

Ling 566

Nov 7, 2019

Non-referential NPs, Expletives, and Extraposition

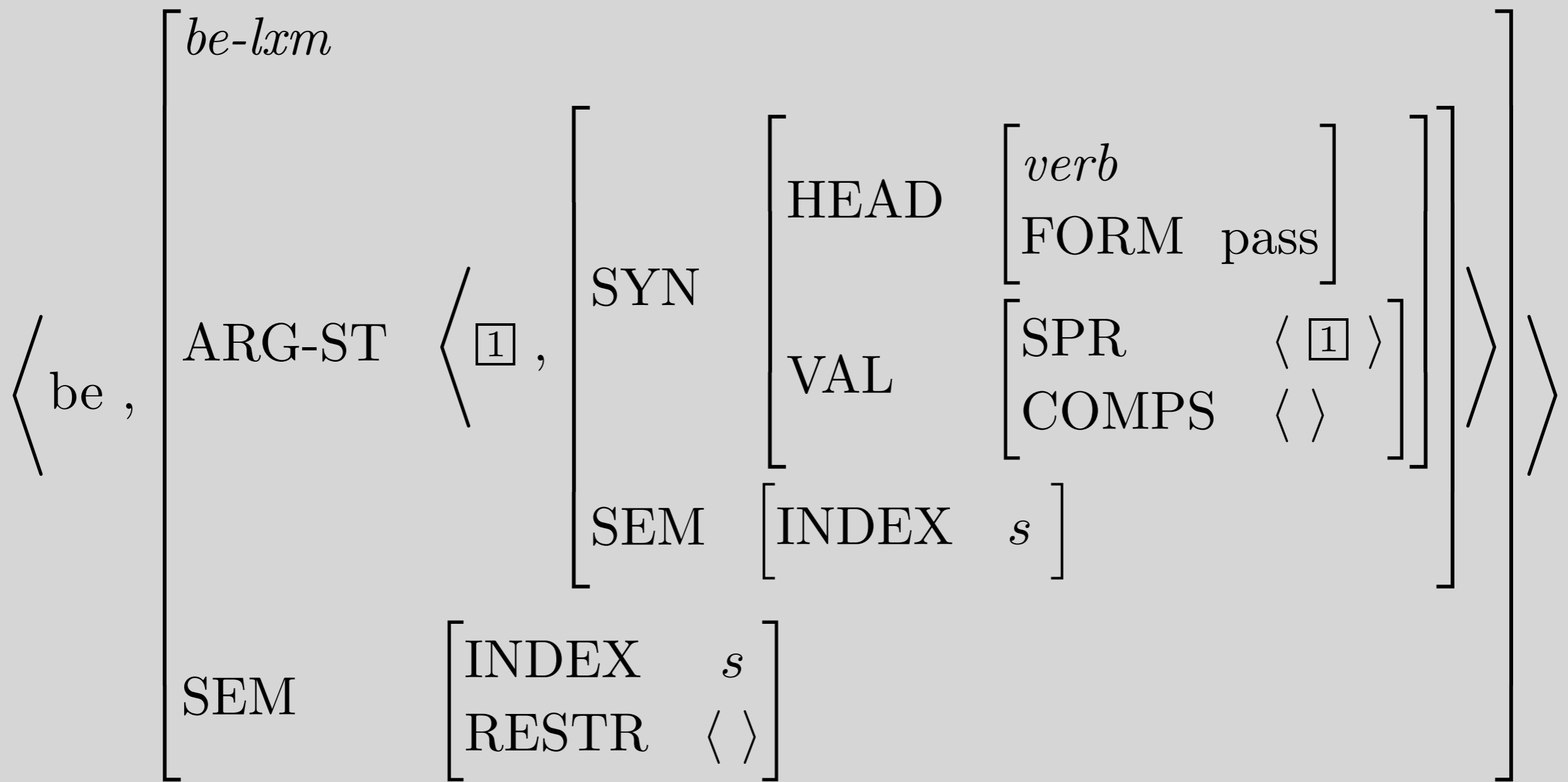
Overview

- Existentials
- Extraposition
- Idioms

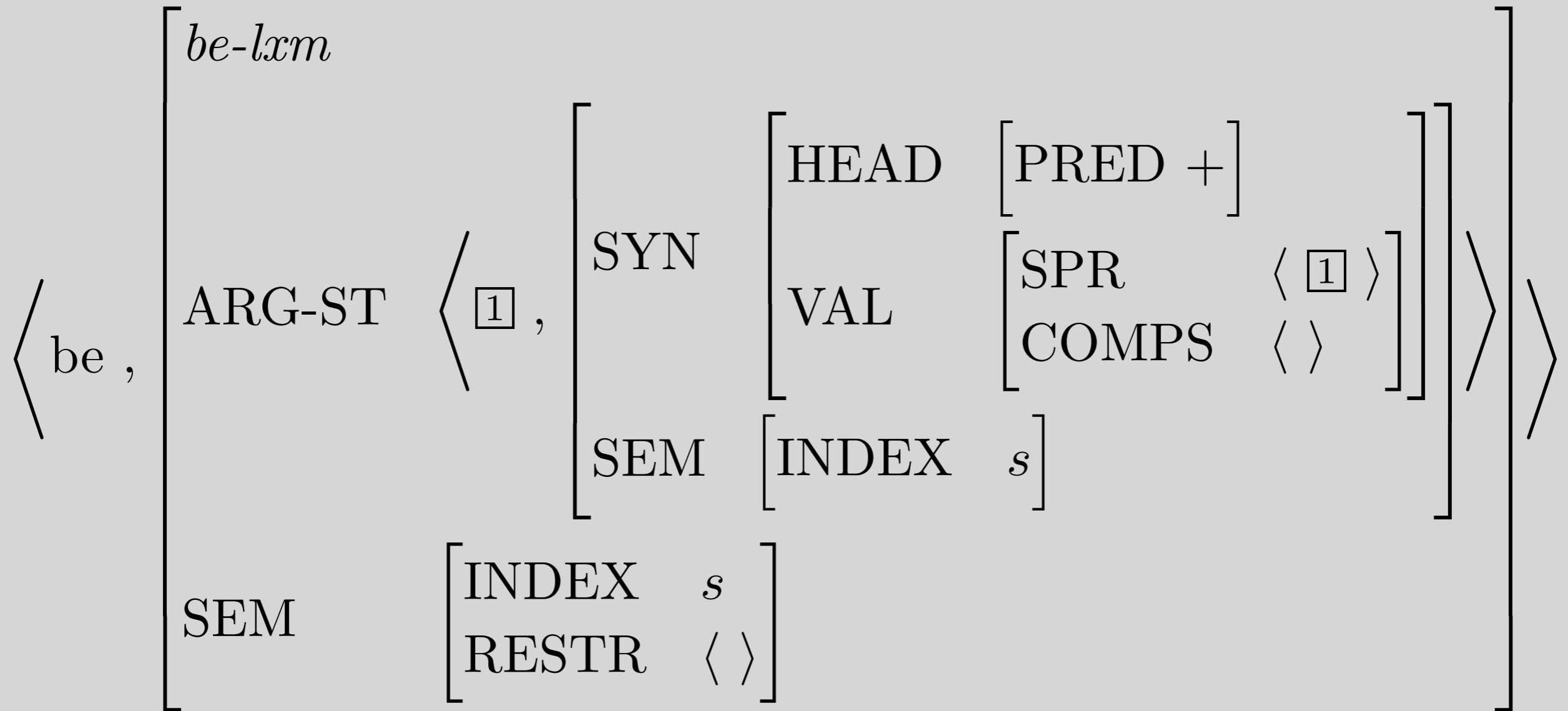
Where We Are, and Where We're Going

- 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*



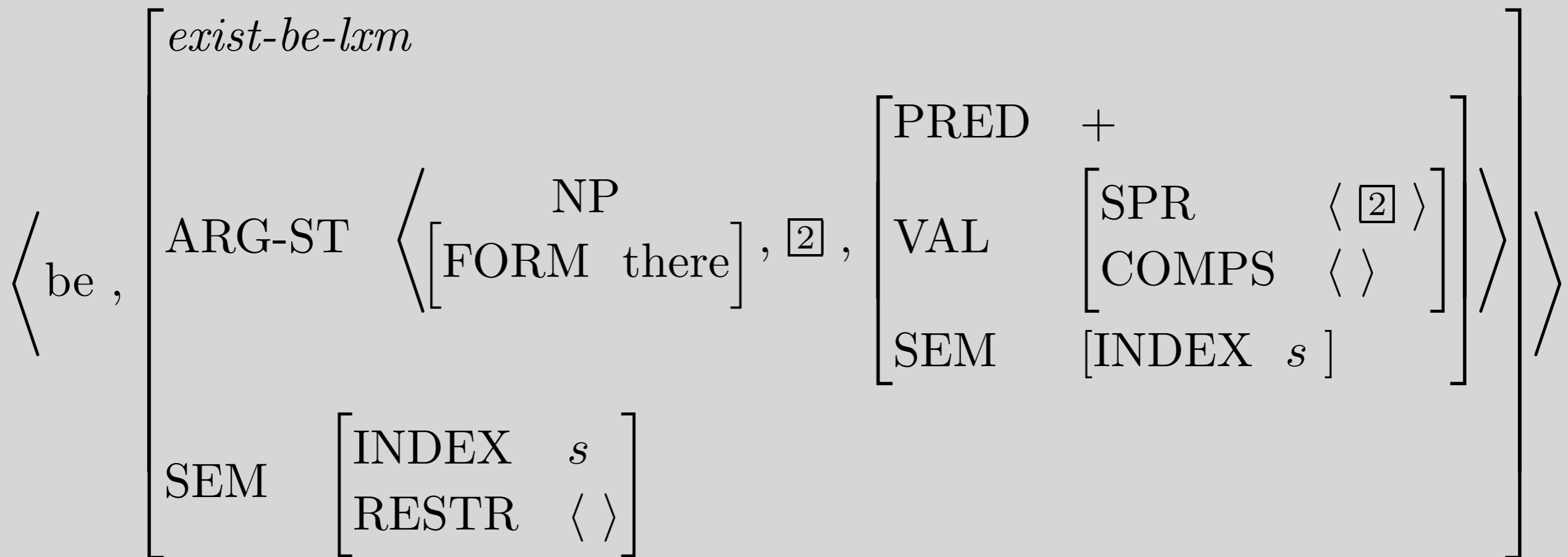
Copula (generalized)



Existentials

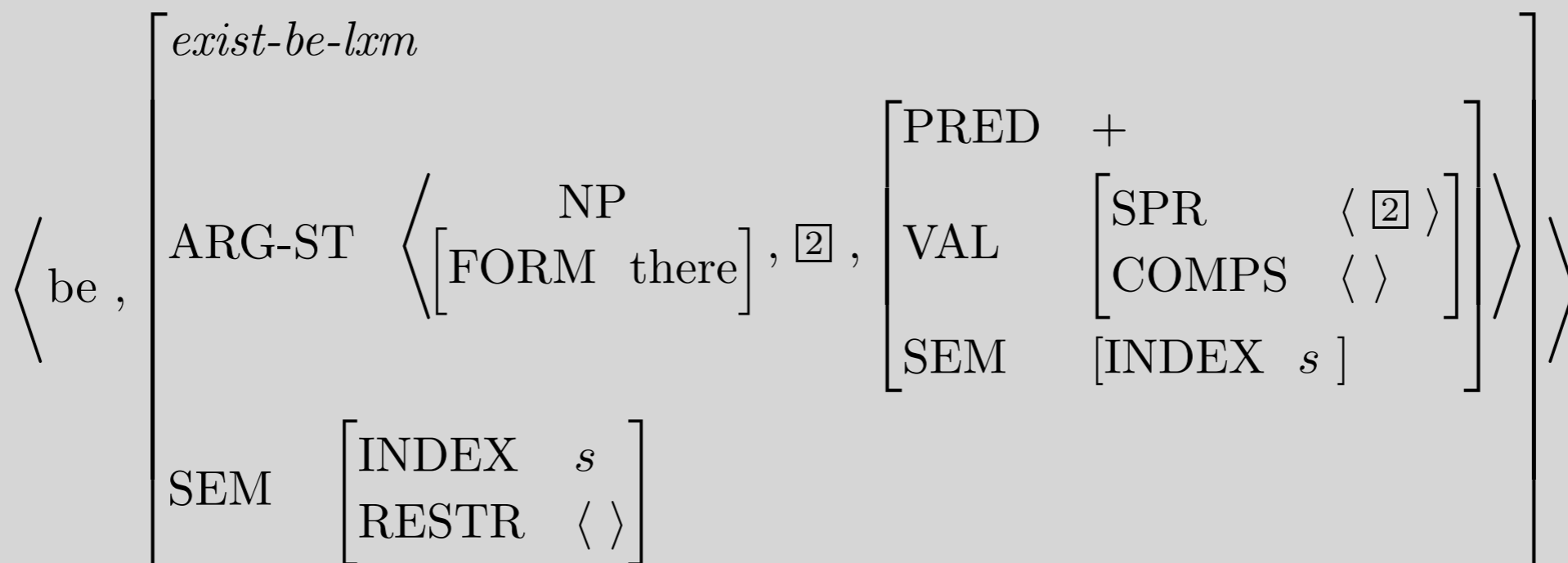
- The *be* in *There is a page missing* cannot be the same *be* that occurs in sentences like *Pat is tall* or *A cat was chased by a dog*. Why not?
- So we need a separate lexical entry for this *be*, stipulating:
 - Its SPR must be *there*
 - It takes two complements, the first an NP and the second 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?



The Entry for Existential *there*

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

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?

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

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	$\left[\begin{array}{l} \text{FORM } \textit{it} \\ \text{AGR } \textit{3sing} \end{array} \right]$
SEM	MODE	none	
	INDEX	none	
	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*?

\langle it, \rangle	$\left[\begin{array}{l} \text{SYN} \\ \text{SEM} \end{array} \right]$	$\left[\begin{array}{l} \text{HEAD} \\ \text{MODE} \\ \text{INDEX} \\ \text{RESTR} \end{array} \right]$	$\left[\begin{array}{l} \text{FORM} \\ \text{AGR} \\ \text{none} \\ \text{none} \\ \langle \rangle \end{array} \right]$	$\left[\begin{array}{l} \text{it} \\ 3sing \end{array} \right]$
	<i>pron-lxm</i>			

A New Type of Lexeme: Complementizers

comp-lxm :

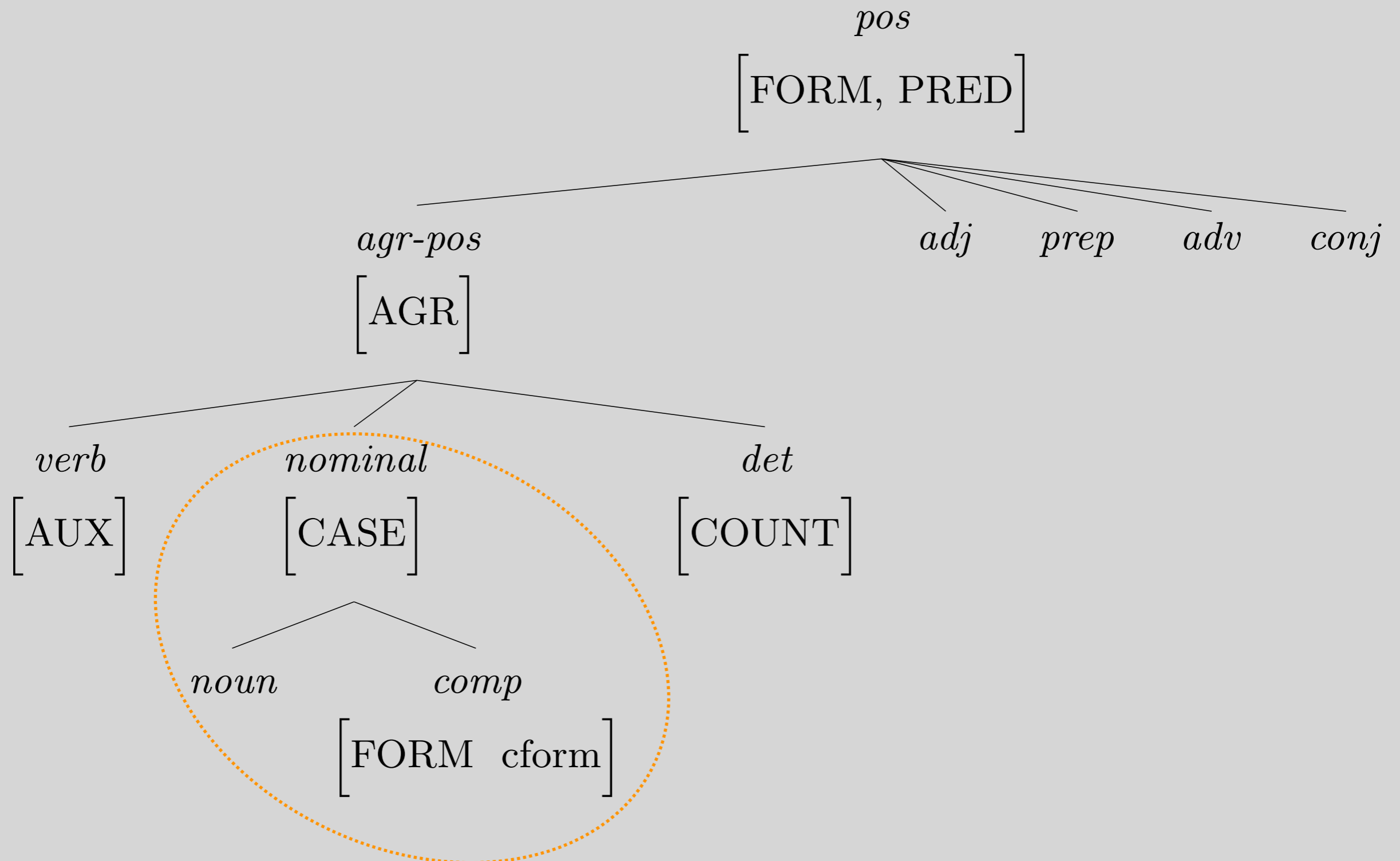
SYN	<table border="1"> <tr> <td>HEAD</td> <td> <table border="1"> <tr> <td><i>comp</i></td> </tr> <tr> <td>AGR</td> <td><i>3sing</i></td> </tr> </table> </td> </tr> <tr> <td>VAL</td> <td> <table border="1"> <tr> <td>SPR</td> <td>$\langle \rangle$</td> </tr> </table> </td> </tr> </table>	HEAD	<table border="1"> <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>$\langle \rangle$</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>									
VAL	<table border="1"> <tr> <td>SPR</td> <td>$\langle \rangle$</td> </tr> </table>	SPR	$\langle \rangle$							
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>						
S										
INDEX	<i>s</i>									
SEM	<table border="1"> <tr> <td>INDEX</td> <td><i>s</i></td> </tr> <tr> <td>RESTR</td> <td>$\langle \rangle$</td> </tr> </table>	INDEX	<i>s</i>	RESTR	$\langle \rangle$					
INDEX	<i>s</i>									
RESTR	$\langle \rangle$									

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?

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

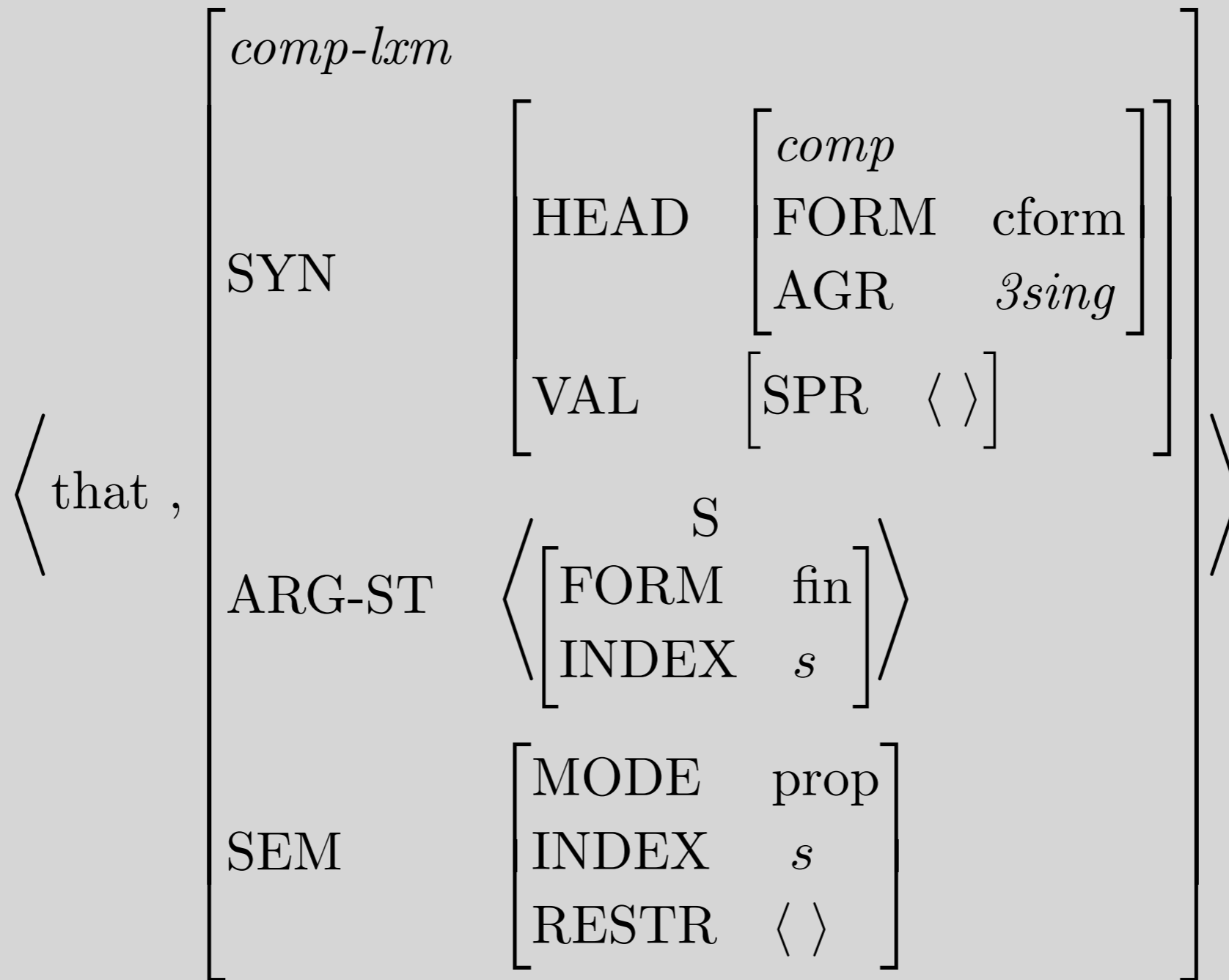
The Type *comp*



The Lexical Entry for Complementizer *that*

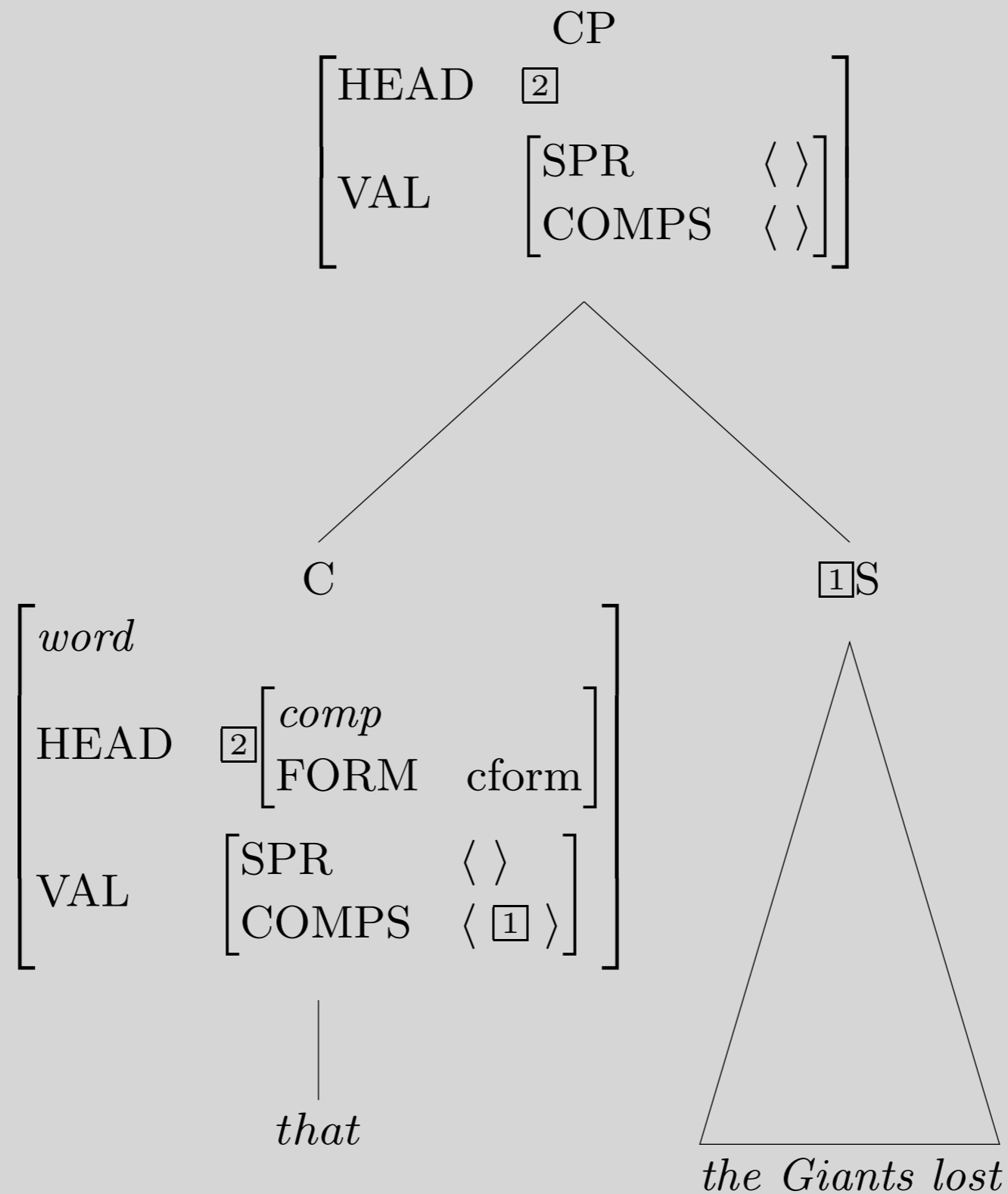
$$\left\langle \text{that} , \begin{bmatrix} \textit{comp-lxm} \\ \text{ARG-ST} \left\langle \left[\text{FORM fin} \right] \right\rangle \\ \text{SEM} \left[\text{MODE prop} \right] \end{bmatrix} \right\rangle$$

...and with inherited information filled in

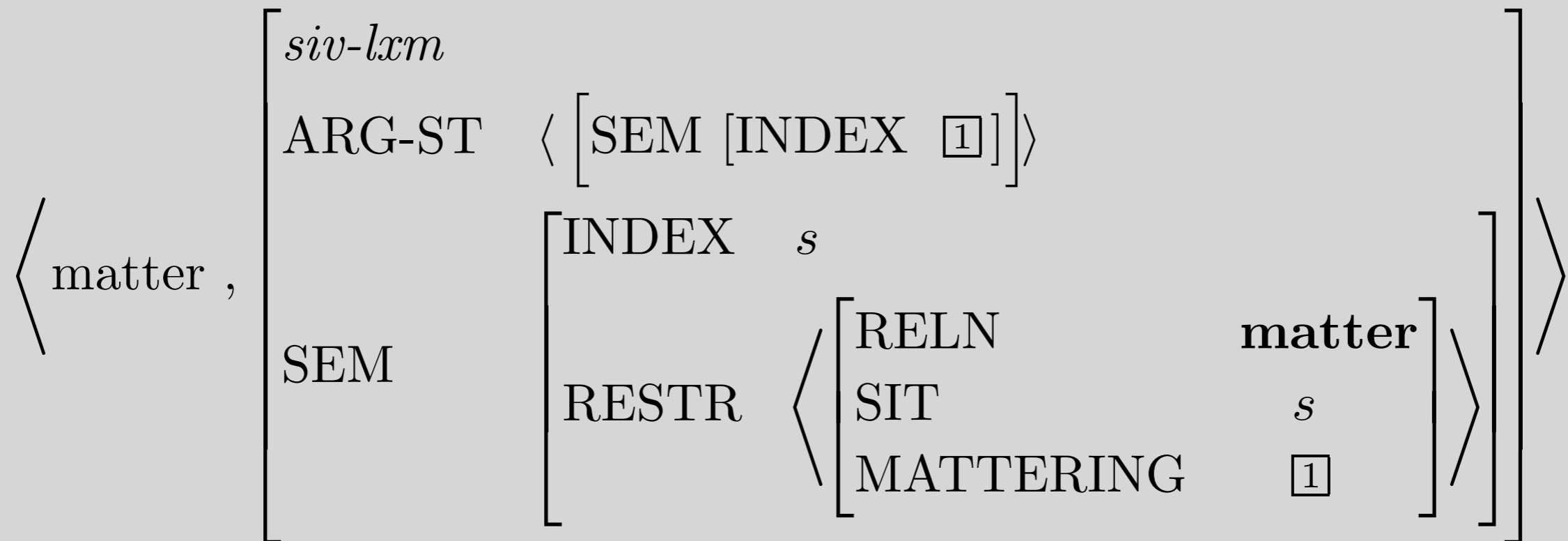


Question: Where did [FORM cform] come from?

Structure of a Complementizer Phrase



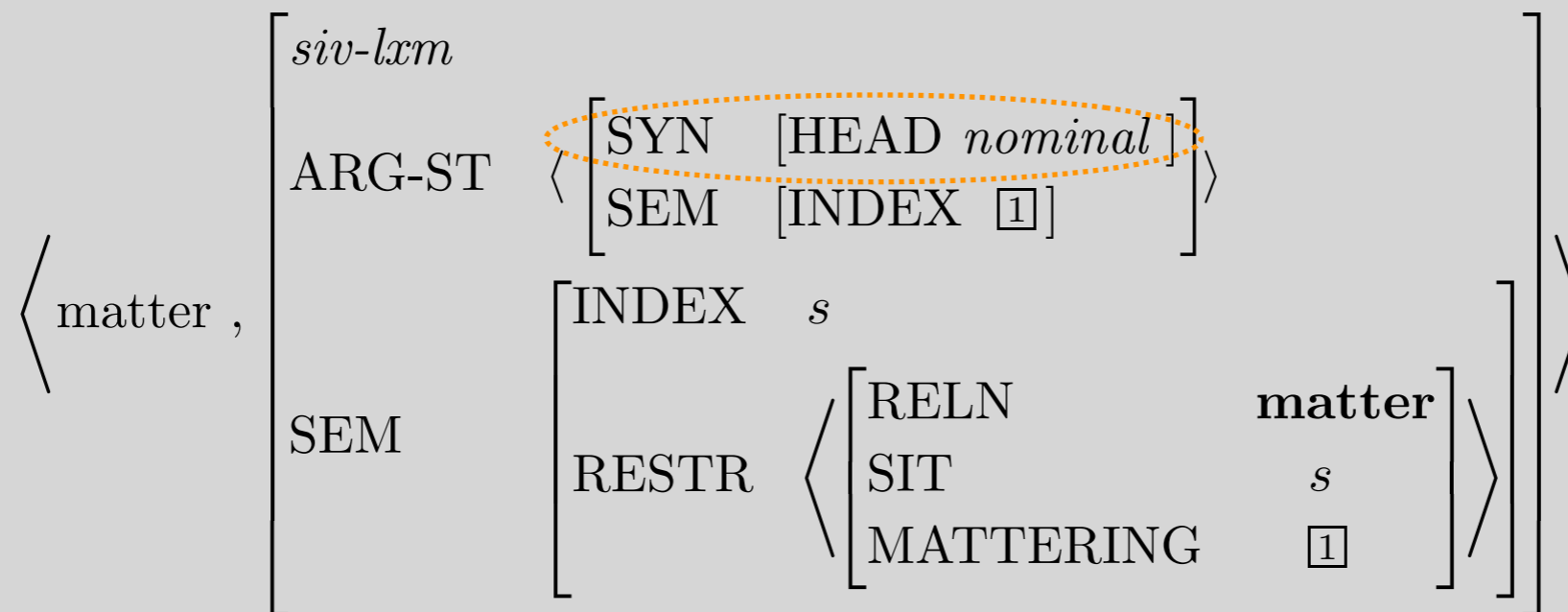
Sample Verb with a CP Subject



Note: the only constraint on the first argument is semantic

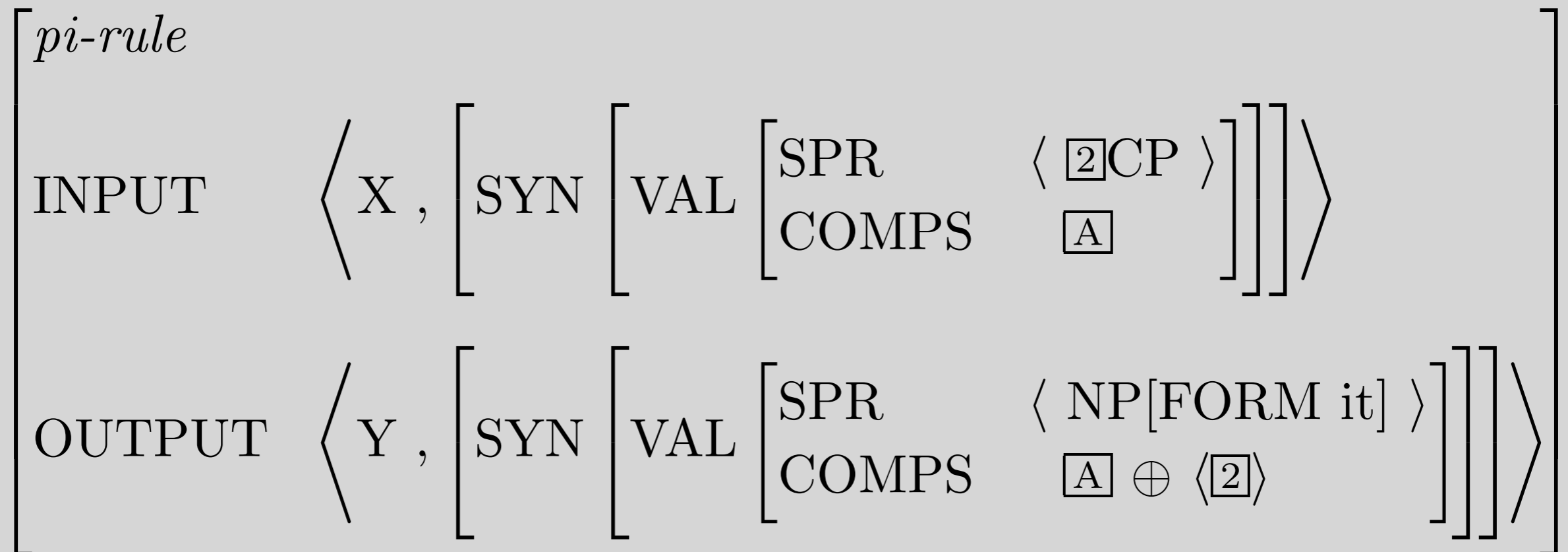
A Problem

- 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 belongs on *verb-lxm*.

The Extraposition Lexical Rule

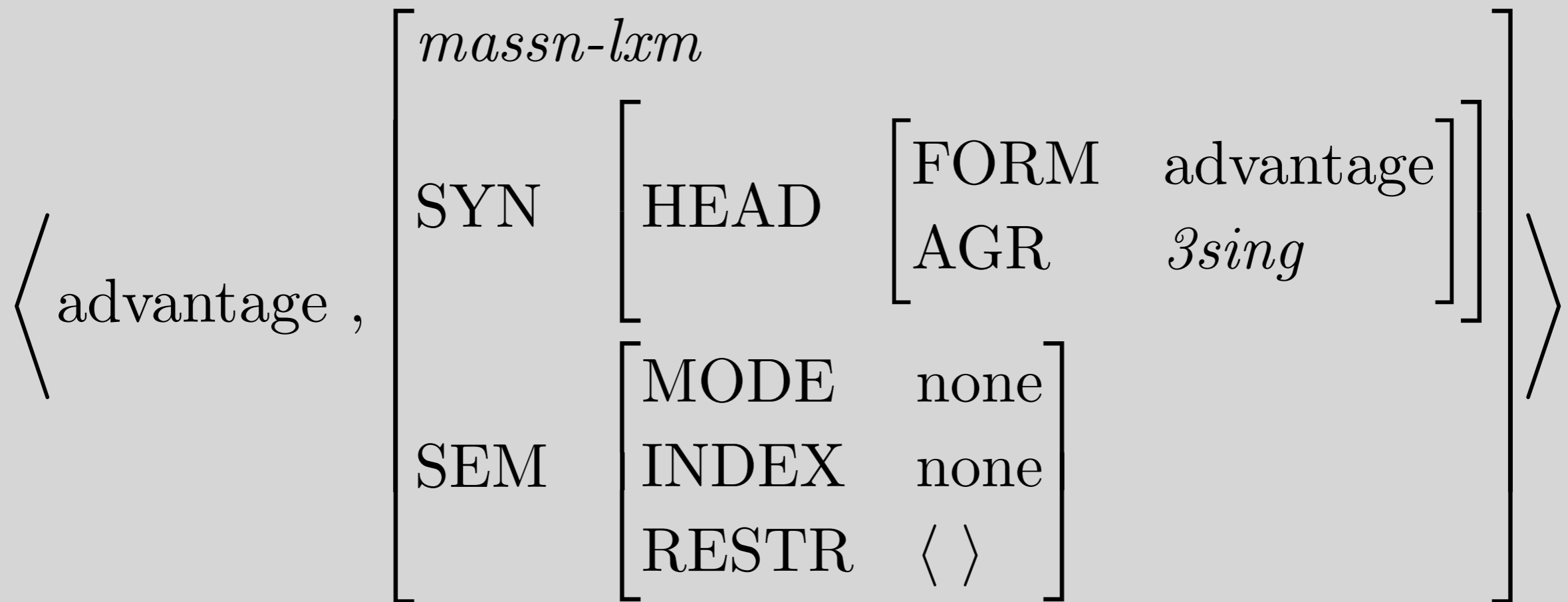


- Why is the type *pi-rule*?
- Why doesn't it say anything about the semantics?
- Why is the COMPS on INPUT \boxed{A} , not $\langle \ \ \rangle$?

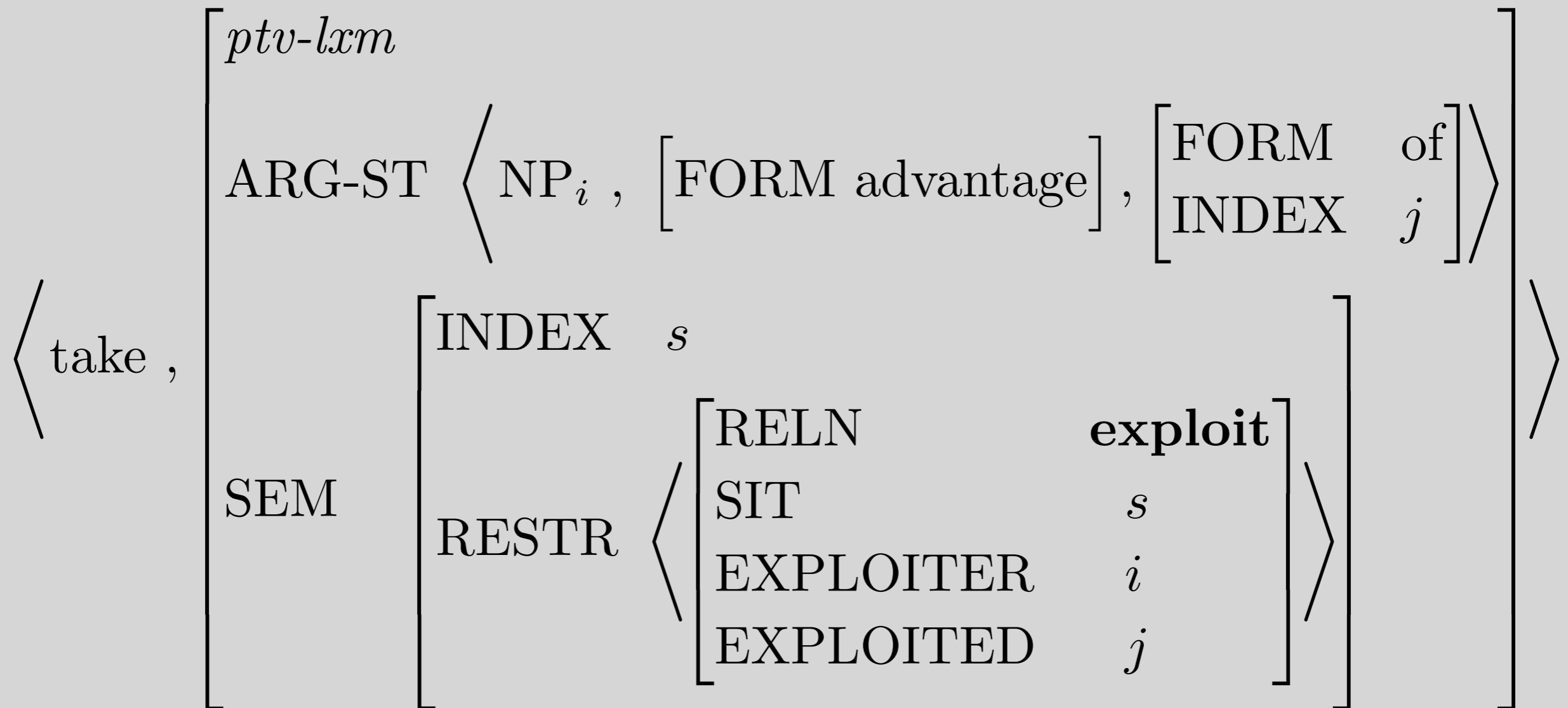
Extraposition with Verbs whose COMPS Lists are Nonempty

- *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 online activists.

- But not:

Many people were taken advantage of.

- Why not?

Overview

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

Reading Questions

- If the meaning of a sentence that contains existential "be" or dummy "it" can be conveyed without including these semantically null elements, then why do these forms exist in the first place?

Reading Questions

- If, referring to 'be', the "verb contributes nothing to the semantics of the sentences", how do we account for meaning differences between the following phrases?
- 1) Drake is a singer
- 2) Drake was a singer
- Isn't TENSE a form of semantic meaning?

Reading Questions

- What is the motivation for the existence of null elements? Would everything fall apart if we give them some semantics, or is it just counter-intuitive?
- Follow-up question: do they exist because of computational friendliness?
- Could you clarify what the motivations are for not embedding a feature structure within a SEM value and thus keeping our RESTR lists "flat"?

Reading Questions

- I feel like the property "none", as we have added it to the possibility of values for INDEX on p. 353, might be incomplete. I feel like we need some indication to show that it is a special, null value. I think I see how it works in this case, it just sort of bothers me, for some vague reason.

Reading Questions

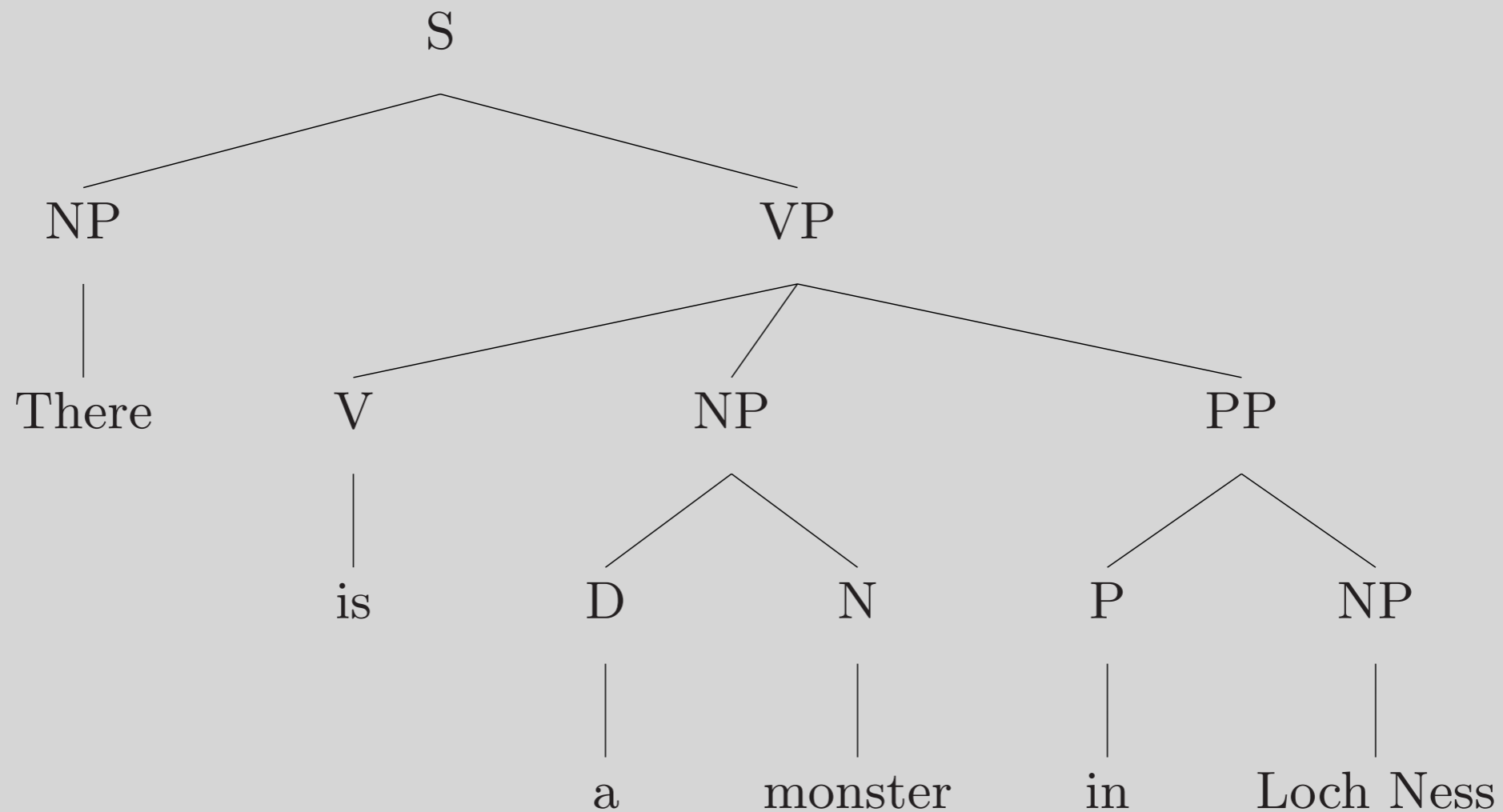
- Can you elaborate on the complement requirements for sentences containing the existential there? The NP following be and the [PRED+] phrase are both complements of the verb be, correct? Not of there? Does there contain any semantic meaning at all? Would the [PRED+] phrase always be optional, such as in the example below?

There is a seat available.

There is a seat.

Reading Questions

- Additionally, a tree of a sentence containing a dummy subject would be very helpful. I could not find a comparable tree in the chapter.



Reading Questions

- With regards to the section on existential there, how does the new lexical entry for be (the exist-be-lxm one) account for cases where be only has one complement, as in There is a unicorn? The specifier of be is of FORM there, but there is only one NP complement, so it doesn't match the exist-be-lxm lexical entry. Is this sentence accounted for by the previous be lexical entry, even though the specifier of be is

Reading Questions

- On p.337 in figure 11:
- On the ARG-ST there are 3 elements: A 'there' NP, X , and a predicative phrase, Y, that is specified by X
- But, on the previous page, we have the example "There is a seat available".
- X = a seat; Y = available
- The first paragraph explains that there are two complements as is shown on the specifier list, but how can Y be specified by X if they are separate complements and not one complex?
- Wouldn't it be impossible for the HSR to apply here?

Reading Questions

- I'm not really sure I understand why the first argument of 'be' has to have the same specifier as 'be'. Why should 'the book' be the specifier of 'under the table'? What does this help us accomplish?
- What about It is raining? Do we allow exist-be-1xm to have an NP [FORM it] as an alternative to NP[FORM there] on its ARG-ST list, since it here is also a dummy?
- Why is PRED a HEAD feature?

Reading Questions

- In the lexical entry defined for the pronoun 'there' it is said that it does not contribute to any semantic meaning of the sentence. Also, the given examples like "There is a unicorn in the garden" can be equally represented by the sentence "A unicorn is in the garden" truly suggest the same. However, what about sentences like "There is the book." or "There is the missing boy." In these sentences 'there' seems to be carrying semantic meaning. How do we explain this usage of the pronoun 'there'?

Reading Questions

- After a few revisions of 11.4, I'm still not sure that I can entirely articulate where the "nominal" type came from, or the purpose it serves in our grammar.
- Why is CASE a feature of nominal instead of noun? Is it there because of the case constraint, or are there other differences between CP[CASE acc] and CP[CASE nom]?
- Is positing the type, nominal, necessary in order to make the theory work or is it just capturing a generalization about the distributions of CPs and NPs?

Reading Questions

- How do we handle CPs that don't include "that"? Such as: "I think (that) it is good" where the "that" is optional.

Reading Questions

- Why can't the Extraposition Lexical Rule be formulated in terms of ARG-ST?
- With the Extraposition Lexical Rule as a pi-rule, I'm confused as to why we're allowed to mess with the SPR and COMPS even though the input and output are words. I thought we didn't want to mess with the argument structure of words, which is why we used a d-rule for the passive construction, so we were only dealing with lexemes.

Reading Questions

- Also, when writing lexical entries for idioms, how does one know if the entire idiom should be the first element of the lexical entry or only part of it? I'm confused with this because to me the passive form for kick the bucket does seem to mean that someone died.

Reading Questions

- Assuming that verbal morphology always appears on the first word in a multiword lexical entry feels like a pretty big thing to hand-wave away, and multi-word lexical entries already feel like they come out of left field in the first place. On the one hand, this seems to cover the cases I can think of, but on the other it feels counter to the concept of generalization we're holding onto as we build the grammar and lexicon further. I can see how trying to generalize this could involve breaking up the multi-word idiom lexical entries back into individual words, which invites a lot of complexity. But this is making me wonder what a more formalized approach to specifically the verbal morphology of idioms might look like.

Reading Questions

- The idioms in the book are shown to be parts of sentences, but what about idioms that can be sentences by themselves? Would a phrase like "Can't see the forest for the trees" be represented as one word with an optional NP specifier? Or would there have to be a different way?
- I'm still a bit confused...couldn't we treat "keep tabs" as a whole verb just like we did with "kick the bucket"? Why are the two idioms being analyzed differently?

Reading Questions

- It seems like each word of an idiom gets its own FORM value. Footnote 4 says the set of FORM entries are quite "manageable." What are the limits to "manageable"?
- Does our grammar account for the acceptability of ditransitive idioms? For example, why some ditransitive idioms can undergo dative-alternation?

"Bill gave Bob the boot"

"*Bill gave the boot to Bob"

Reading Questions

- If *advantage* as in *take advantage of* is nonreferential, how would we account for sentences like (1)?

(1) We all regret the unfair advantage that has been taken of... (p.347, footnote 13 (ii))

- I think *unfair* would be [MOD & <NP_i> // RESTR & <[ARG & i]>], which prevents it from combining with *advantage* who is [INDEX & none], just in the way that the dummy *there* is prevented from being the subject of role-assigning verbs:

(2) * There loved Sandy. (p.338, (14))

Reading Questions

- Is the way we handle idiomatic phrases (hard coding verbs for specific FORM NPs) common in practice, like for the Grammar Matrix? If so, has someone has had to make enter a list of such phrases?
- Could you further explain why the NP idiom has the properties of nonreferentiality and restricted distribution?

Reading Questions

- pp 350 (in the summary) says that comp-lxm is a daughter of const-lxm. As const-lxm is an i-rule, it produces a word and is therefore the last rule to be applied but does the lexeme hierarchy more generally define the order in which rules are applied. I think this is less of an issue in English but in Japanese taberareta, which consists of morphological inflections -rare- and -ta, is never *tabetarare (I don't think). I feel that, somewhere in the grammar, we need to define the sequence in which these inflections are applied. Is this "somewhere" the lexeme hierarchy?