

Ling 566

Nov 16, 2021

Non-referential NPs, Expletives, and Extraposition

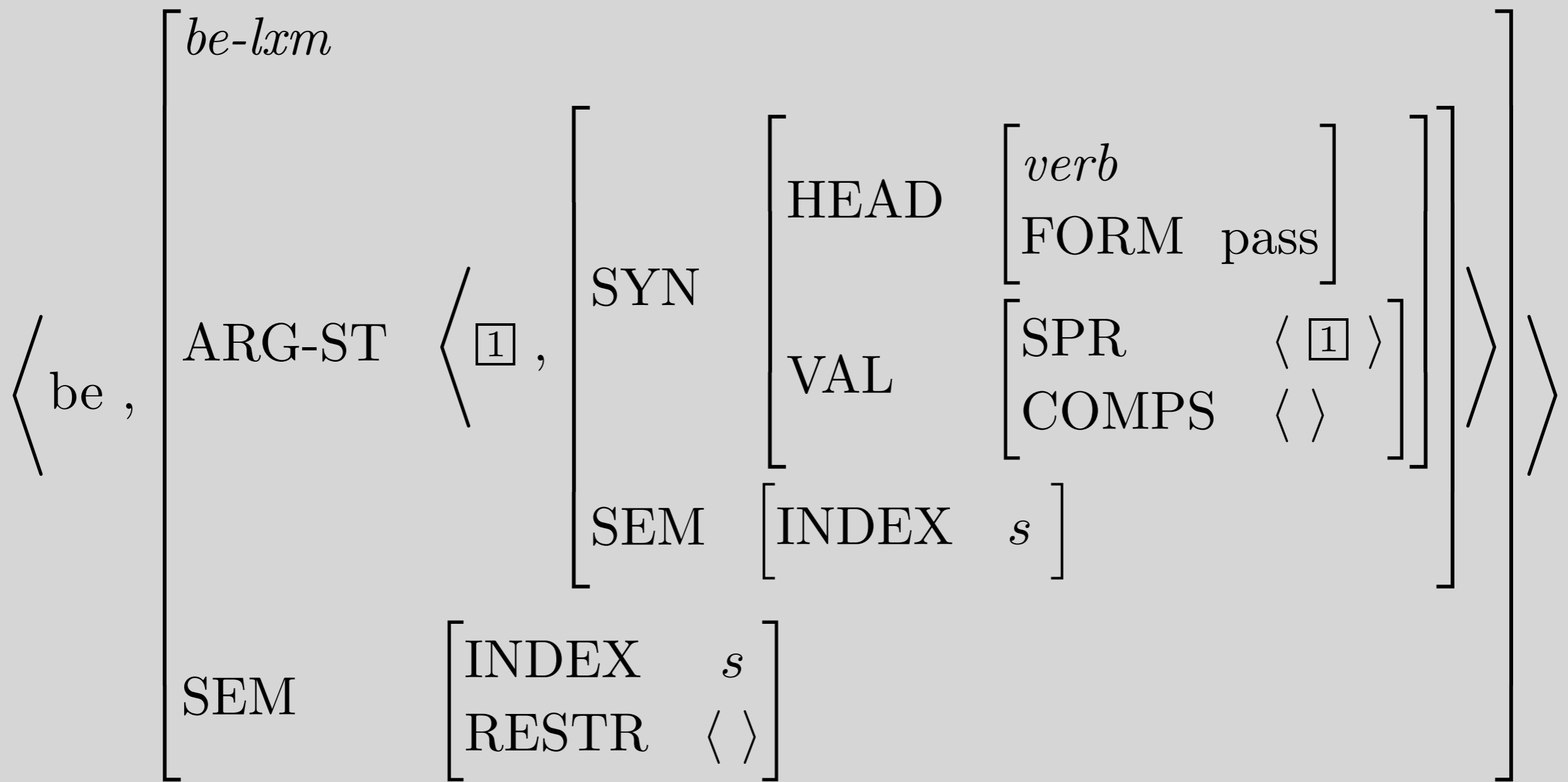
Overview

- Existentials
- Extraposition
- Idioms

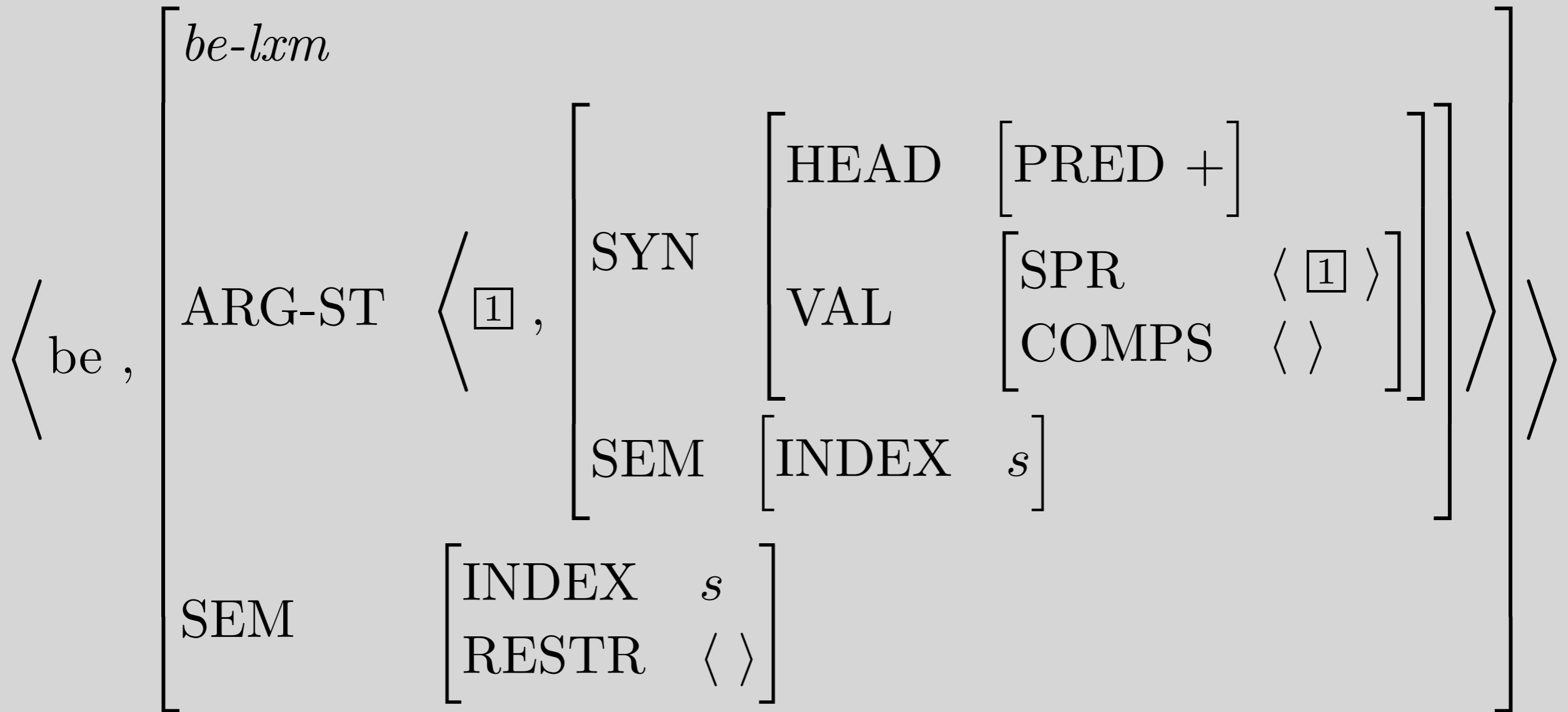
Where We Are, and Where We're Going

- 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*



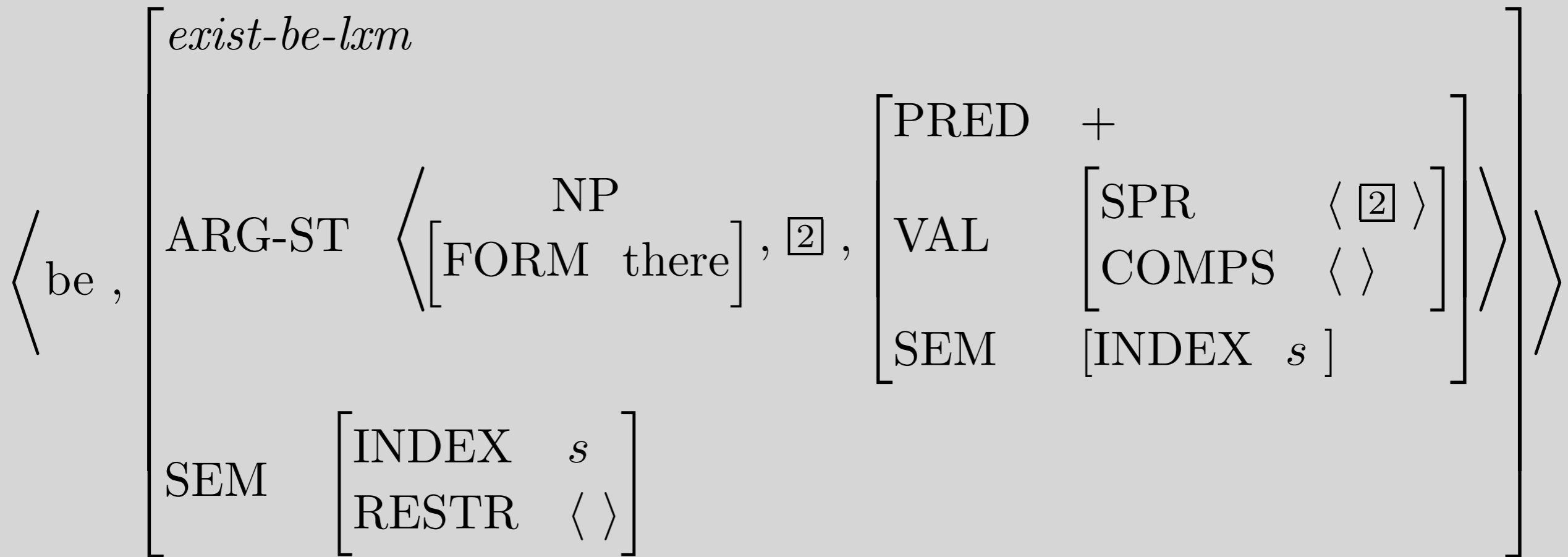
Copula (generalized)



Existentials

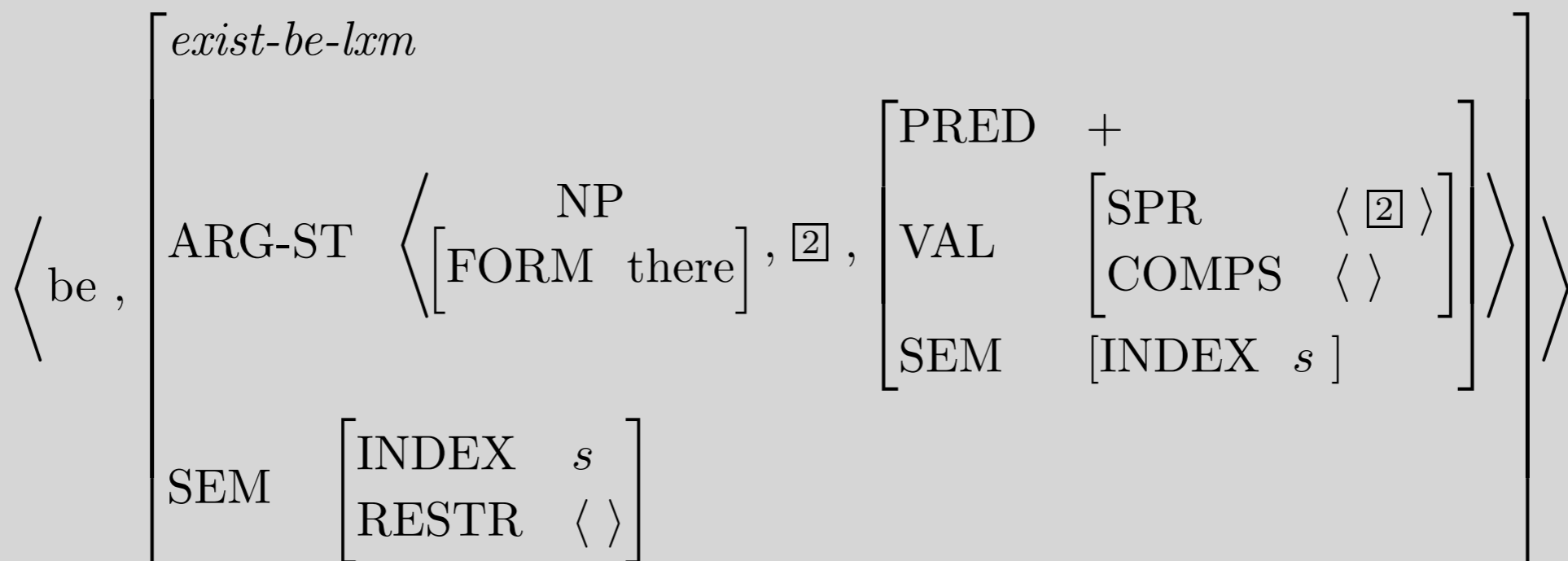
- The *be* in *There is a page missing* cannot be the same *be* that occurs in sentences like *Pat is tall* or *A cat was chased by a dog*. Why not?
- So we need a separate lexical entry for this *be*, stipulating:
 - Its SPR must be *there*
 - It takes two complements, the first an NP and the second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

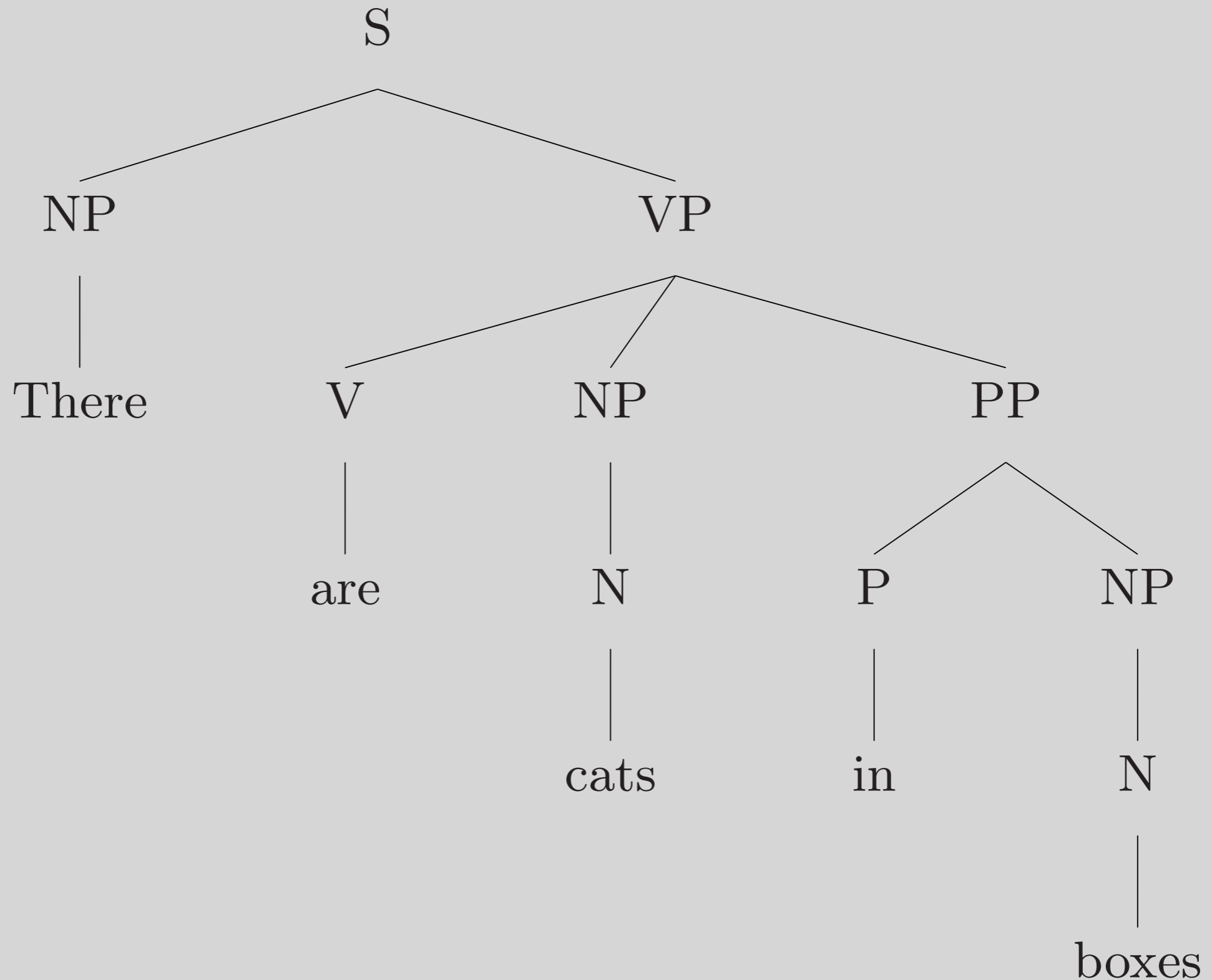
| | | | | |
|-------------------|---|---|--|-----------|
| \langle there , | $\left[\begin{array}{l} \text{pron-}lxm \\ \text{SYN} \end{array} \right]$ | $\left[\begin{array}{l} \text{HEAD} \\ \text{AGR} \end{array} \right]$ | $\left[\begin{array}{l} \text{FORM} \quad \text{there} \\ \text{PER} \quad 3rd \end{array} \right]$ | \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 | ⟨ ⟩ |] | | | | |

Sample tree for existential *be*



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*

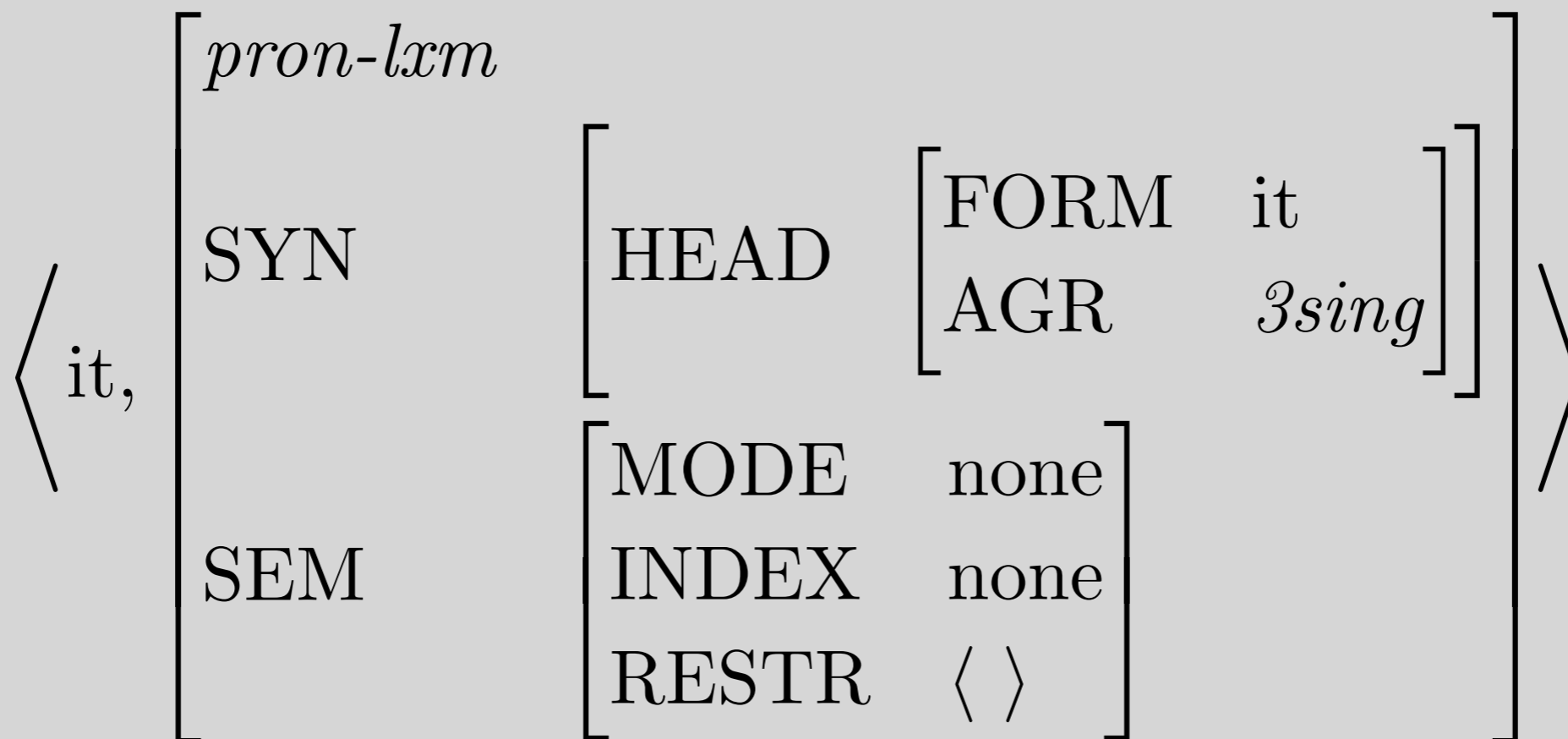
- A lexical entry for this dummy *it*
- An analysis of this use of *that*
- Entries for verbs that take clausal subjects
(as in *That you are wrong follows*)
- A rule to account for the relationship
between pairs like *That you are wrong
follows* and *It follows that you are wrong*

The Entry for Dummy *it*

| | | | | |
|--------------------------------|-----------------|-------------------|--|-----------|
| \langle <i>it,</i> \rangle | <i>pron-lxm</i> | | | |
| | SYN | HEAD | $\left[\begin{array}{l} \text{FORM } it \\ \text{AGR } 3sing \end{array} \right]$ | \rangle |
| 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*?



A New Type of Lexeme: Complementizers

comp-lxm :

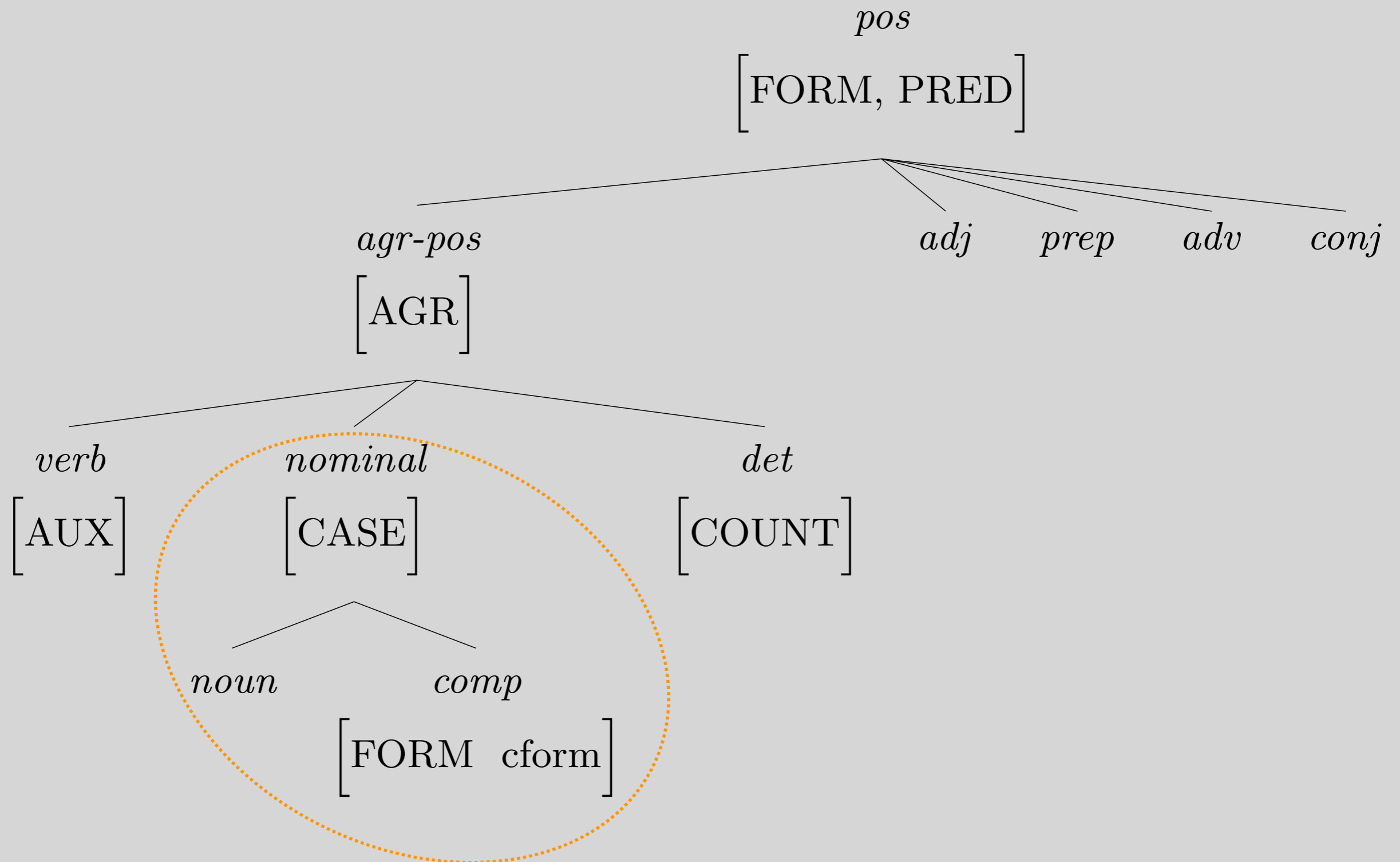
| | | | | | | | | | | | |
|-------------|--|-------------|--|-------------|--------------|-----|--------------|-----|--|-----|-----|
| SYN | <table border="0"> <tr> <td style="vertical-align: middle;">HEAD</td> <td style="vertical-align: middle;"> <table border="0"> <tr> <td style="vertical-align: middle;"><i>comp</i></td> <td style="vertical-align: middle;">[]</td> </tr> <tr> <td style="vertical-align: middle;">AGR</td> <td style="vertical-align: middle;"><i>3sing</i></td> </tr> </table> </td> </tr> <tr> <td style="vertical-align: middle;">VAL</td> <td style="vertical-align: middle;"> <table border="0"> <tr> <td style="vertical-align: middle;">SPR</td> <td style="vertical-align: middle;">⟨ ⟩</td> </tr> </table> </td> </tr> </table> | HEAD | <table border="0"> <tr> <td style="vertical-align: middle;"><i>comp</i></td> <td style="vertical-align: middle;">[]</td> </tr> <tr> <td style="vertical-align: middle;">AGR</td> <td style="vertical-align: middle;"><i>3sing</i></td> </tr> </table> | <i>comp</i> | [] | AGR | <i>3sing</i> | VAL | <table border="0"> <tr> <td style="vertical-align: middle;">SPR</td> <td style="vertical-align: middle;">⟨ ⟩</td> </tr> </table> | SPR | ⟨ ⟩ |
| HEAD | <table border="0"> <tr> <td style="vertical-align: middle;"><i>comp</i></td> <td style="vertical-align: middle;">[]</td> </tr> <tr> <td style="vertical-align: middle;">AGR</td> <td style="vertical-align: middle;"><i>3sing</i></td> </tr> </table> | <i>comp</i> | [] | AGR | <i>3sing</i> | | | | | | |
| <i>comp</i> | [] | | | | | | | | | | |
| AGR | <i>3sing</i> | | | | | | | | | | |
| VAL | <table border="0"> <tr> <td style="vertical-align: middle;">SPR</td> <td style="vertical-align: middle;">⟨ ⟩</td> </tr> </table> | SPR | ⟨ ⟩ | | | | | | | | |
| SPR | ⟨ ⟩ | | | | | | | | | | |
| ARG-ST | <table border="0"> <tr> <td style="vertical-align: middle;">S</td> <td style="vertical-align: middle;">[]</td> </tr> <tr> <td style="vertical-align: middle;">INDEX</td> <td style="vertical-align: middle;"><i>s</i></td> </tr> </table> | S | [] | INDEX | <i>s</i> | | | | | | |
| S | [] | | | | | | | | | | |
| INDEX | <i>s</i> | | | | | | | | | | |
| SEM | <table border="0"> <tr> <td style="vertical-align: middle;">INDEX</td> <td style="vertical-align: middle;"><i>s</i></td> </tr> <tr> <td style="vertical-align: middle;">RESTR</td> <td style="vertical-align: middle;">⟨ ⟩</td> </tr> </table> | INDEX | <i>s</i> | RESTR | ⟨ ⟩ | | | | | | |
| INDEX | <i>s</i> | | | | | | | | | | |
| RESTR | ⟨ ⟩ | | | | | | | | | | |

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?

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

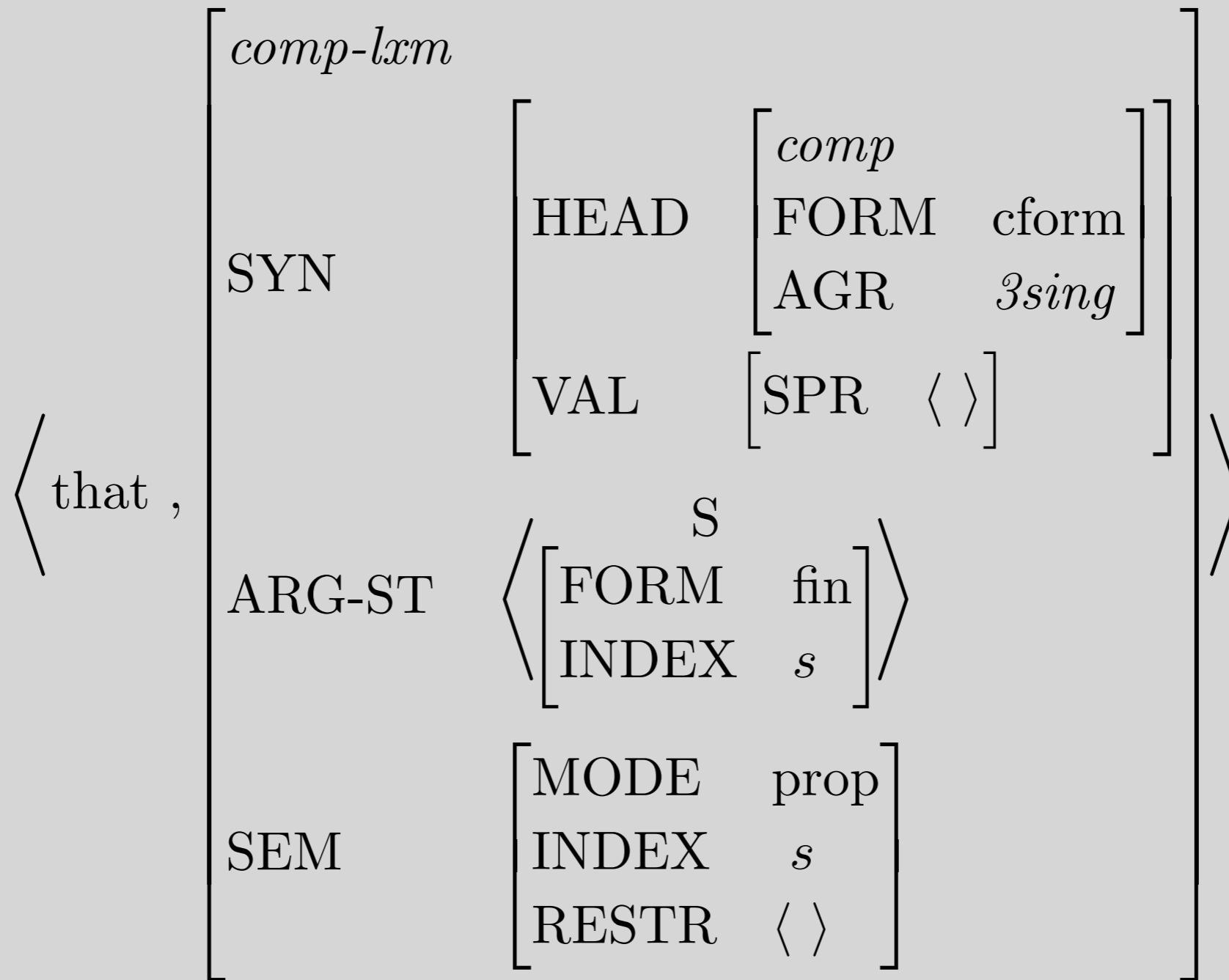
The Type *comp*



The Lexical Entry for Complementizer *that*

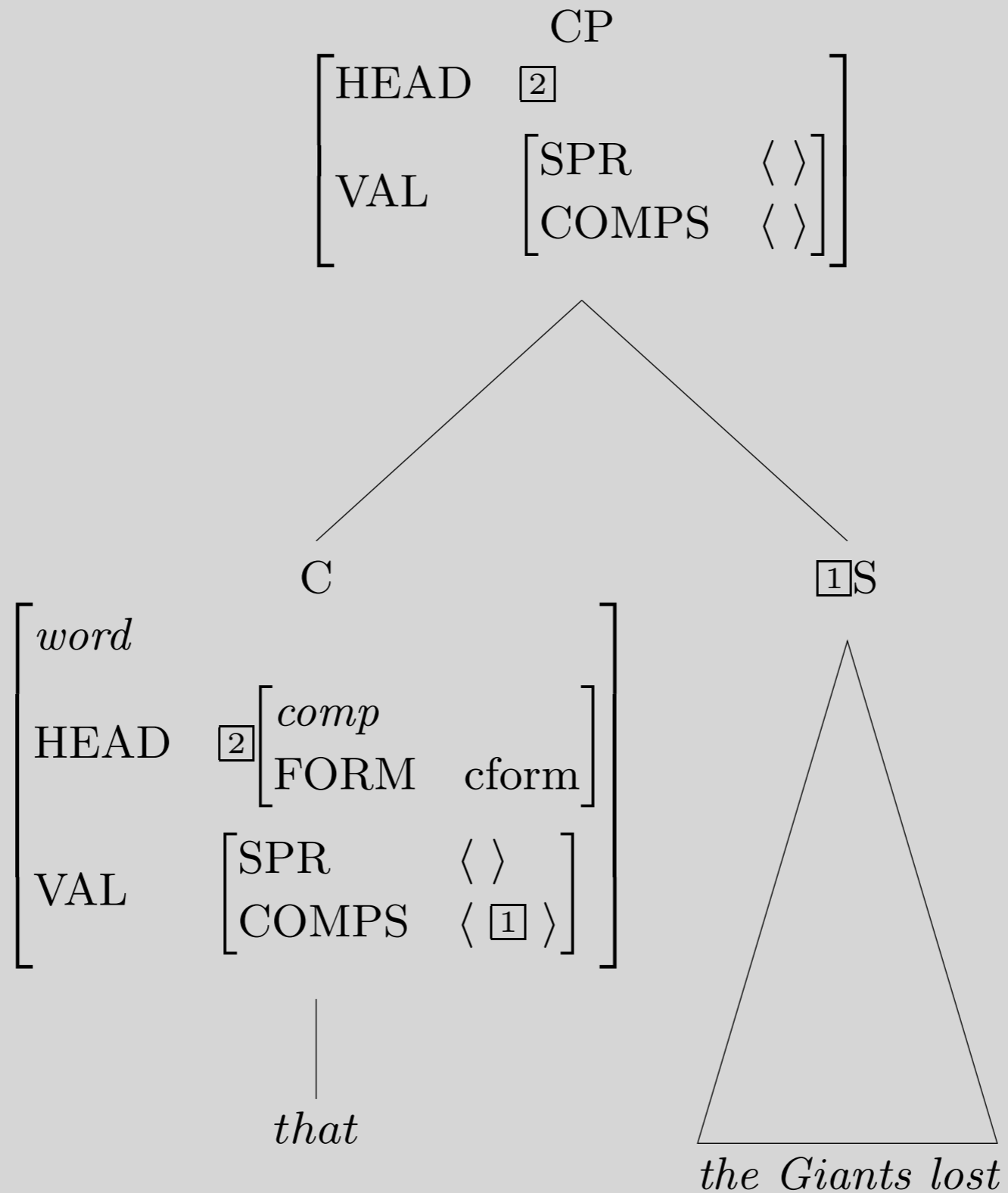
$$\left\langle \text{that} , \begin{bmatrix} \textit{comp-lxm} \\ \text{ARG-ST} \left\langle \left[\text{FORM fin} \right] \right\rangle \\ \text{SEM} \left[\text{MODE prop} \right] \end{bmatrix} \right\rangle$$

...and with inherited information filled in



Question: Where did [FORM cform] come from?

Structure of a Complementizer Phrase



🌐 When poll is active, respond at pollev.com/emb

📱 Text **EMB** to **22333** once to join



W What is your impression of treating complementizers as the head of constituents like this one?

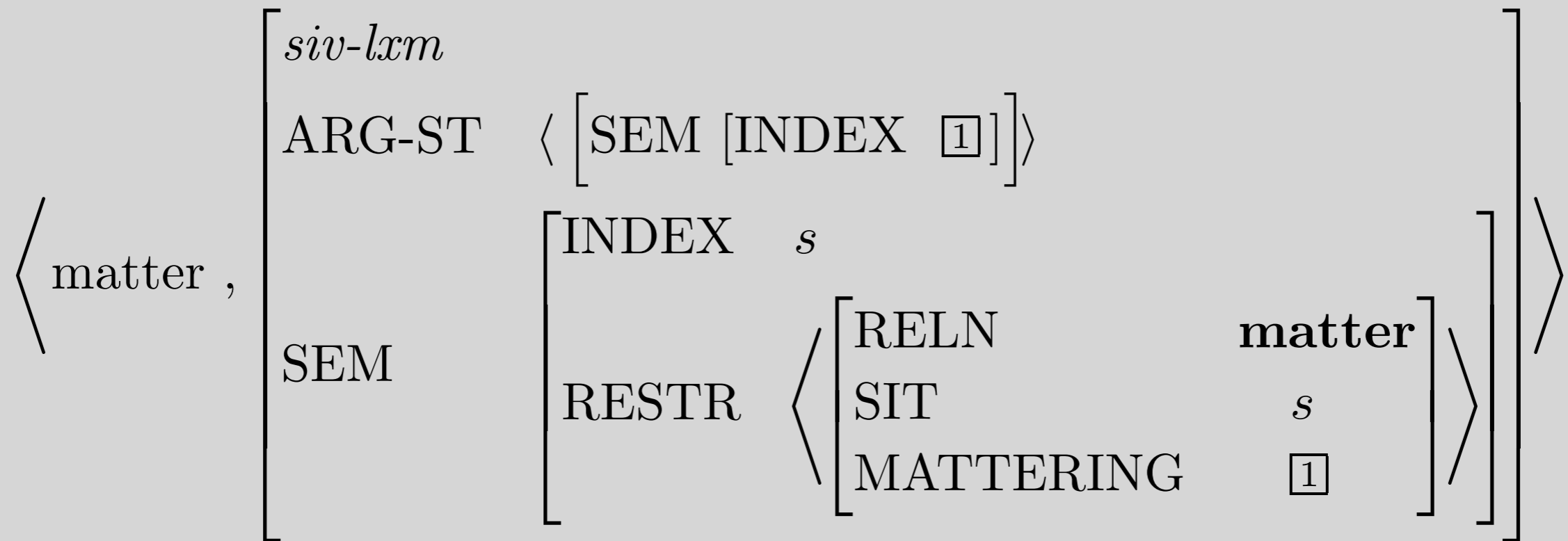
Fine: I know CPs from
another class

New to me but seems legit

Not sure

Seems strange, since the
main part is the S

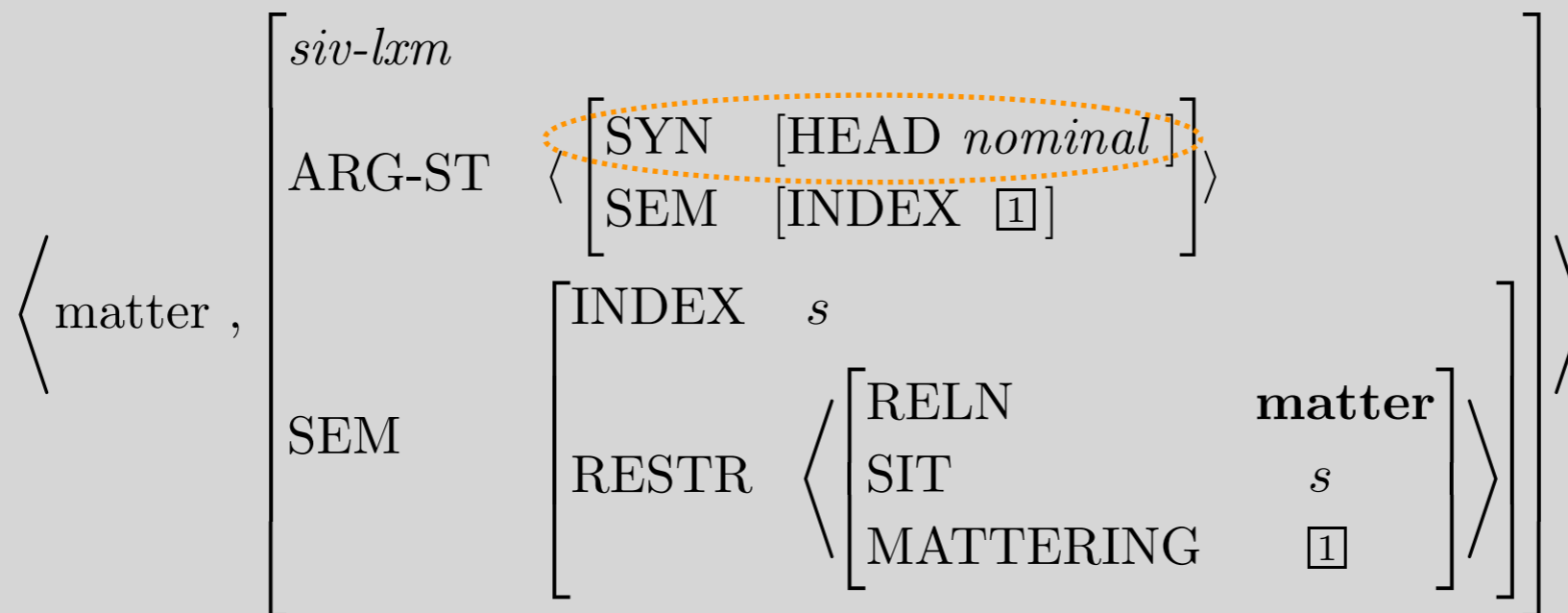
Sample Verb with a CP Subject



Note: the only constraint on the first argument is semantic

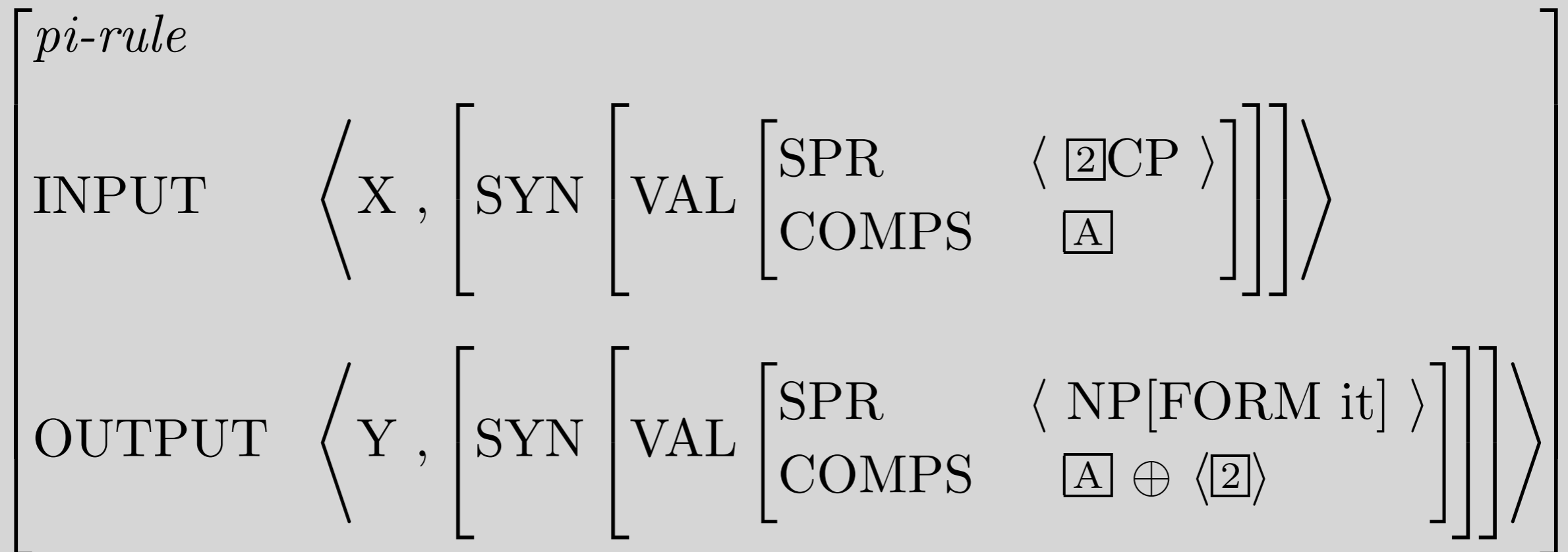
A Problem

- 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

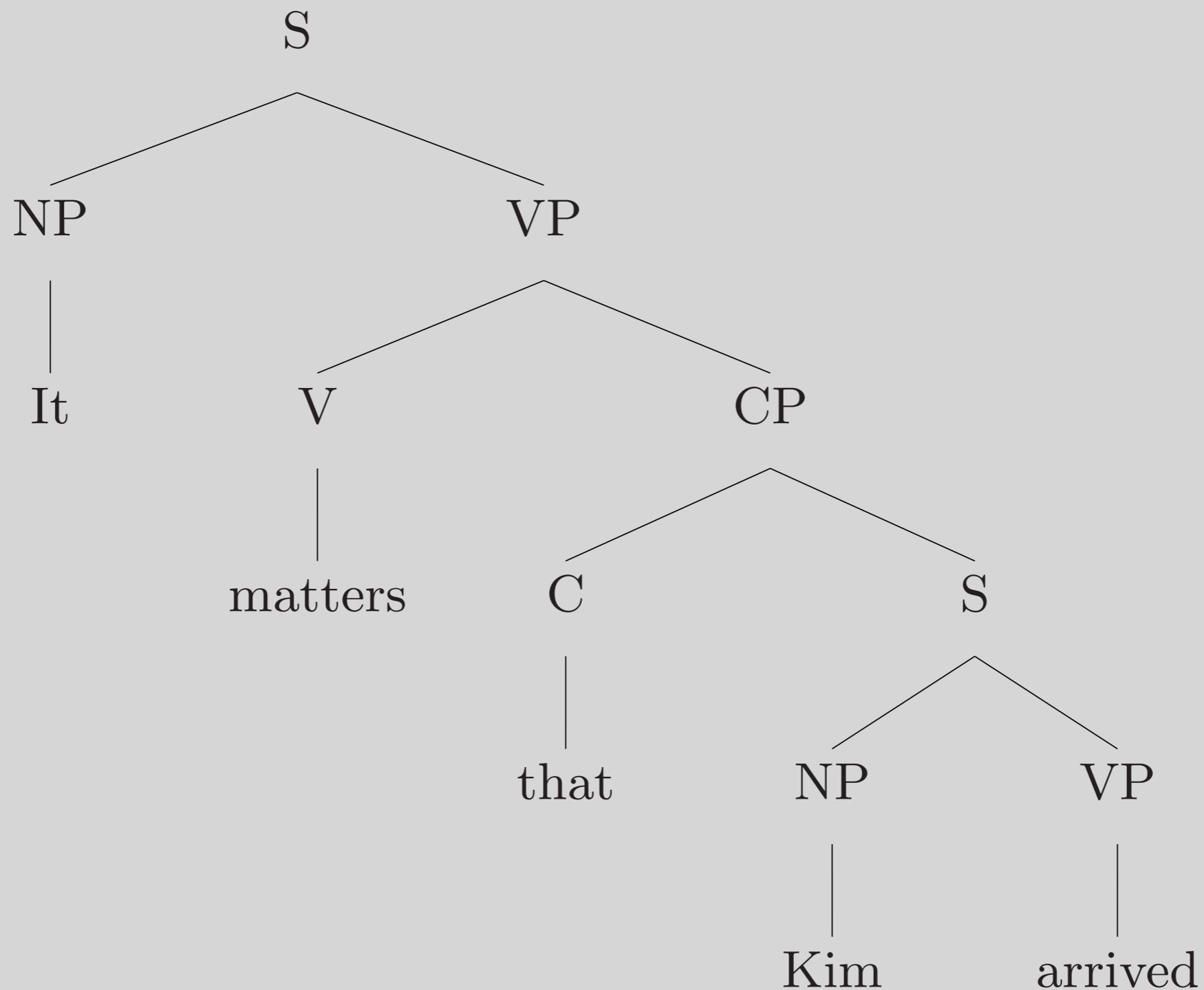


- Why is the type *pi-rule*?
- Why doesn't it say anything about the semantics?
- Why is the COMPS on INPUT \boxed{A} , not $\langle \ \ \rangle$?

Extraposition with Verbs whose COMPS Lists are Nonempty

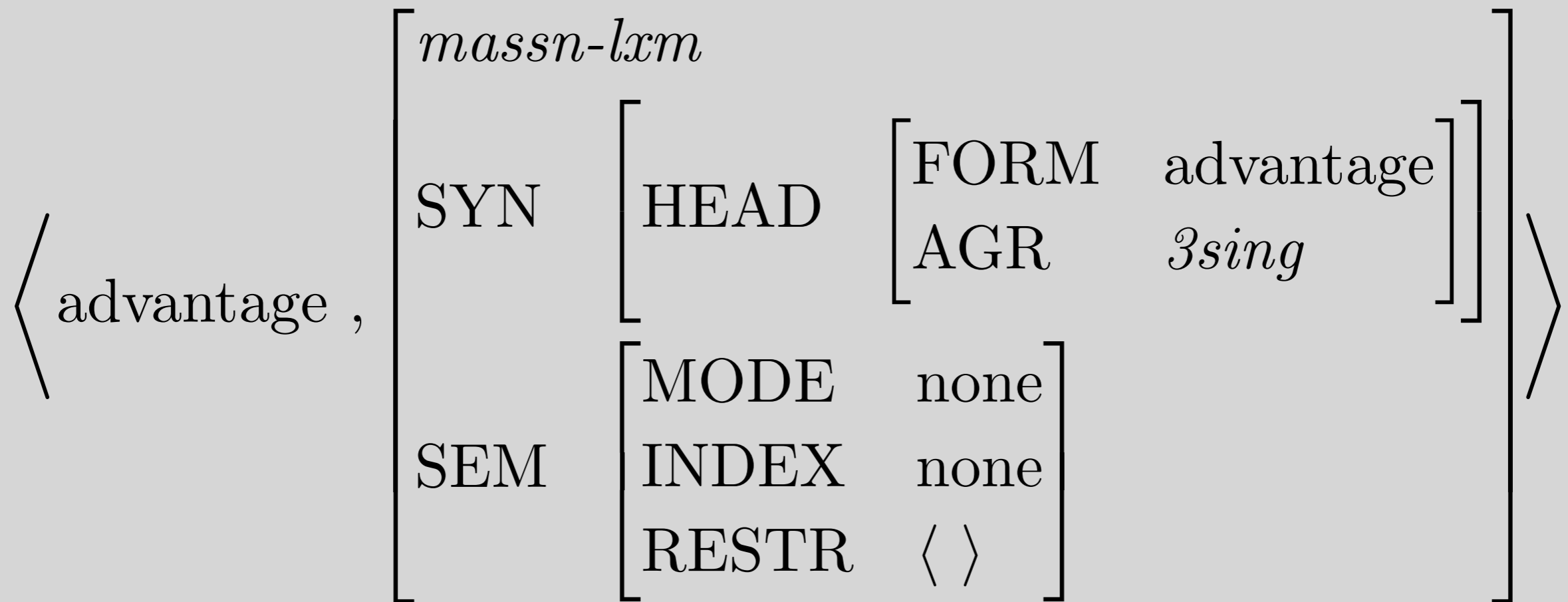
- *It worries me that war is imminent.*
- *It occurred to Pat that Chris knew the answer.*
- *It endeared you to Andy that you wore a funny hat.*

Sample tree with extraposition

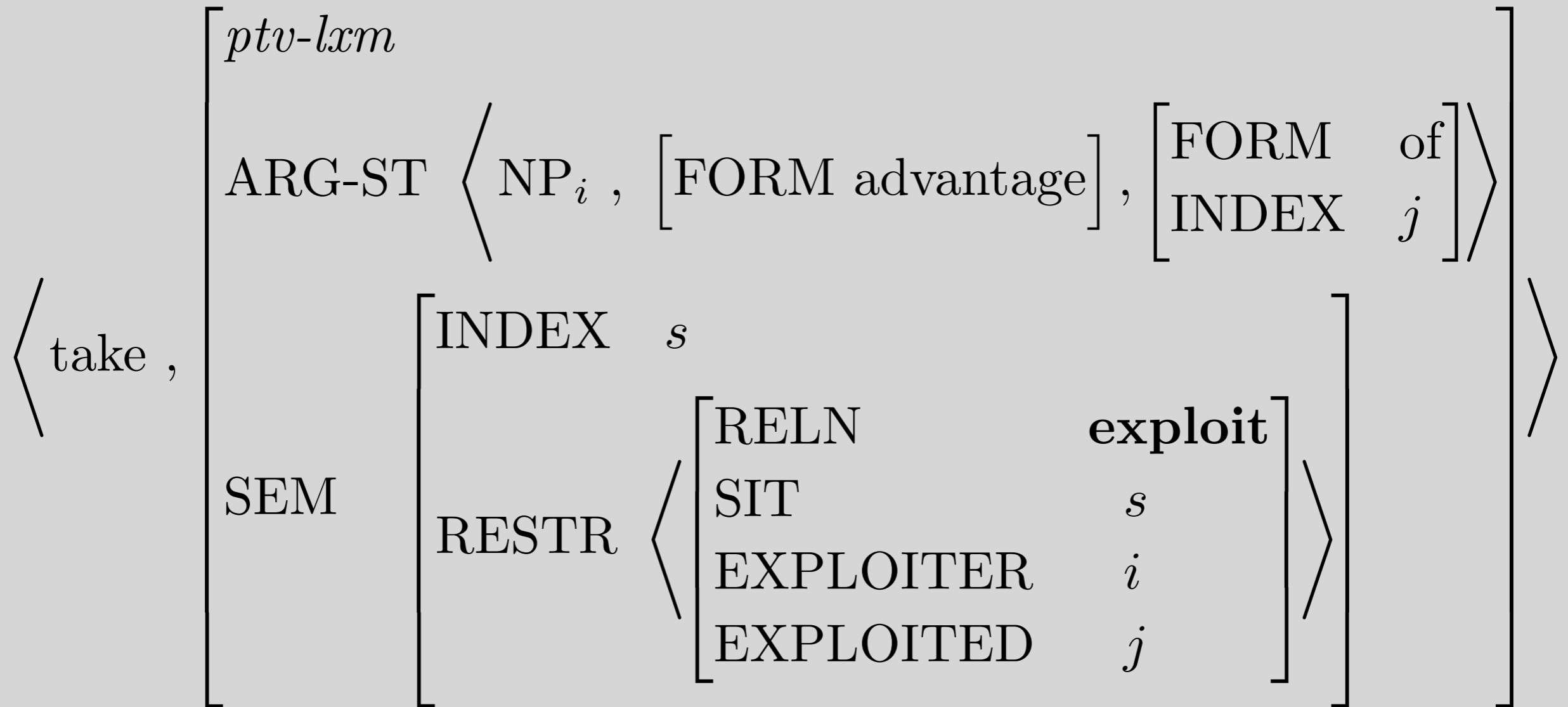


W Your favorite (SFW) English idiom?

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

- In (13) on p.338, the lexical entry for existential there, which "does not contribute to the meaning of the sentences in which it occurs" (337), has a SEM feature-structure with [MODE none], [INDEX none], and RESTR $\langle \rangle$. Does the value of any one of these three SEM features contribute more than the others in determining whether a lexeme is semantically empty, or must all three of these SEM features have these values in order to convey semantic emptiness?

Reading Questions

- I'm a little confused as to the requirement of having 'none' as the MODE and INDEX values for semantically empty nouns like 'there'. Is it only there as a double-check against not being able to have its index be part of any predication in some RESTR list? Also, unlike 'there', the lexical entry for 'be' has an empty RESTR list but still has an INDEX value. Do we say that 'be' is also semantically empty?

Reading Questions

- What is the difference between existential *be* (what I think is the copula) and the predicative *be*? Is the difference between *there is a seat available* vs. *A seat is available* that the former uses an existential *be*, and the latter is predicative? If so, it feels unintuitive to say that they're two different kinds of *bes*, if only because both sentences are clearly reordered versions of the other, with the exception of the word *there*.

Reading Questions

- Is there a pi-rule we can create to relate these two sequences to each other, the way the extraposition rule relates *That dogs bark annoys people*, and *It annoys people that dogs bark*?

Reading Questions

- I don't really like how we have two different lexemes for one word, *be*. I recognize the importance and use for both *exist-be-lxm* and *be-lxm*, but how I understood our reasoning for having lexemes is that we wanted to relate similar words like *run*, *running*, *ran*, etc., and so we created a *run* lexeme from which each of these words were derived. It was a "one lexeme to multiple words" relationship. Now, although *be* can take on different forms like *is* and *was*, it seems to me that we have multiple lexemes for one word, and so the HPSG section of my brain is raising some alarms, saying this goes against how I conceptualized lexemes. Have I misunderstood lexemes, or is *be* an exception to the rule here?

Reading Questions

- I am still a little confused about the distinctions made between predicative and nonpredicative NPs. Do they always have different semantic MODE values? I was also wondering if the NPs that follow *be* are always predicative. If not, can you give us an example of a sentence where *be* is followed by a nonpredicative NP?

Reading Questions

- I'm a bit confused about how the discussion of semantic embedding (on pg. 342) relates to the formulation of lexical types and lexical rules for complements.
- On page 342 the textbook says that an alternative to specifying in the ARG-ST lists in the lexical entries of certain verbs that they can't take CP complements or can't take NP complements would be to treat it as a semantic issue. How does whether or not a verb can take a CP or NP complement reflect its semantics?

Reading Questions

- Why does the Extraposition Lexical Rule (44) modify SPR/COMPS values rather than modify ARG-ST (as the Passive Lexical Rule does)? The book points this difference out, but the motivation for it is not clear to me.

Reading Questions

- The analysis of idioms makes some sense to me, but I'm wondering if there's a more generalizable way of handling them. It looks like we'd just need a large number of FORM values to handle them? Is this a problem that's just easier to solve with a computer?

Reading Questions

- As mentioned on page (349) , idioms gets treated depending on the syntactic behavior. *Kicked the bucket* idiom is not treated the way *keep tabs on* and *take advantage of*. So, is it fair to say that every idiom will have to be treated on individual basis depending on the active verb. English language is full of idioms, I am just curious if we have a general approach for idioms.

Reading Questions

- It kind of feels like cheating the system to have words that don't add semantic meaning and are have FORM of the themselves. Is there a reason that is not covered in this book, or is it just something that we have to accept? I'm totally fine accepting it, but I just wanted to know if there is something else to it.