

Ling 566

Nov 7, 2024

Non-referential NPs, Expletives, and Extraposition

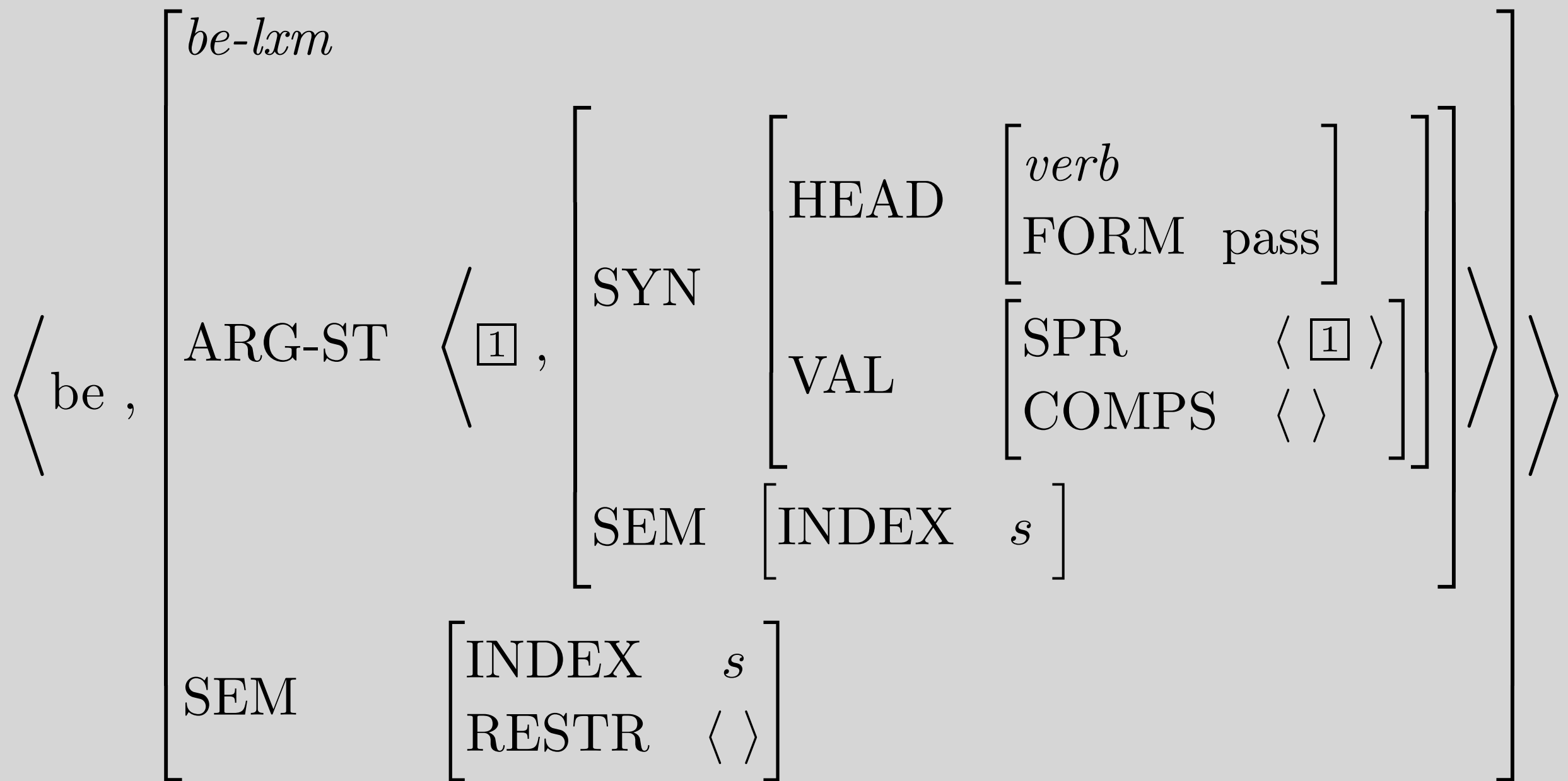
Overview

- Existentials
- Extraposition
- Idioms

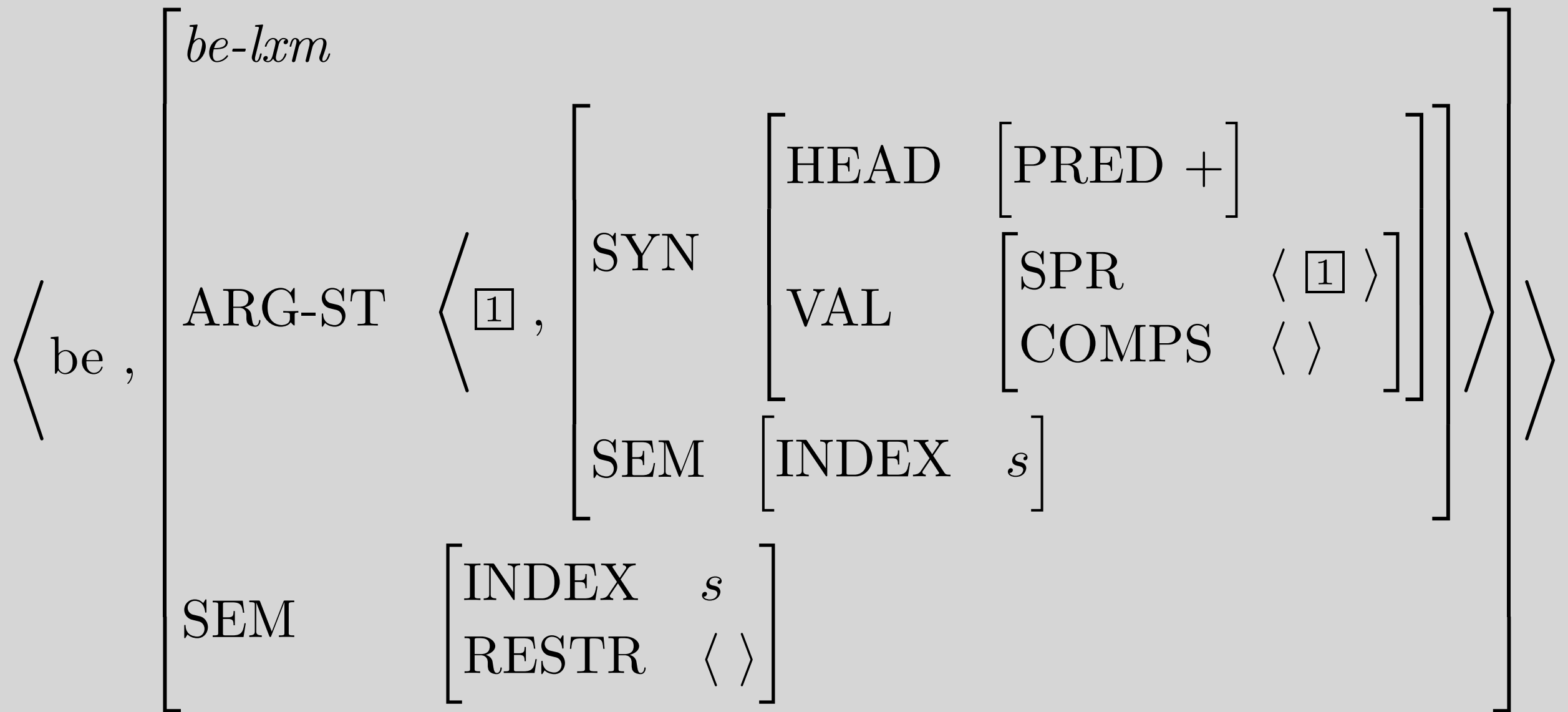
Where We Are, and Where We're Going

- 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*

$$\left\langle \text{be} , \left[\begin{array}{l} \text{exist-be-lxm} \\ \text{ARG-ST} \left\langle \begin{array}{c} \text{NP} \\ \left[\text{FORM} \quad \text{there} \right] \end{array} , \boxed{2} , \left[\begin{array}{l} \text{PRED} \quad + \\ \text{VAL} \quad \left[\begin{array}{c} \text{SPR} \quad \langle \boxed{2} \rangle \\ \text{COMPS} \quad \langle \rangle \end{array} \right] \\ \text{SEM} \quad \left[\begin{array}{c} \text{INDEX} \quad s \end{array} \right] \end{array} \right] \right\rangle \\ \text{SEM} \quad \left[\begin{array}{c} \text{INDEX} \quad s \\ \text{RESTR} \quad \langle \rangle \end{array} \right] \end{array} \right] \right\rangle$$

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?

$$\left\langle \text{be}, \left[\begin{array}{l} \text{exist-be-lxm} \\ \text{ARG-ST} \left\langle \begin{array}{l} \text{NP} \\ \left[\text{FORM} \text{ there} \right], \boxed{2} \end{array} \right\rangle, \left[\begin{array}{l} \text{PRED} \quad + \\ \text{VAL} \quad \left[\begin{array}{l} \text{SPR} \quad \langle \boxed{2} \rangle \\ \text{COMPS} \quad \langle \rangle \end{array} \right] \\ \text{SEM} \quad \left[\text{INDEX } s \right] \end{array} \right] \right\rangle \\ \text{SEM} \quad \left[\begin{array}{l} \text{INDEX} \quad s \\ \text{RESTR} \quad \langle \rangle \end{array} \right] \end{array} \right] \right\rangle$$

The Entry for Existential *there*

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

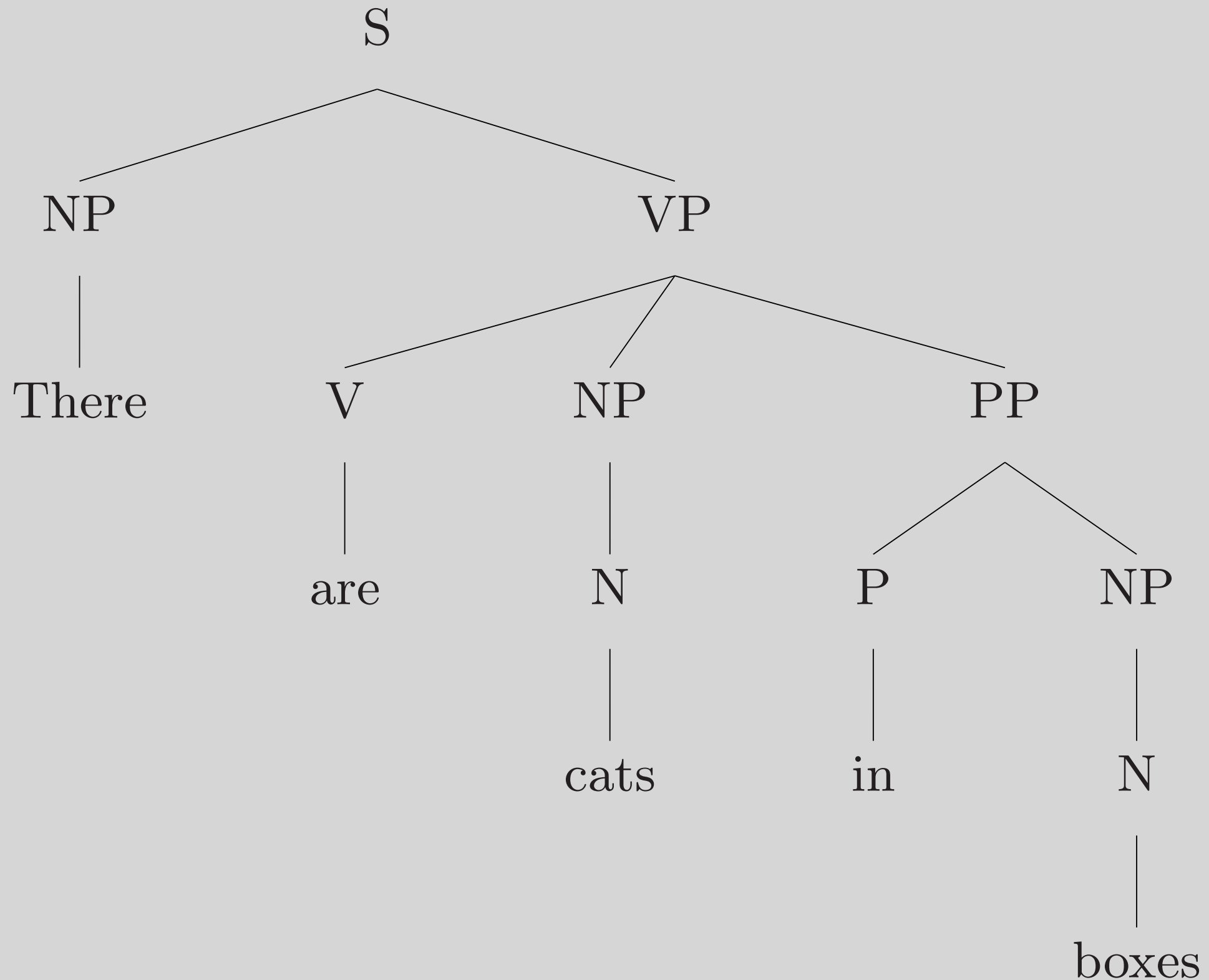
Questions About Existential *there*

- 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?

$\left\langle \text{there} , \right.$	<i>pron-lxm</i>	$\left. \right\rangle /$																
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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 correct*

- 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 correct follows*)
- A rule to account for the relationship
between pairs like *That you are correct
follows* and *It follows that you are correct*

The Entry for Dummy *it*

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

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*?

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

A New Type of Lexeme: Complementizers

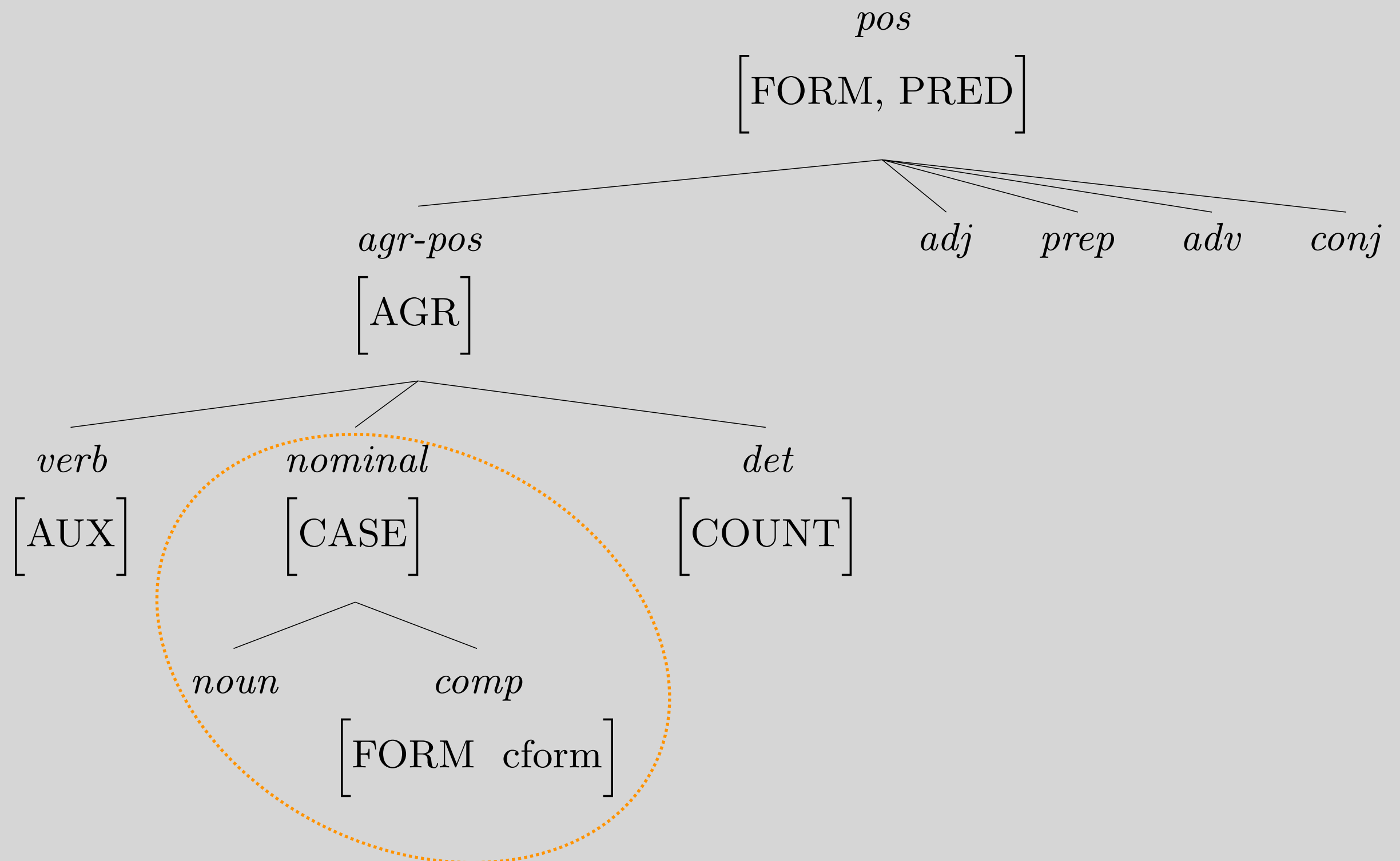
$$\text{comp-lxm} : \left[\begin{array}{l} \text{SYN} \left[\begin{array}{l} \text{HEAD} \left[\begin{array}{l} \text{comp} \\ \text{AGR} \quad 3sing \end{array} \right] \\ \text{VAL} \left[\text{SPR} \quad \langle \rangle \end{array} \right] \end{array} \right] \\ \text{ARG-ST} \left\langle \begin{array}{c}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

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?

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

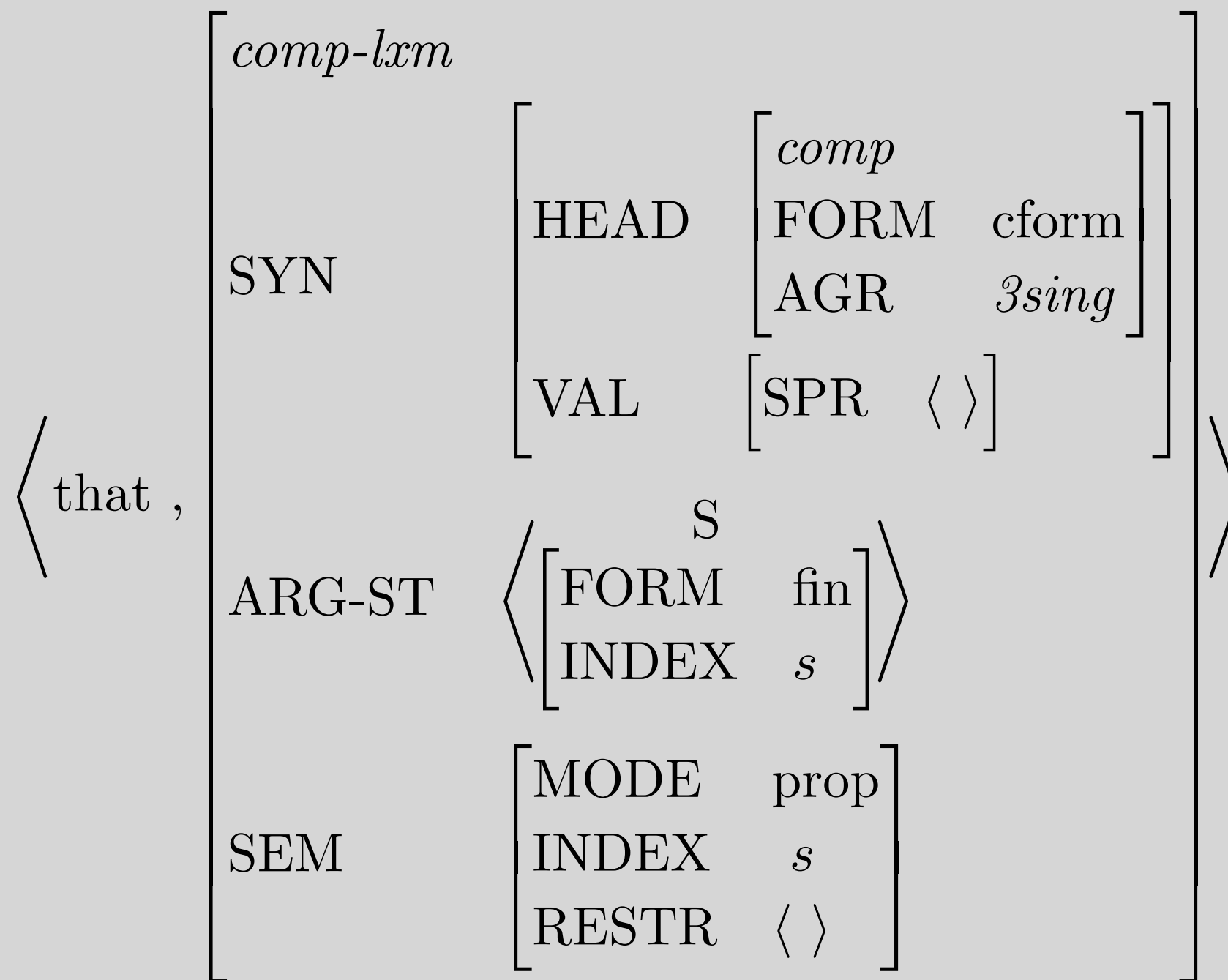
The Type *comp*



The Lexical Entry for Complementizer *that*

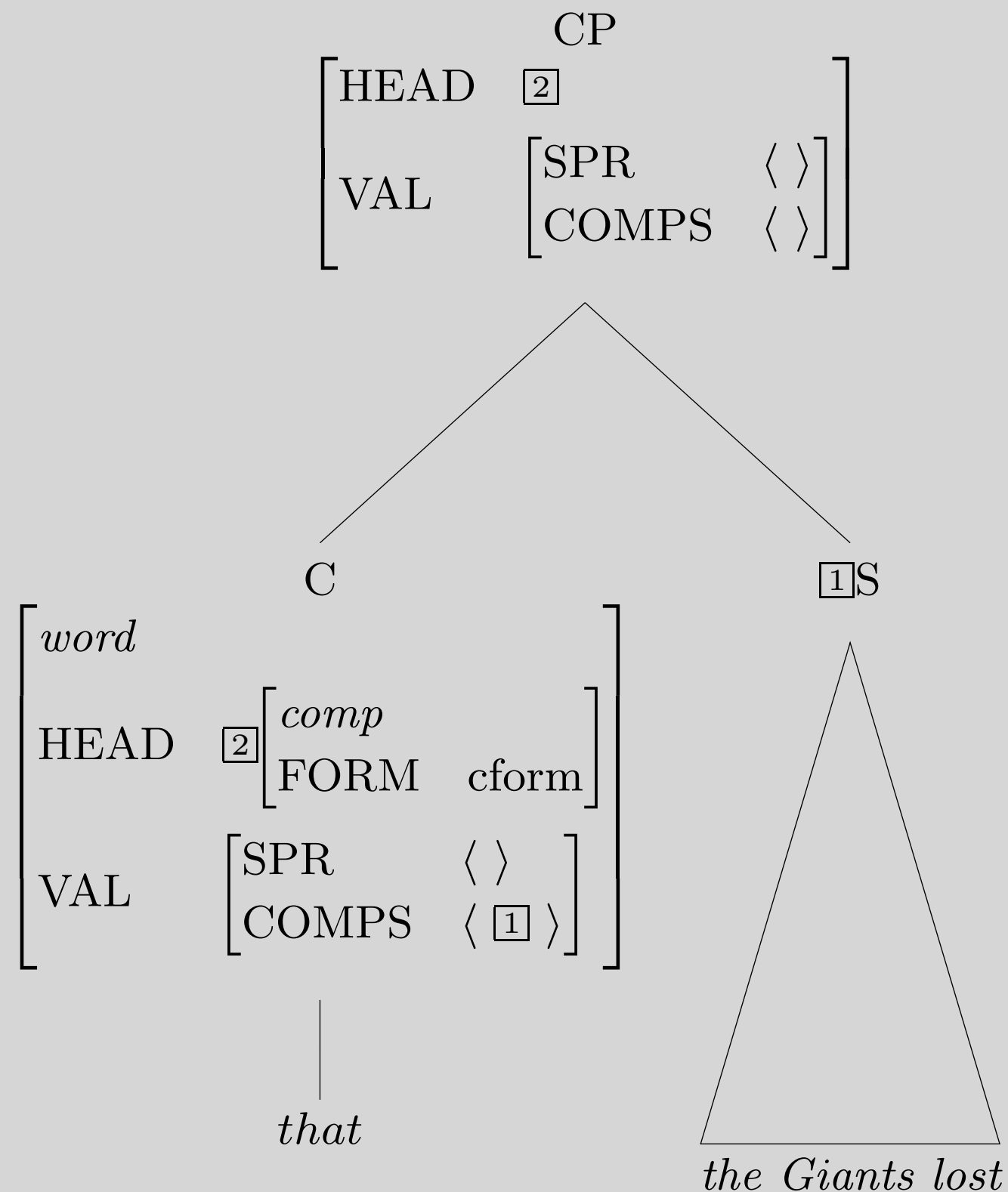
$$\left\langle \text{that} , \begin{bmatrix} \textit{comp-lxm} \\ \text{ARG-ST} & \langle [\text{FORM fin}] \rangle \\ \text{SEM} & [\text{MODE prop}] \end{bmatrix} \right\rangle$$

...and with inherited information filled in



Question: Where did [FORM cform] come from?

Structure of a Complementizer Phrase





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



Fine: I know CPs from another class

0

New to me but seems legit

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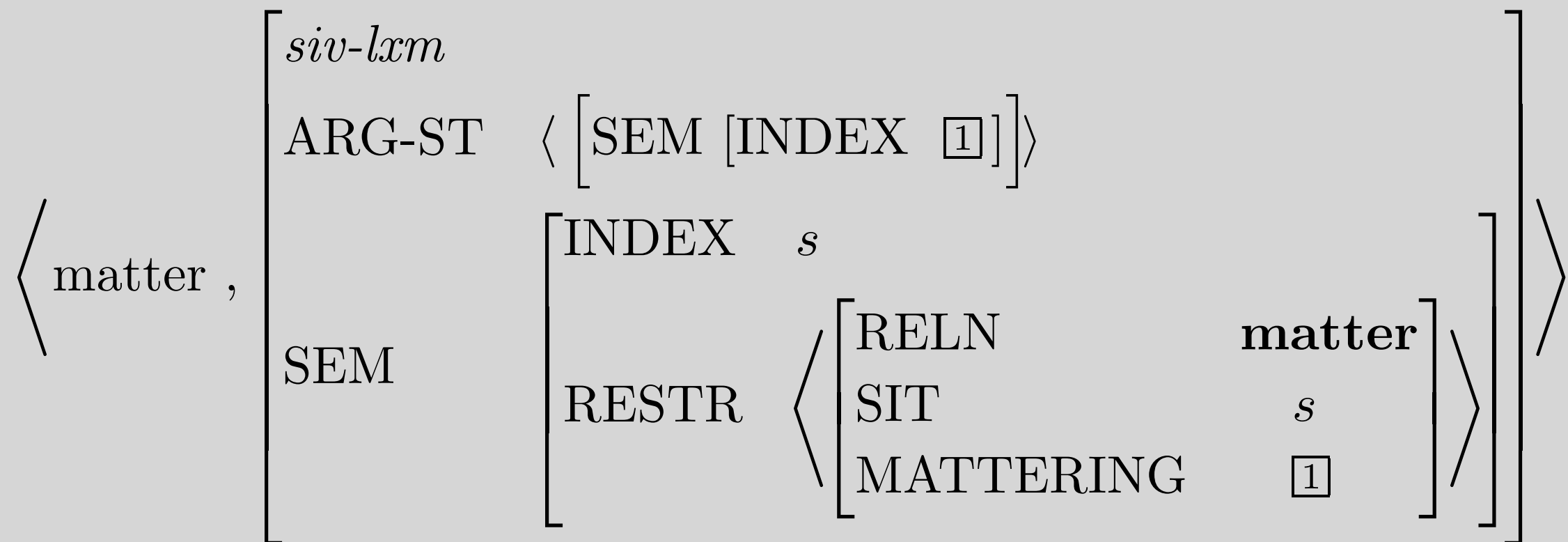
Not sure

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Seems strange, since the main part is the S

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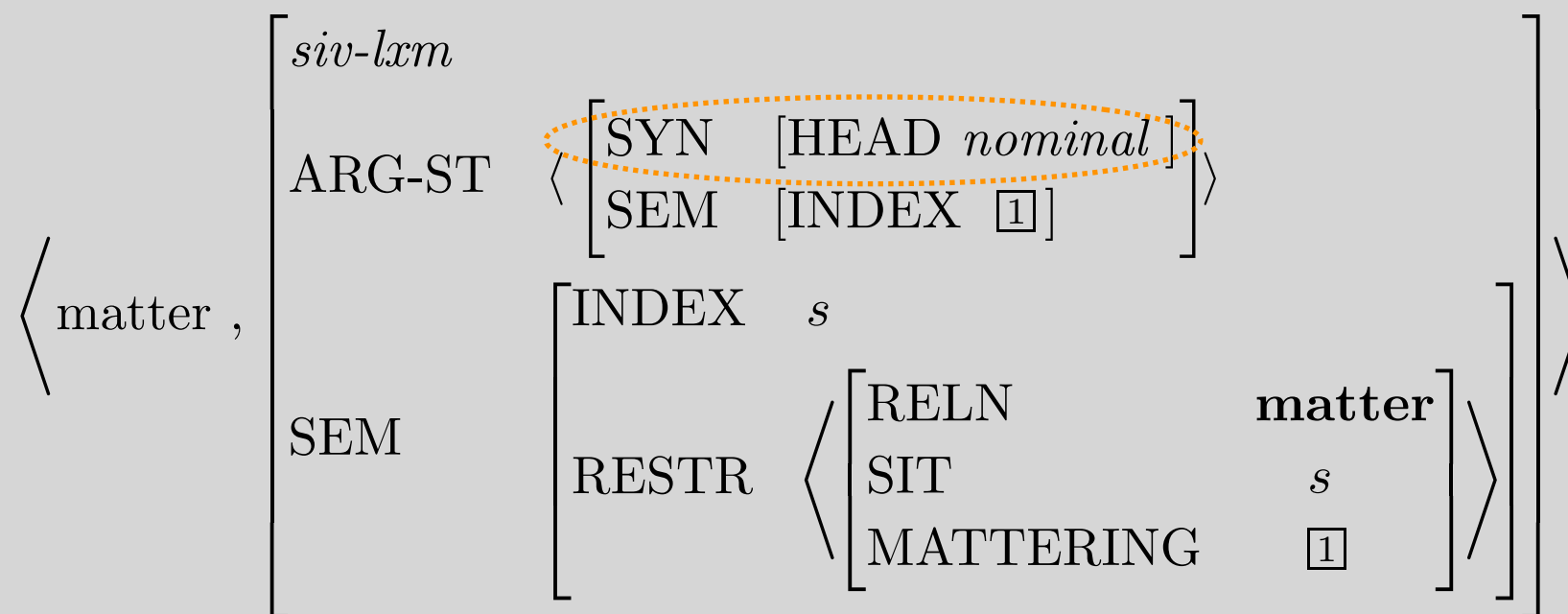
Sample Verb with a CP Subject



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

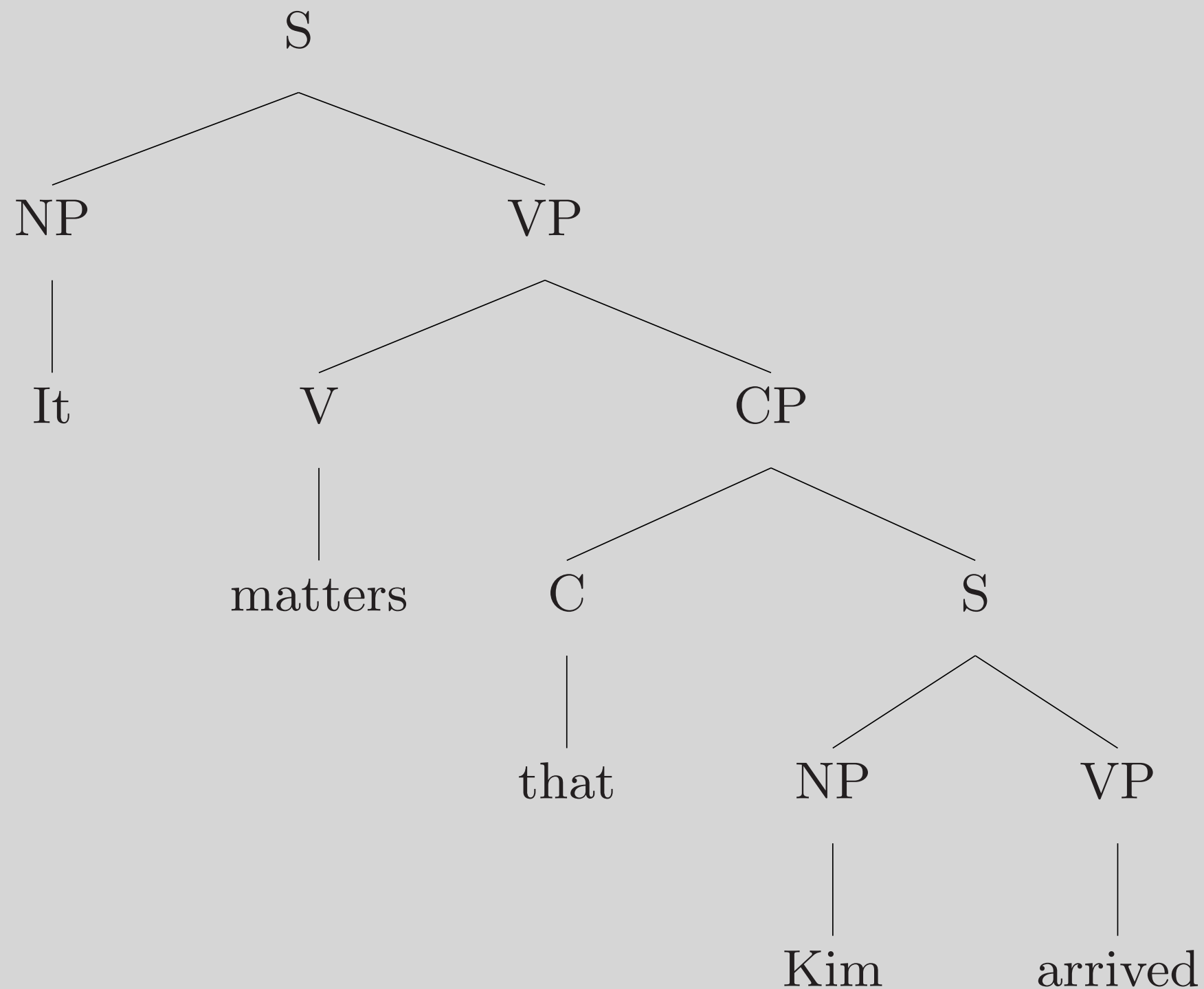
$$\left[\begin{array}{l} \text{INPUT} \\ \text{OUTPUT} \end{array} \right] \begin{array}{l} \left\langle X, \left[\text{SYN} \left[\text{VAL} \left[\begin{array}{l} \text{SPR} \\ \text{COMPS} \end{array} \right] \left[\begin{array}{l} \langle \boxed{2} \text{CP} \rangle \\ \boxed{A} \end{array} \right] \right] \right] \right\rangle \\ \left\langle Y, \left[\text{SYN} \left[\text{VAL} \left[\begin{array}{l} \text{SPR} \\ \text{COMPS} \end{array} \right] \left[\begin{array}{l} \langle \text{NP}[\text{FORM it}] \rangle \\ \boxed{A} \oplus \langle \boxed{2} \rangle \end{array} \right] \right] \right] \right\rangle \end{array} \right]$$

- 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





Title logo

Your favorite (SFW) English idiom?



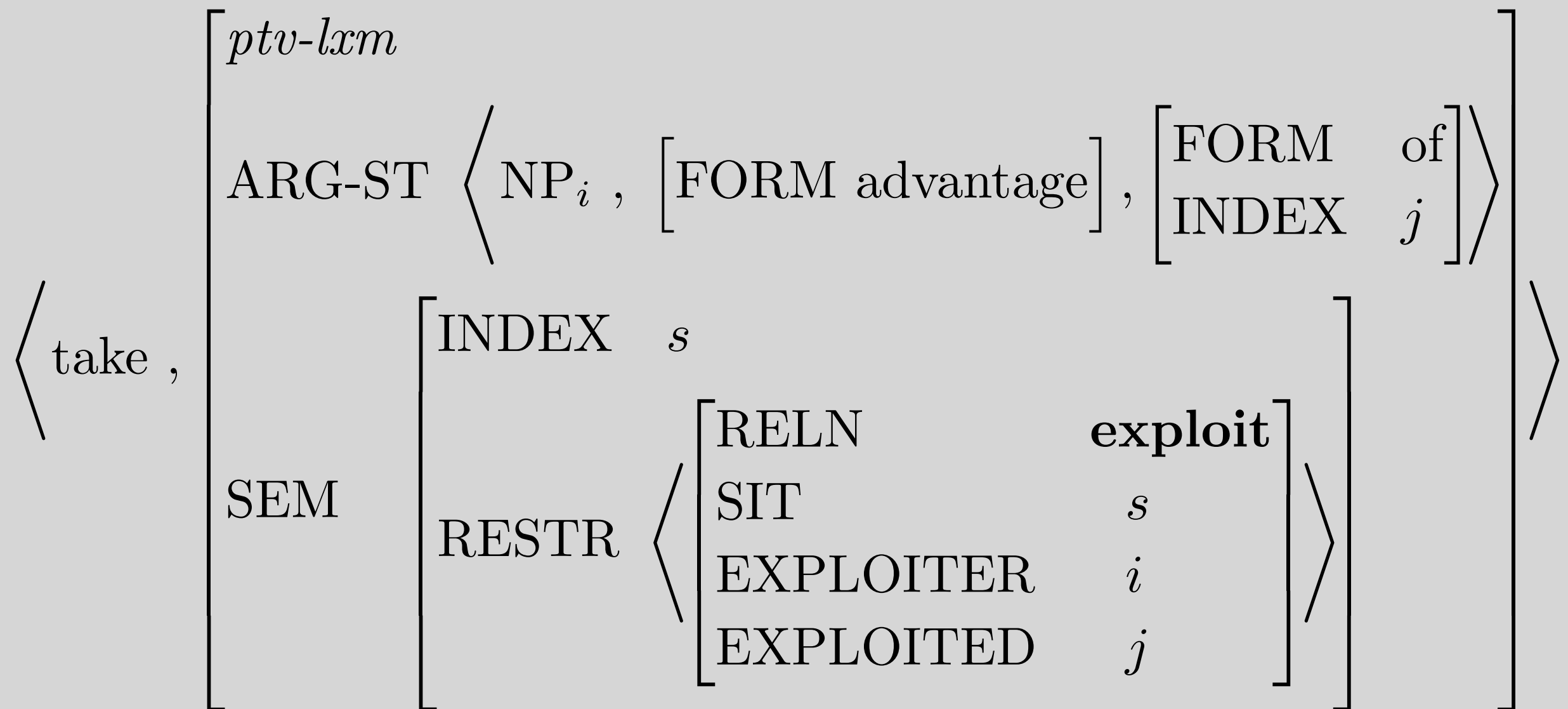
Nobody has responded yet.

Hang tight! Responses are coming in.

Another Nonreferential Noun

$\langle$ advantage ,	$massn-lxm$			
	SYN	HEAD	$\begin{bmatrix} \text{FORM} & \text{advantage} \\ \text{AGR} & 3sing \end{bmatrix}$	
			$\begin{bmatrix} \text{MODE} & \text{none} \\ \text{INDEX} & \text{none} \\ \text{RESTR} & \langle \rangle \end{bmatrix}$	

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

RQs: Idioms

- Towards the end of the chapter we have example 51, which is a single lexical entry for kick the bucket. Is this the best way to deal with idioms? Is this common?? Or do we make special individual lexical entries for the components like earlier in the chapter?
- What is the reasoning behind for considering the idioms in syntactic terms? Isn't it more of an issue of semantics / pragmatics?

RQs: Idioms

- How can we tell if an idiom has a passive form or not? For example, how can we know that (50c) “The bucket was kicked by Pat” cannot also have an idiomatic interpretation in addition to its literal interpretation?
- I am curious about whether there are other lexical entries that represent multiple words other than idioms and if any will come up in this book.

RQs: Idioms

- I am trying to imagine how idioms would work when implementing the lexicon. For example, for *kick the bucket*, I would have the predications associated with each word in its "normal" context, but when I license a tree that has *kick the bucket* I would have to ignore the SCP and use the *die* predication as defined in (51)? (p. 349).

RQs: PRED

- I still don't fully understand PRED because it isn't explicitly defined in the text. It would be really beneficial if I could get more detail about what the PRED functionality is and when it should be used.
- Why is the PRED feature added on the pos level? Is it possible for any type of phrase to be a predicative phrase?

RQs: FORM

- Do we still need FORM pass, after introducing and wrapping up all predicative things that can follow be into the feature PRED?
- I'm not completely understanding when it's necessary to use the FORM value. Is there a general rule on types of lexemes we need to pay attention to the FORM value of more than others? Is it mostly useful in deciding whether certain rules cause sentences to be grammatical or not?

RQs: *it*-selecting verbs

- Do the verbs that can have a dummy pronoun (*it*) have two different lexical sequences to account for the version of the verb that has “*it*” as a subject and the one that doesn’t?

RQs: Overgeneration

- How can semantically empty categories be formally constrained to prevent overgeneration, ensuring that they do not produce grammatically or semantically anomalous expressions?

RQs: CP vs. NP arguments

- Could you clarify why a verb's selection of CP or NP is a semantic issue?

RQs: CASE on comp

- I understand why our grammar now requires that CASE be an appropriate feature for comp, but it feels like this is something that we're allowing just so we don't have to revise other portions of our grammar. I don't see how [CASE acc] and [CASE nom] CPs would ever be realized differently in terms of phonology/morphology/orthography, unlike the NPs *him* and *he*, so it seems odd that this arises from our grammar. Is there cross-linguistic evidence for such an analysis?