|HEAD} \boxed{1} \left[ \textit{mass-noun} \right] \end{array} \right] \end{array} \right] \end{array} \right] \end{array} \right] \right]$$