

# Ling 566

## Nov 8, 2007

Non-referential NPs, Expletives, and Extraposition

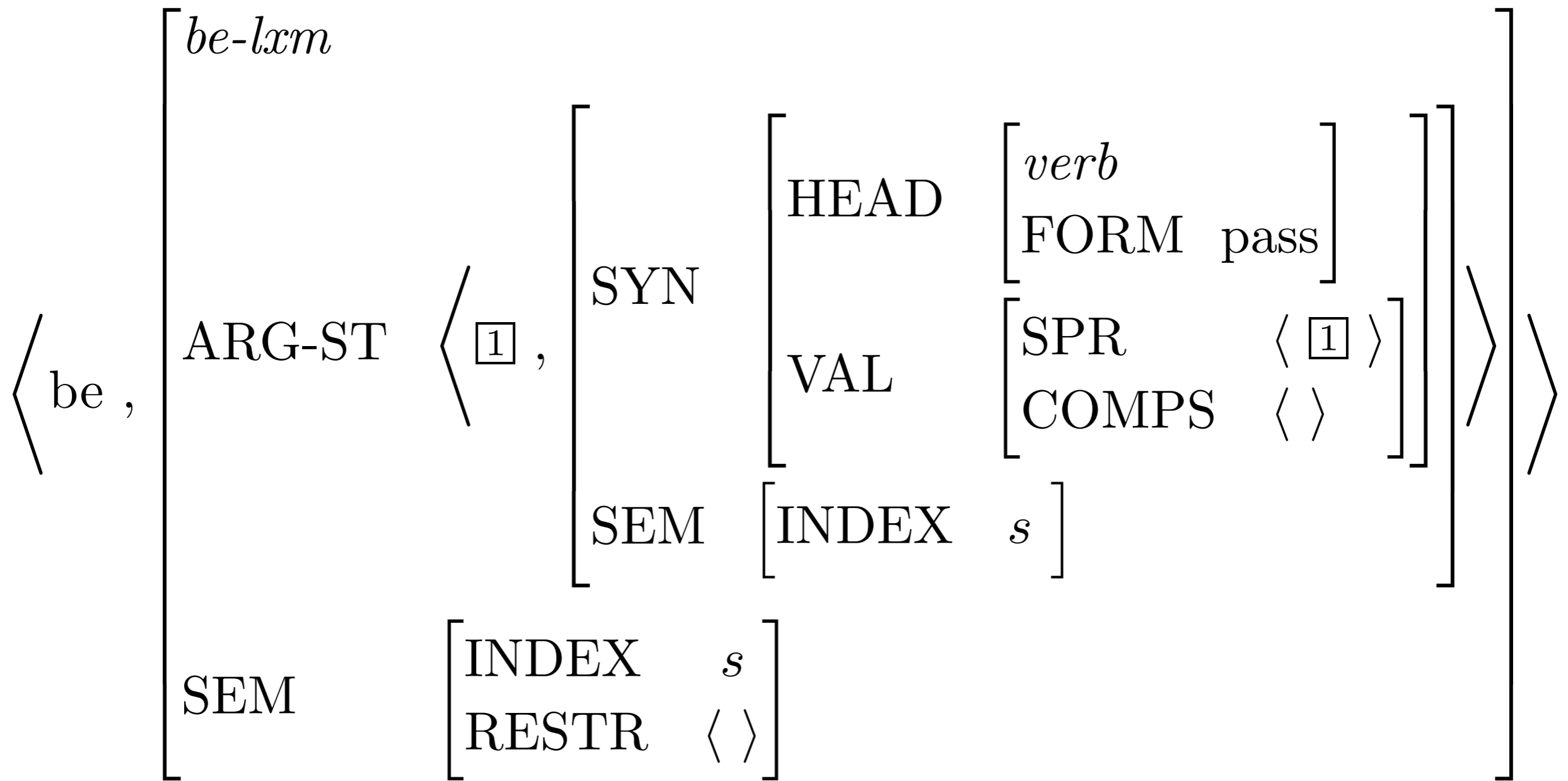
# Overview

- Existentials
- Extraposition
- Idioms

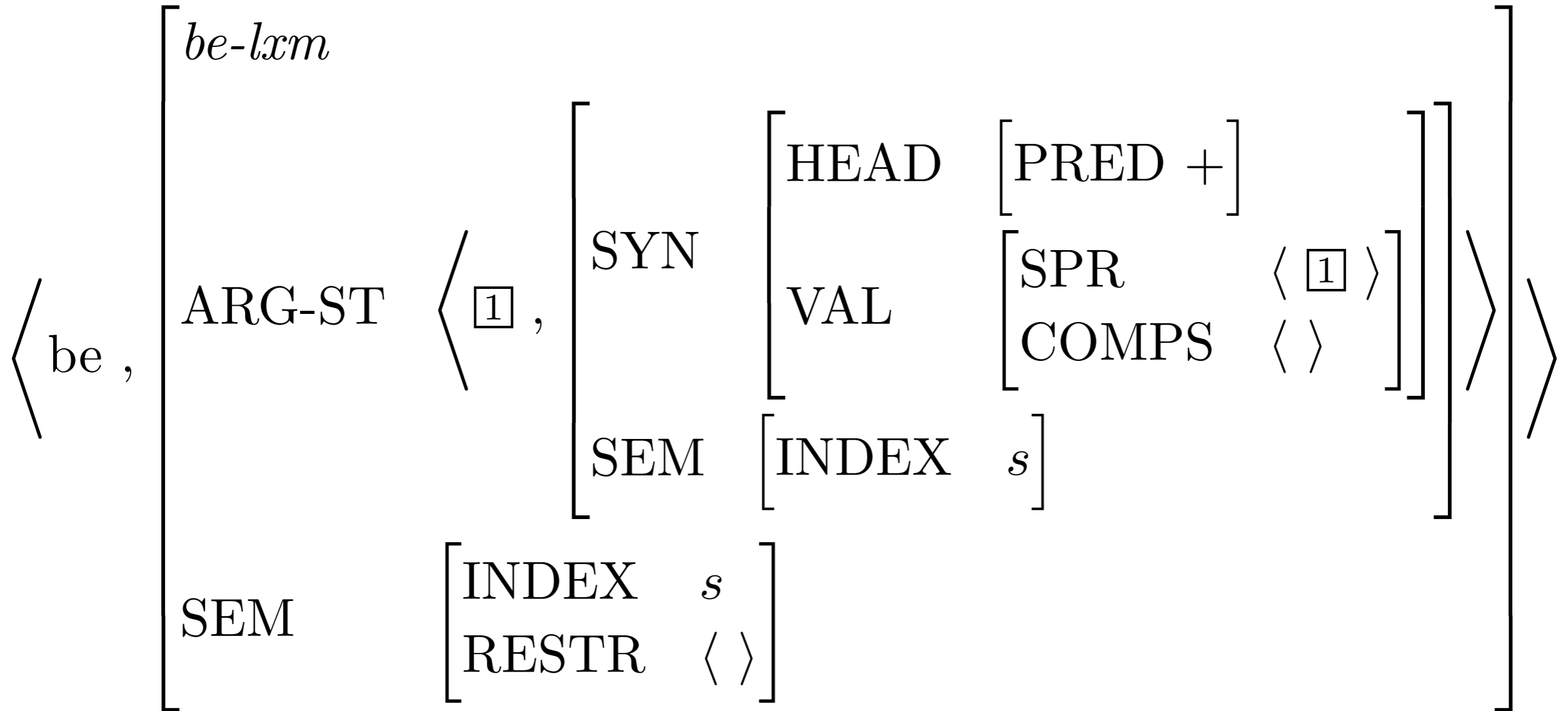
# Where We Are, and Where We're Going

- Last time, we met the passive *be*.
- Passive *be* is just a special case -- that *be* generally introduces [PRED +] constituents (next slide).
- Today, we'll start with another *be*, which occurs in existential sentences starting with *there*, e.g. *There is a monster in Loch Ness*.
- Then we'll look at this use of *there*.
- Which will lead us to a more general examination of NPs that don't refer, including some uses of *it* and certain idiomatic uses of NPs.

# Chapter 10 entry for *be*



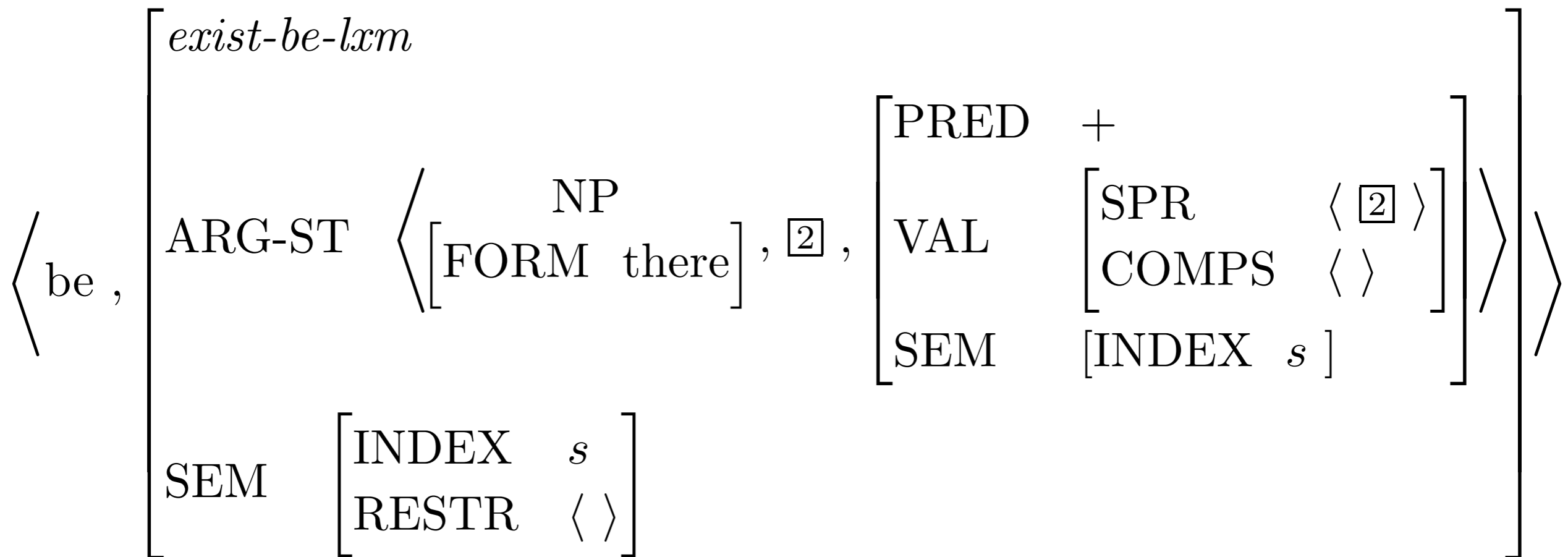
# Copula (generalized)



# Existentials

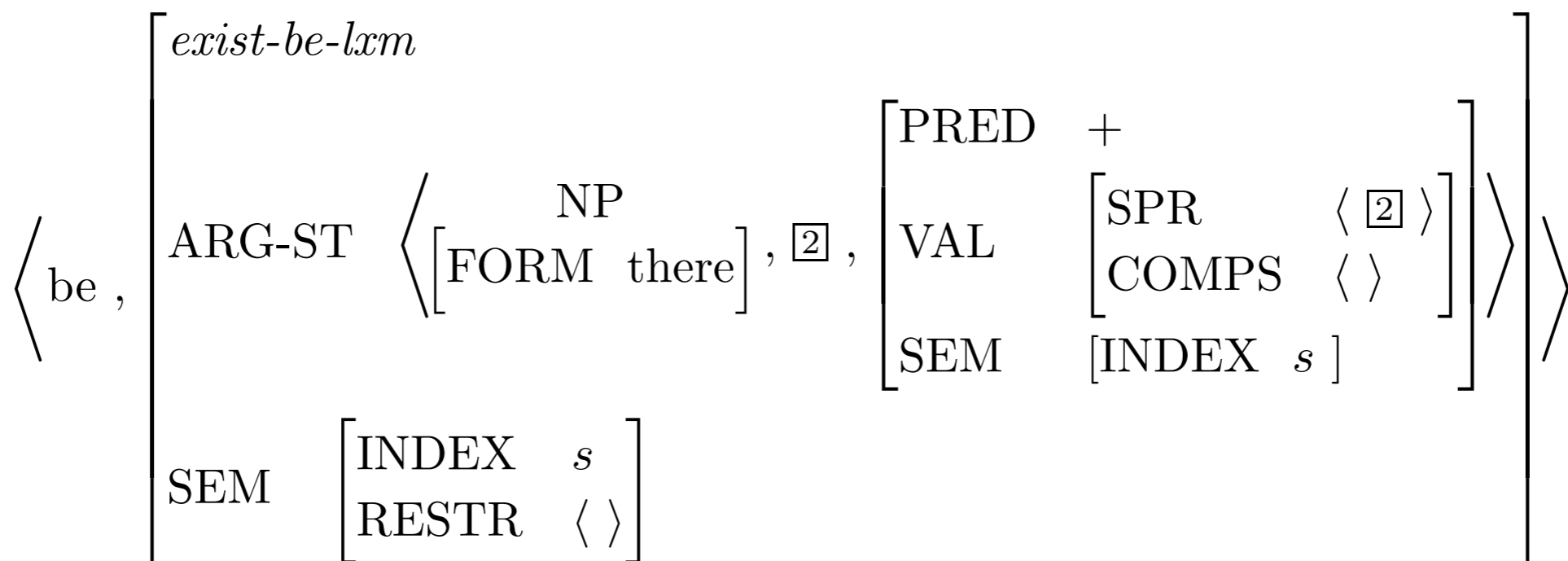
- The *be* in *There is a page missing* cannot be the same *be* that occurs in sentences like *Pat is tall* or *A cat was chased by a dog*. Why not?
- So we need a separate lexical entry for this *be*, stipulating:
  - Its SPR must be *there*
  - It takes two complements, the first an NP and the second an AP, PP, or (certain kind of) VP.
  - The semantics should capture the relation between, e.g. *There is a page missing* and *A page is missing*.

# Lexical Entry for the Existential *be*



# Questions About the Existential *be*

- What type of constituent is the third argument?
- Why is the third argument [PRED +]?
- Why is the second argument tagged as identical to the SPR of the third argument?
- What is the contribution of this *be* to the semantics of the sentences it occurs in?
- Can all [PRED +] predicates appear as the third argument in existentials?
- How do we rule out *\*There was a greyhound a good runner*?





# The Entry for Existential *there*

$\langle$	there ,	$\left[ \begin{array}{l} \text{pron-lxm} \\ \text{SYN} \end{array} \right]$	$\left[ \begin{array}{l} \text{HEAD} \\ \text{AGR} \end{array} \right]$	$\left[ \begin{array}{l} \text{FORM} \quad \text{there} \\ \text{PER} \quad \text{3rd} \end{array} \right]$	$\rangle$
		$\left[ \begin{array}{l} \text{SEM} \\ \text{MODE} \quad \text{none} \\ \text{INDEX} \quad \text{none} \\ \text{RESTR} \quad \langle \rangle \end{array} \right]$			

# Questions About Existential *there*

- Why do we call it a pronoun?
- Why don't we give it a value for NUM?
- What does this entry claim is *there*'s contribution to the semantics of the sentences it appears in?  
Is this a correct claim?

⟨	there ,	<i>pron-lxm</i>	[	HEAD	[	FORM	there	]	]	⟩
		AGR			[	PER	3rd	]		
[	SEM	[	MODE	none	]	[	INDEX	none	]	]
		[	RESTR	⟨ ⟩	]					

# Other NPs that don't seem to refer

- *It sucks that the Rockies lost the series.*
- *It is raining.*
- *Andy took **advantage** of the opportunity.*
- *Lou kicked **the bucket**.*

What we need to deal with examples like  
*It follows that you are wrong*

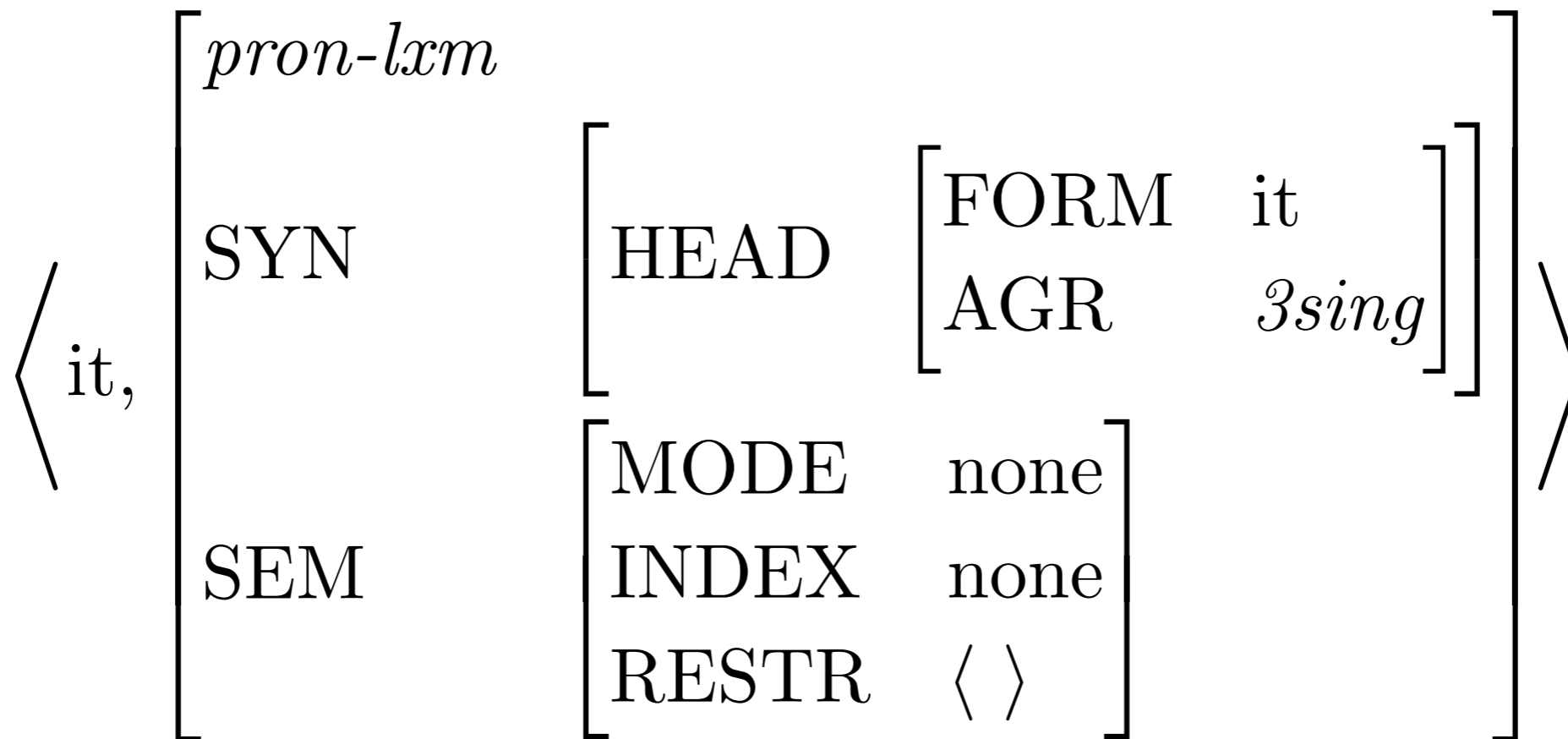
- A lexical entry for this dummy *it*
- An analysis of this use of *that*
- Entries for verbs that take clausal subjects  
(as in *That you are wrong follows*)
- A rule to account for the relationship  
between pairs like *That you are wrong  
follows* and *It follows that you are wrong*

# The Entry for Dummy *it*

$\langle$ <i>it,</i> $\rangle$	<i>pron-lxm</i>			
	SYN	HEAD	FORM <i>it</i>	
			AGR <i>3sing</i>	
	SEM	MODE <i>none</i>		
		INDEX <i>none</i>		
		RESTR $\langle \rangle$		

# Questions About Dummy *it*

- How does it differ from the entry for dummy *there*? Why do they differ in this way?
- Is this the only entry for *it*?



# A New Type of Lexeme: Complementizers

*comp-lxm* :

SYN	<table border="1"> <tr> <td>HEAD</td> <td> <table border="1"> <tr> <td><i>comp</i></td> </tr> <tr> <td>AGR</td> <td><i>3sing</i></td> </tr> </table> </td> </tr> <tr> <td>VAL</td> <td> <table border="1"> <tr> <td>SPR</td> <td><math>\langle \rangle</math></td> </tr> </table> </td> </tr> </table>	HEAD	<table border="1"> <tr> <td><i>comp</i></td> </tr> <tr> <td>AGR</td> <td><i>3sing</i></td> </tr> </table>	<i>comp</i>	AGR	<i>3sing</i>	VAL	<table border="1"> <tr> <td>SPR</td> <td><math>\langle \rangle</math></td> </tr> </table>	SPR	$\langle \rangle$
HEAD	<table border="1"> <tr> <td><i>comp</i></td> </tr> <tr> <td>AGR</td> <td><i>3sing</i></td> </tr> </table>	<i>comp</i>	AGR	<i>3sing</i>						
<i>comp</i>										
AGR	<i>3sing</i>									
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SPR	$\langle \rangle$									
ARG-ST	<table border="1"> <tr> <td>S</td> </tr> <tr> <td>INDEX</td> <td><i>s</i></td> </tr> </table>	S	INDEX	<i>s</i>						
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SEM	<table border="1"> <tr> <td>INDEX</td> <td><i>s</i></td> </tr> <tr> <td>RESTR</td> <td><math>\langle \rangle</math></td> </tr> </table>	INDEX	<i>s</i>	RESTR	$\langle \rangle$					
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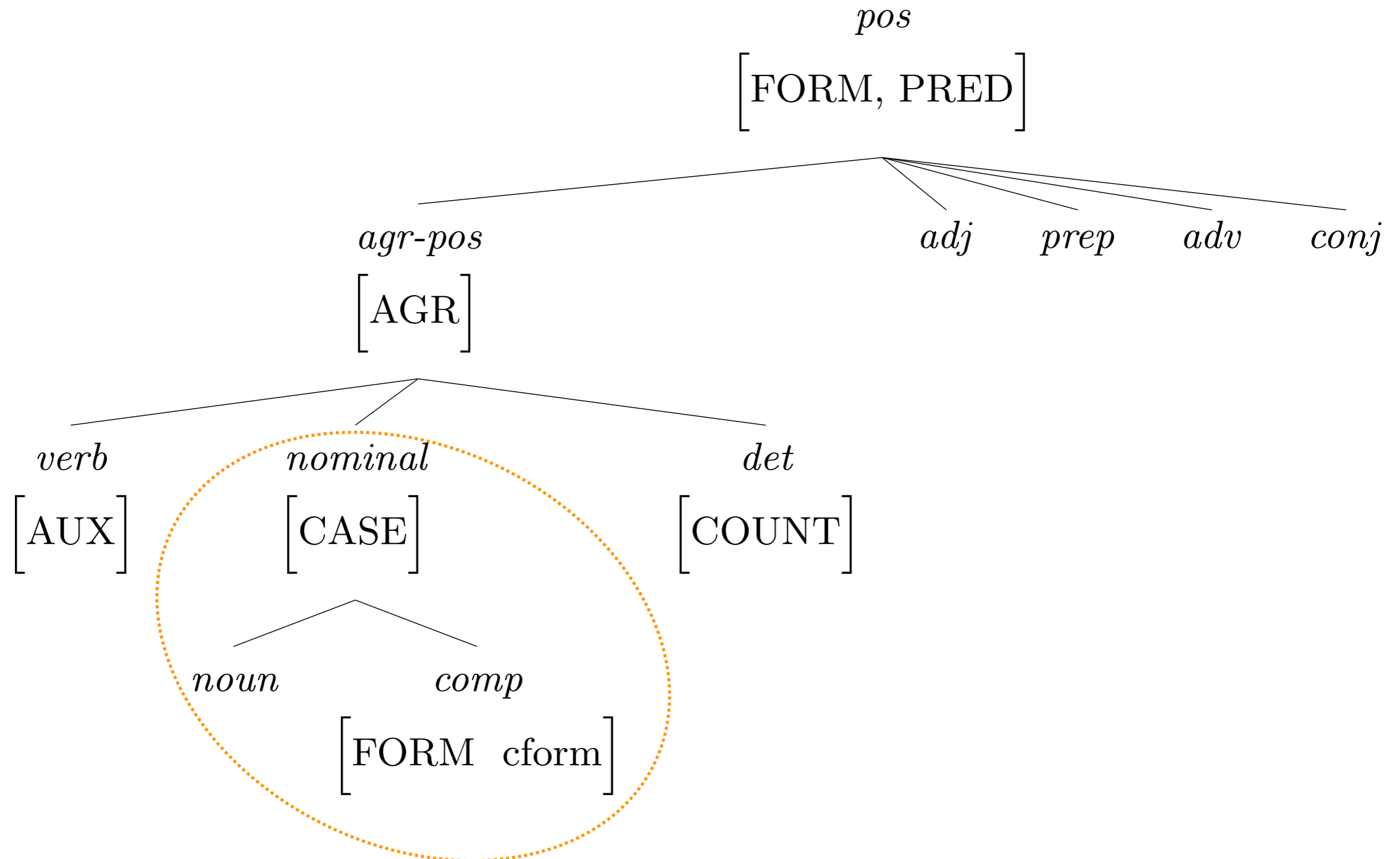
# Questions About the Type *comp-lxm*

- Why does it stipulate values for both SPR and ARG-ST?
- Why is its INDEX value the same as its argument's?
- What is its semantic contribution?

$$\text{comp-lxm} : \left[ \begin{array}{l} \text{SYN} \\ \text{ARG-ST} \\ \text{SEM} \end{array} \left[ \begin{array}{l} \text{HEAD} \left[ \begin{array}{l} \text{comp} \\ \text{AGR} \quad 3sing \end{array} \right] \\ \text{VAL} \left[ \begin{array}{l} \text{SPR} \quad \langle \rangle \end{array} \right] \\ \text{INDEX} \quad s \\ \text{RESTR} \quad \langle \rangle \end{array} \right] \left\langle \begin{array}{l} \text{S} \\ \left[ \begin{array}{l} \text{INDEX} \quad s \end{array} \right] \end{array} \right\rangle \right. \end{array} \right]$$



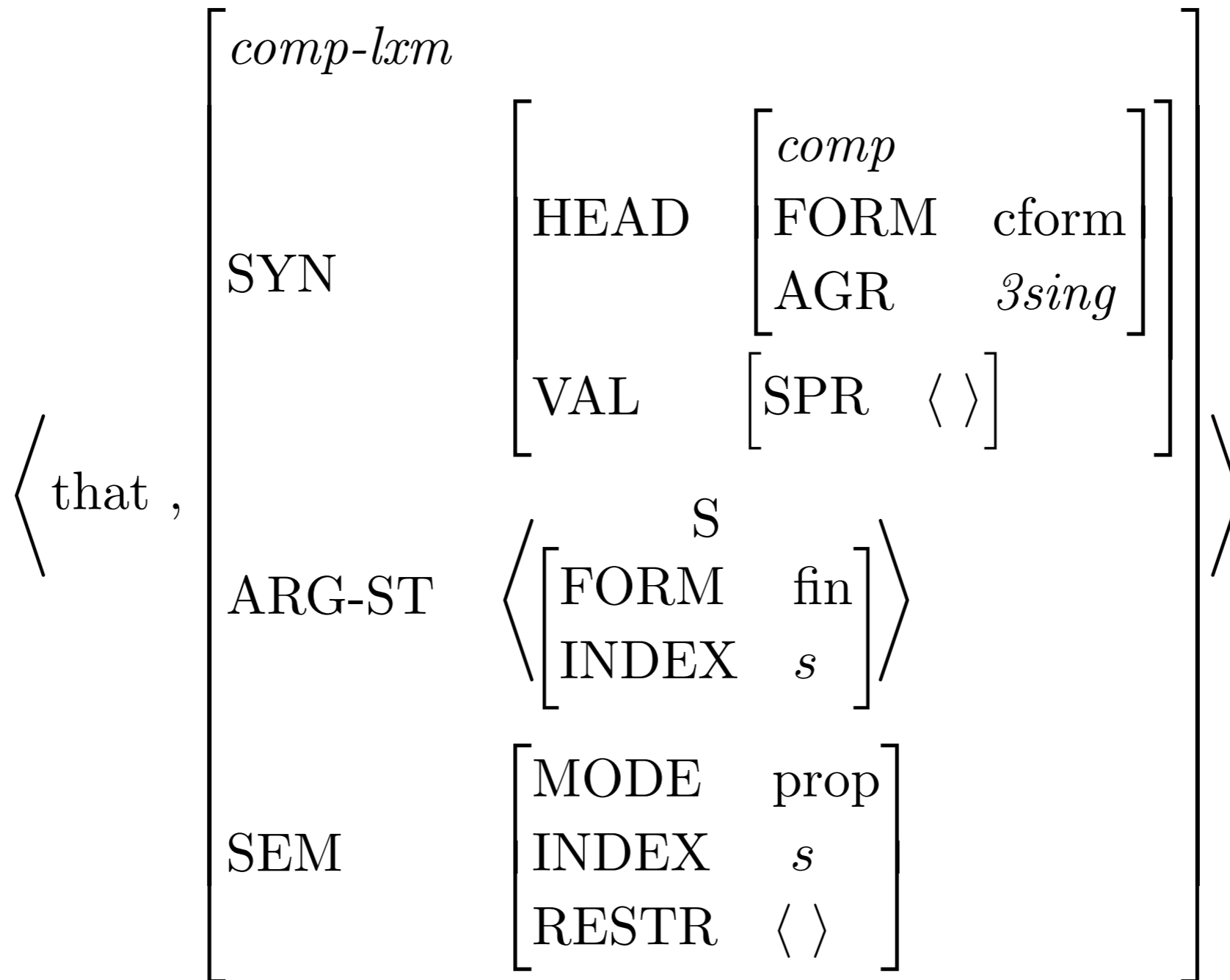
# The Type *comp*



# The Lexical Entry for Complementizer *that*

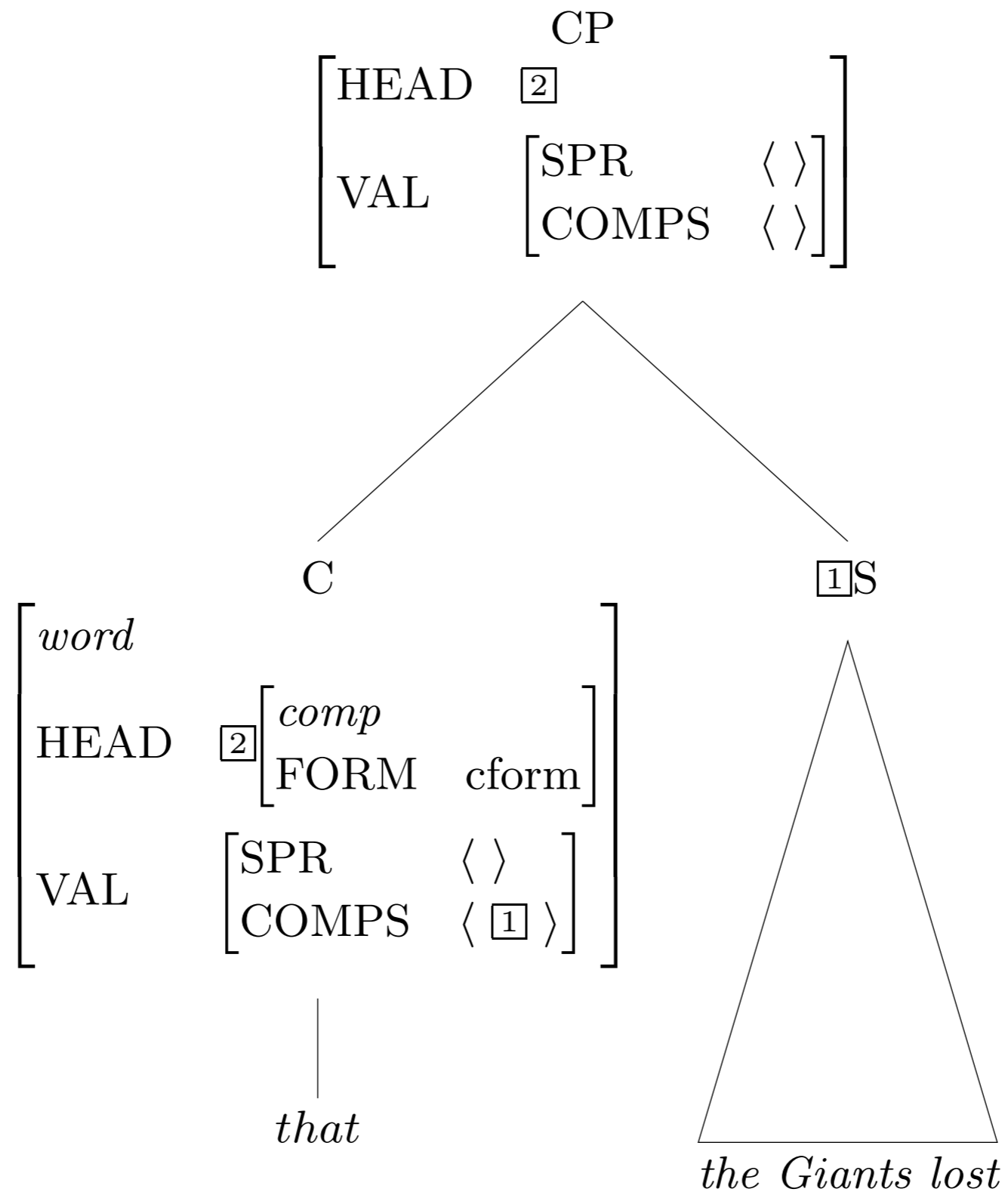
$$\left\langle \text{that} , \begin{bmatrix} \textit{comp-lxm} \\ \text{ARG-ST} \langle [\text{FORM fin}] \rangle \\ \text{SEM} \begin{bmatrix} \text{MODE prop} \end{bmatrix} \end{bmatrix} \right\rangle$$

...and with inherited information filled in

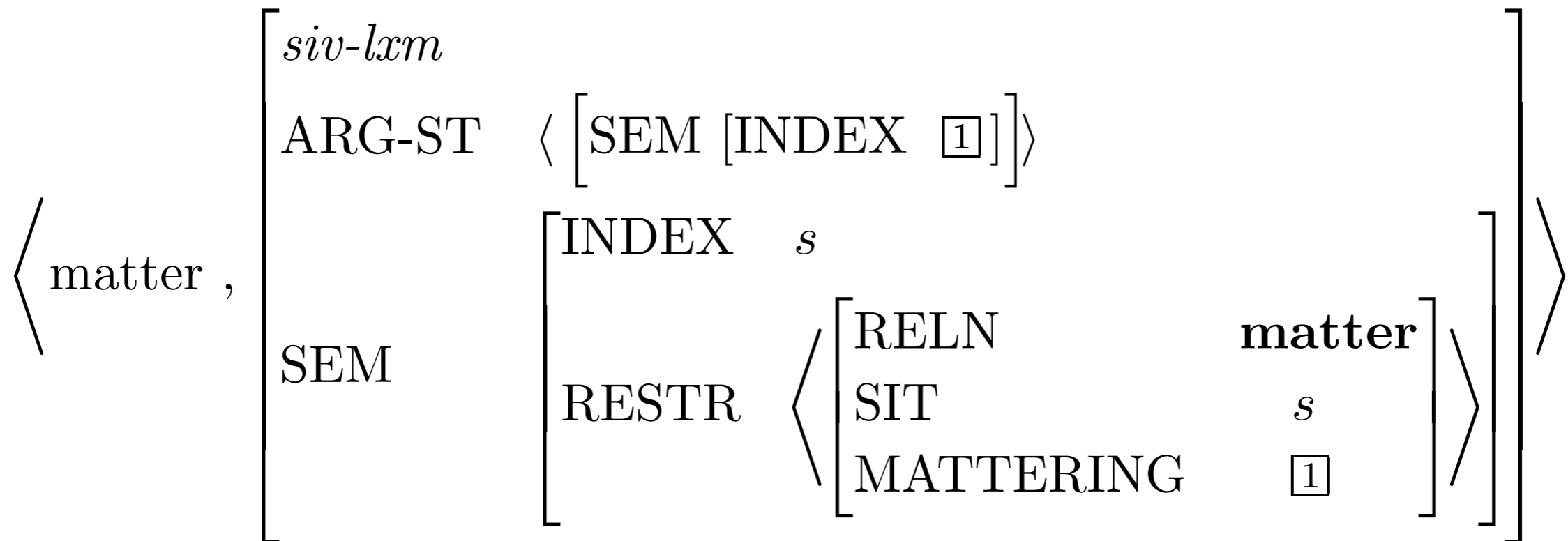


Question: Where did [FORM cform] come from?

# Structure of a Complementizer Phrase



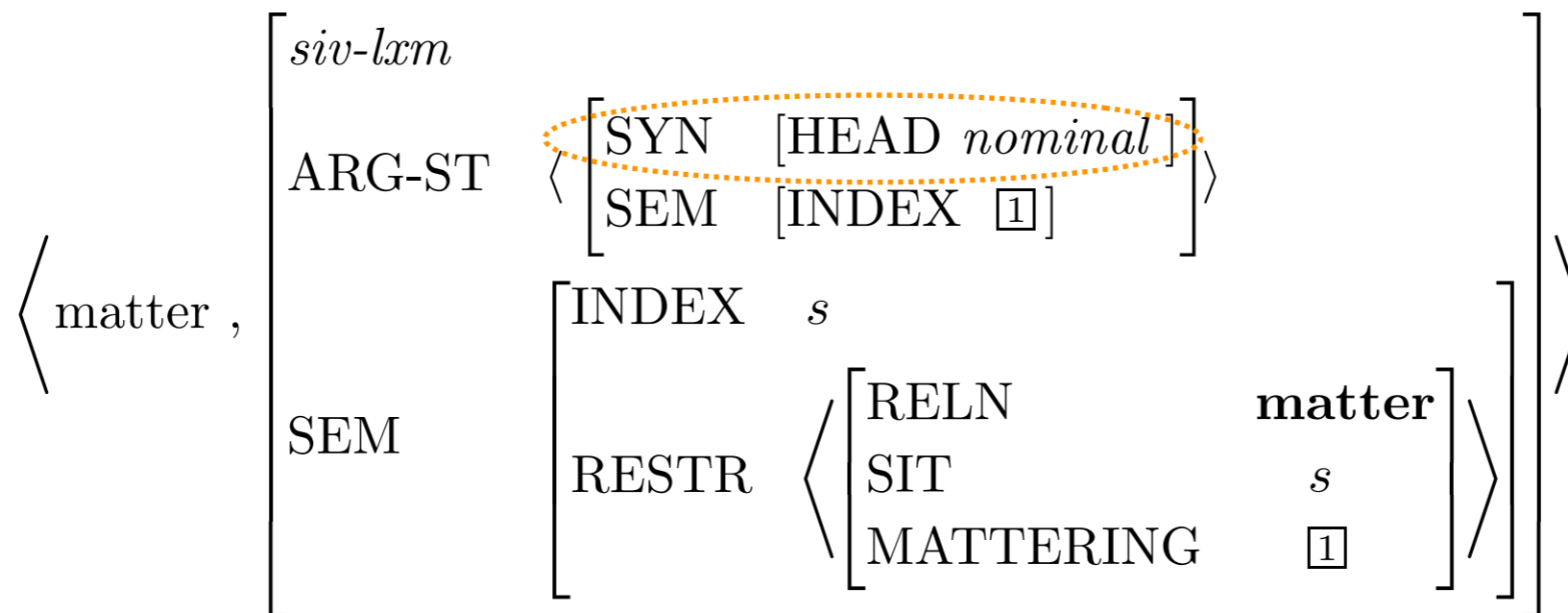
# Sample Verb with a CP Subject



Note: the only constraint on the first argument is semantic

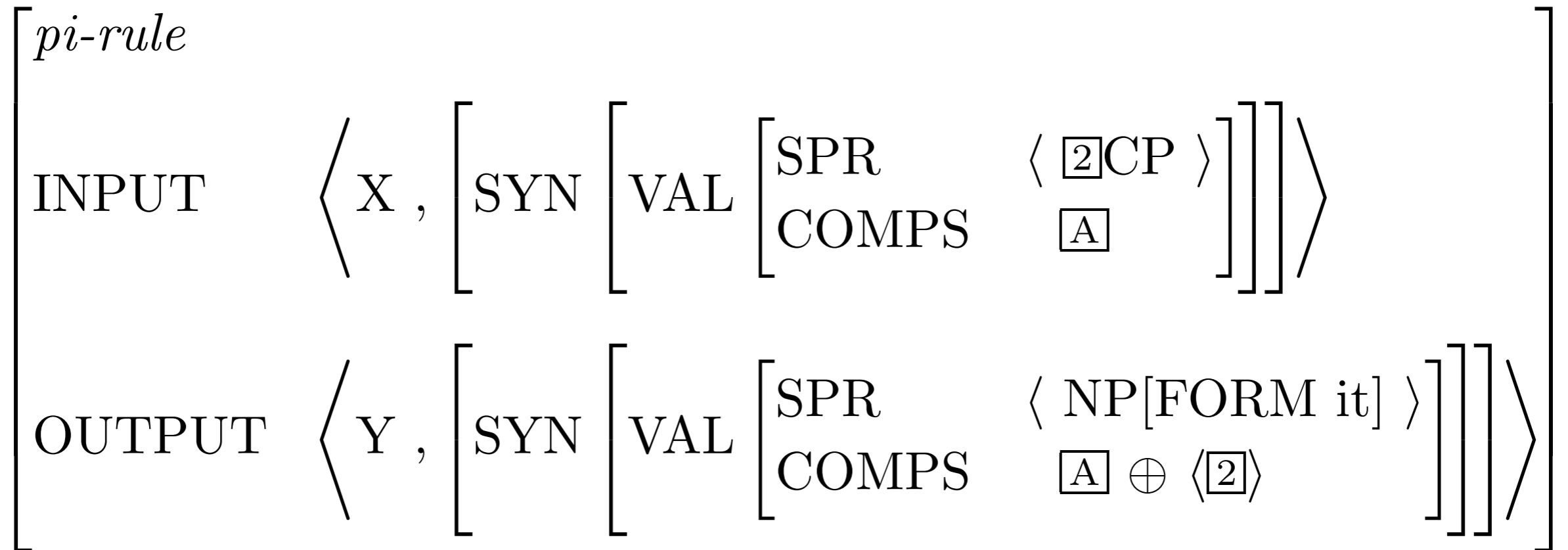
# A Problem

- We constrained the subject of *matter* only semantically. However...
  - CP and S are semantically identical, but we get:  
*That Bush won matters* vs. \**Bush won matters*
  - Argument-marking PPs are semantically identical to their object NPs, but we get:  
*The election mattered* vs. \**Of the election mattered*
- So we need to add a syntactic constraint.



- S and PP subjects are generally impossible, so this constraint should probably be on *verb-lxm*.

# The Extraposition Lexical Rule



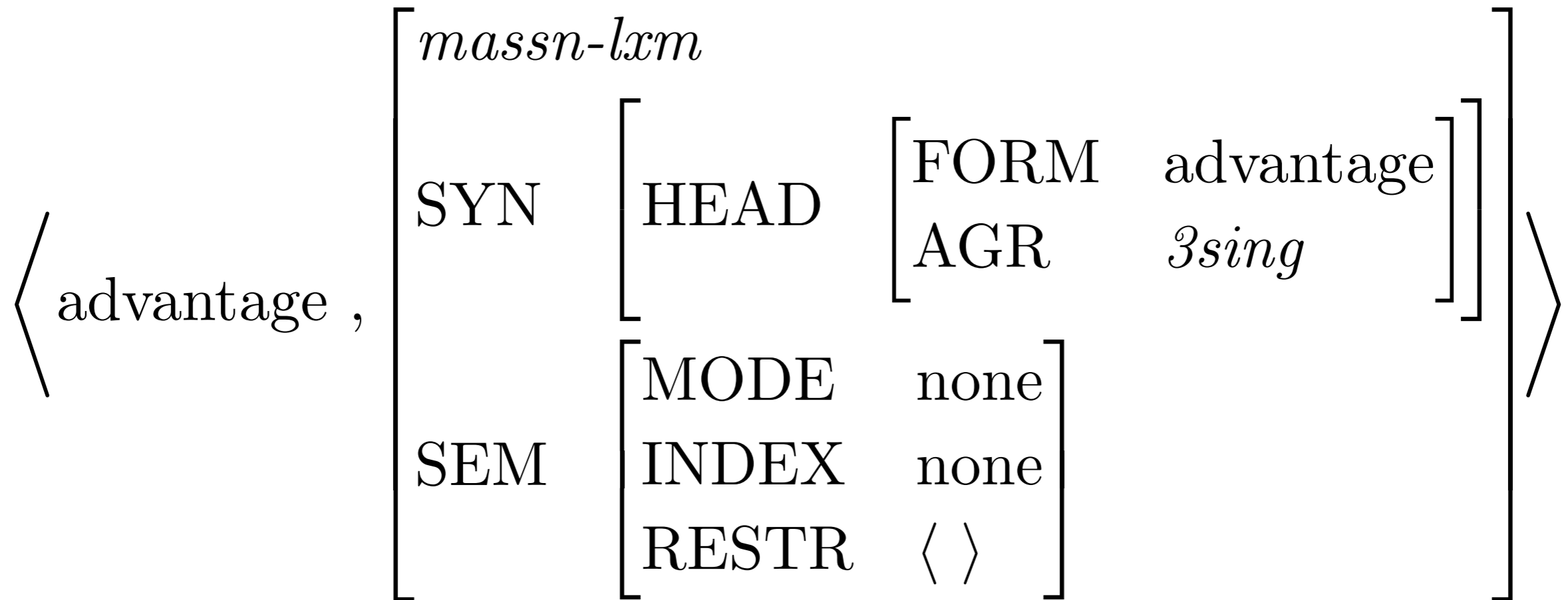
- Why is the type *pi-rule*?
- Why doesn't it say anything about the semantics?
- Why is the COMPS value  $\boxed{A}$ , not  $\langle \ \ \rangle$ ?

# Extraposition with Verbs whose COMPS Lists are Nonempty

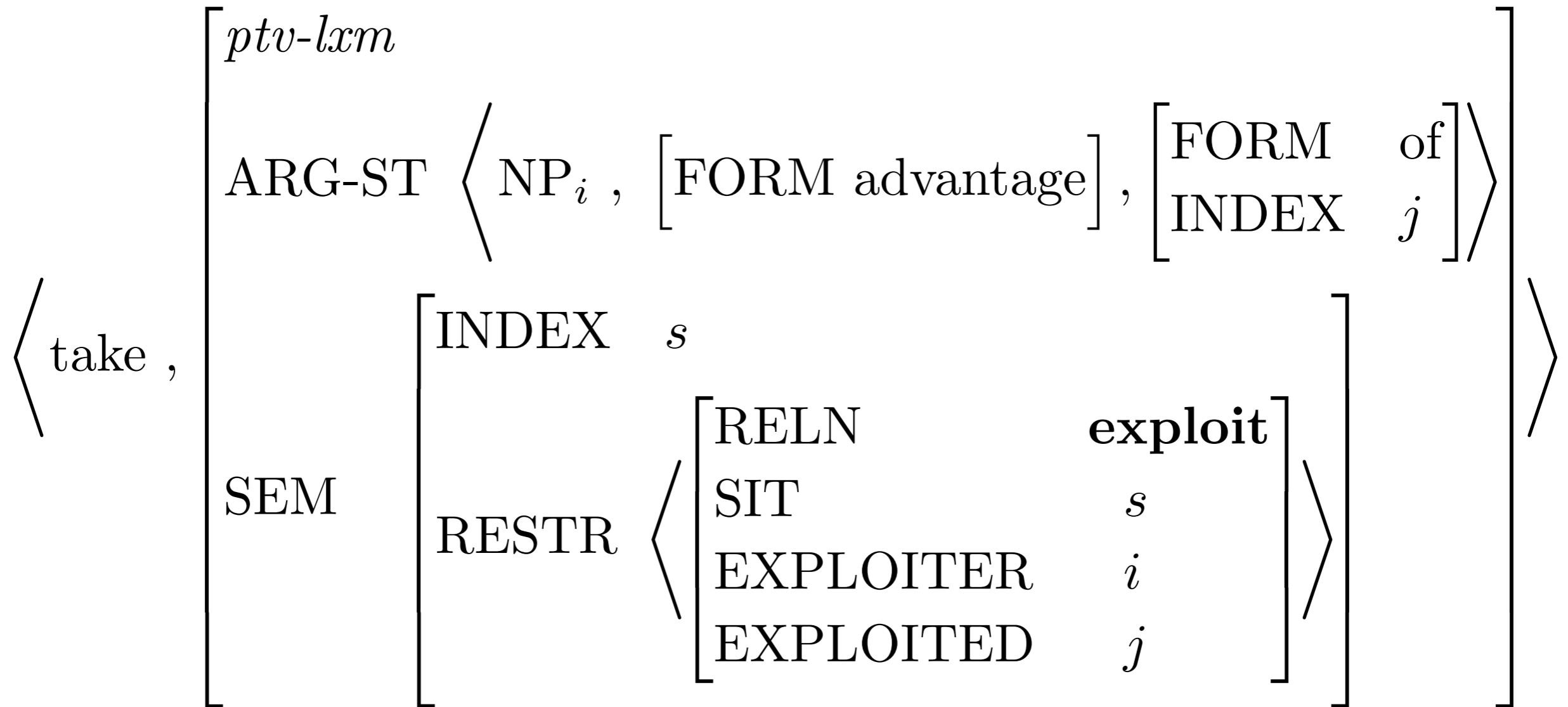
- *It worries me that war is imminent.*
- *It occurred to Pat that Chris knew the answer.*
- *It endeared you to Andy that you wore a funny hat.*



# Another Nonreferential Noun



# The Verb that Selects *advantage*



# Our analyses of idioms and passives interact...

- We generate  
*Advantage was taken of the situation by many people.*  
*Tabs are kept on foreign students.*
- But not:  
*Many people were taken advantage of.*
- That would require another lexical entry, in which *take advantage of* is a transitive verb (with spaces in its written form).

# Overview

- Existentials (*there, be*)
- Extraposition (*that, it, LR*)
- Idioms