

# HG4041 Theories of Grammar

## Non-referential NPs, Expletives, and Extraposition

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Lecture 9

Location: LHN-TR+36

HG4041 (2020)

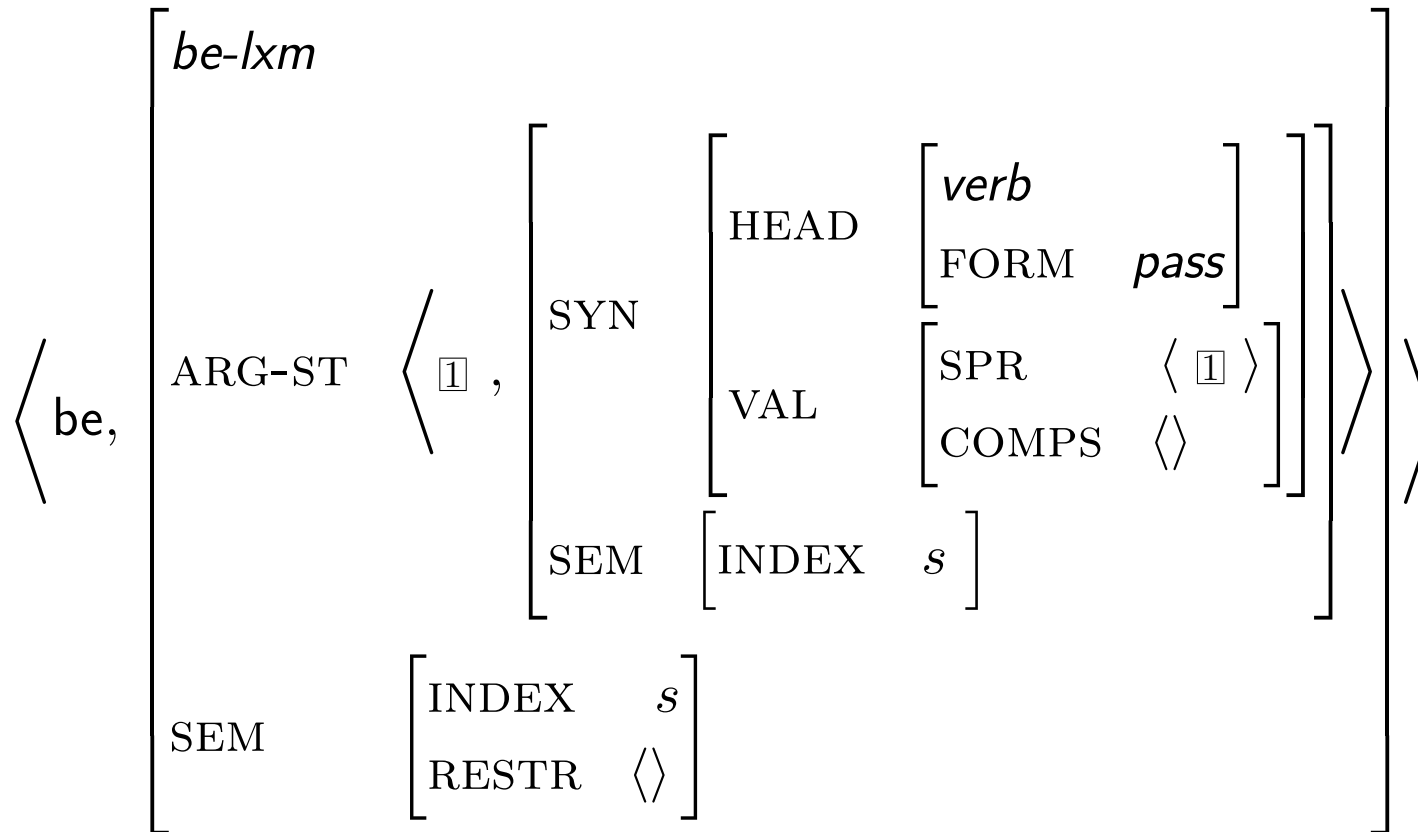
# Overview

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- Existentials (*There is an X, ...*)
- Extraposition (*It worries me that X, ...*)
- Idioms (*X takes advantage of Y, ...*)
- In Chapter 10, we met the passive **be**.
- Passive **be** is just a special case – that **be** generally introduces [PRED +] constituents
- Today, we'll introduce another **be**, which occurs in existential sentences starting with **there**, e.g. *There is a monster in Loch Ness.*

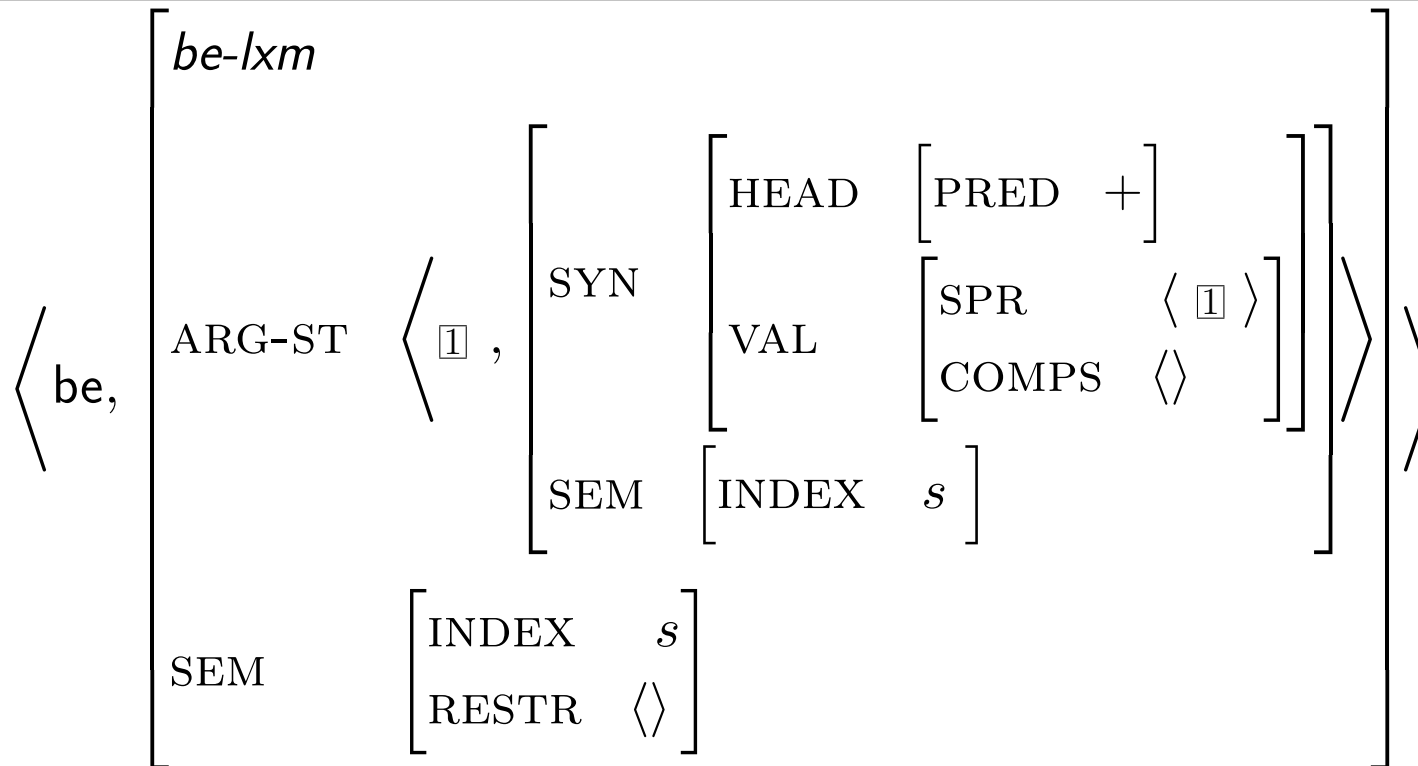
- 
- Then we'll look at this use of *there*.
  - Which will lead us to a more general examination of NPs that don't refer, including some uses of *it* and certain idiomatic uses of NPs.

## Chapter 10 entry for be



This takes only passive lexemes:  $\left[ \text{FORM} \quad \textit{pass} \right]$ .

## Copula (generalized)



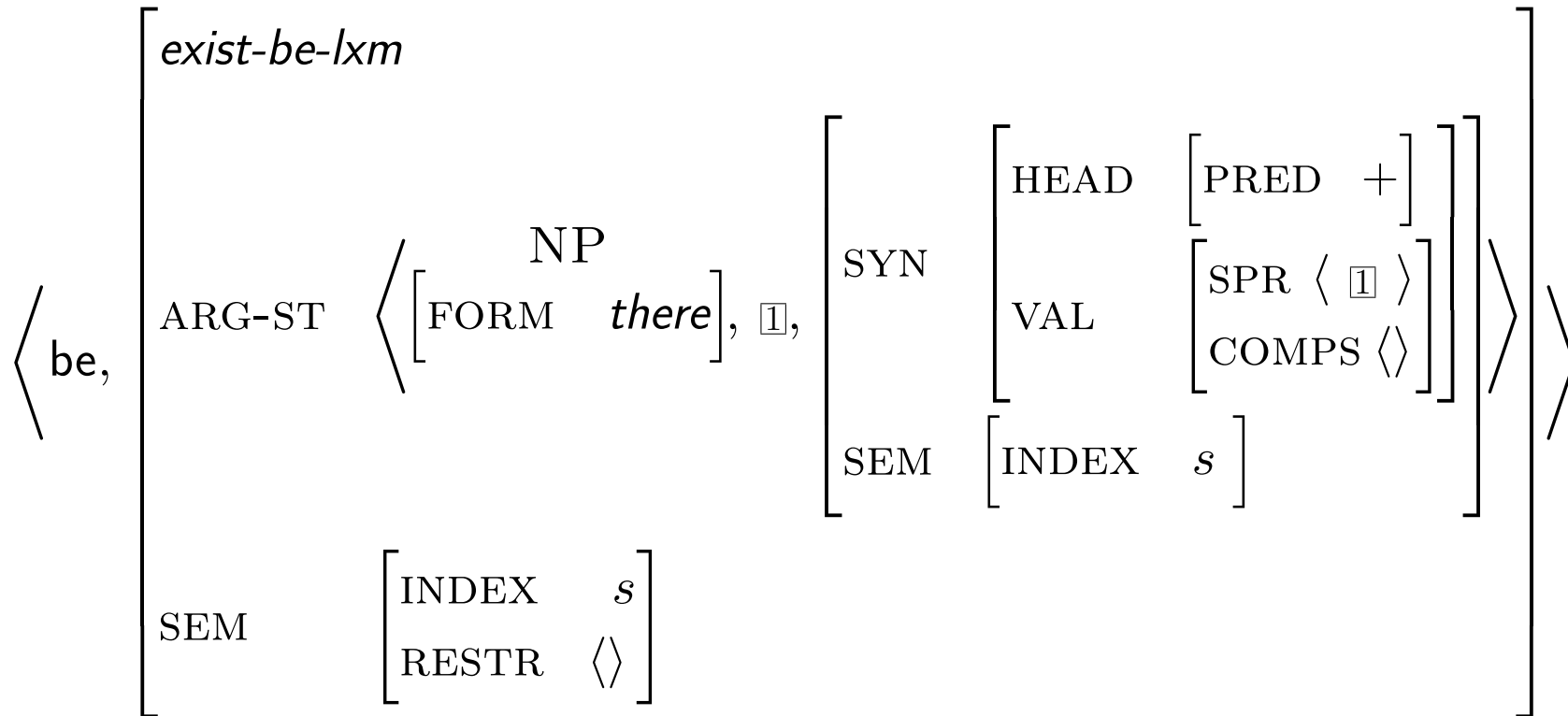
- Allow also (**predicative**) adjectives *fond*, *sleeping* are [PRED +].
- *mere* is [PRED -]
- Most adjectives can be either

## Existentials

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- 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*.
- More examples:
  - (1) *There was a person at the door*
  - (2) *There are many people fond of linguistics*
  - (3) *There are people looking at us*

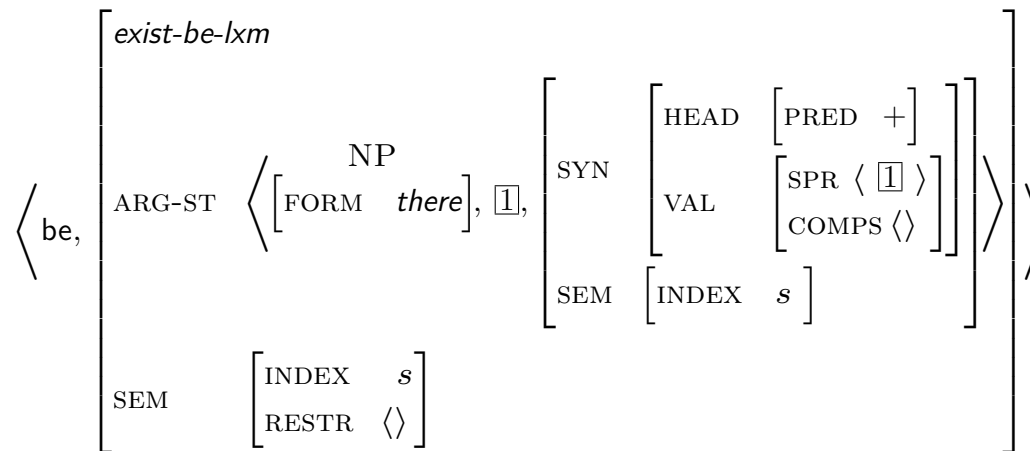
## Lexical Entry for the Existential *be*



## Questions About the Existential *be*

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- 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?

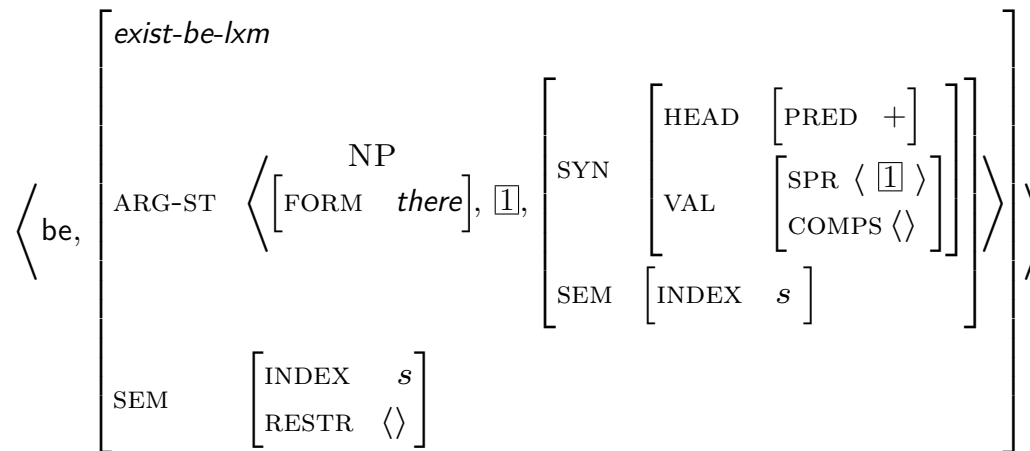




## There are questions left

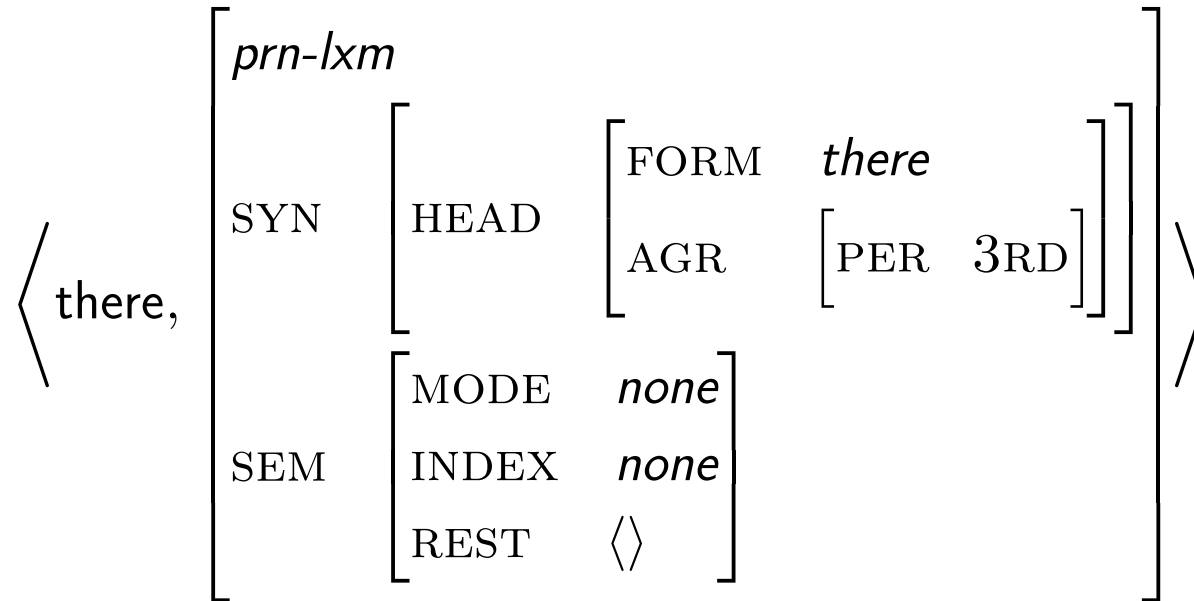
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- What is the contribution of this *be* to the semantics of the sentences it occurs in?
- Can all [PRED +] predicates appear as the third argument in existentials?
- How do we rule out \**There was a greyhound a good runner?*



## The Entry for Existential *there*

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## Questions About Existential there

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- 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>prn-lxm</i>	SYN	HEAD	[	FORM	<i>there</i>	]
				AGR	[	PER	3RD	]
			SEM	MODE	<i>none</i>			
				INDEX	<i>none</i>			
				REST	⟨ ⟩			
								]

## Other NPs that don't seem to refer

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- (4) *It sucks that the Rockies lost the series.*
- (5) *It is raining.*
- (6) *Andy took advantage of the opportunity.*
- (7) *Lou kicked the bucket.*

## What about *It follows that you are wrong*?

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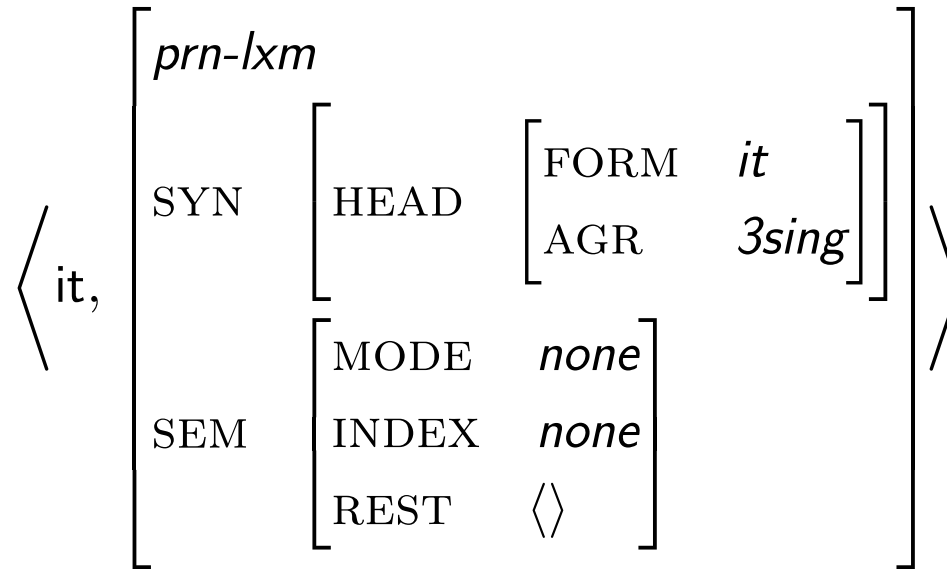
- This is an example of **extraposition**
- To analyze it we need:
  - An analysis of this use of *that*\*
  - Entries for verbs that take clausal subjects \*
  - (8) *That you are wrong follows*
  - A lexical entry for dummy *it*
  - A rule to account for the relationship between pairs like (8) and (9)
  - (9) *It follows that you are wrong.*

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\*We need these anyway (independently motivated)

## The Entry for Dummy *it*

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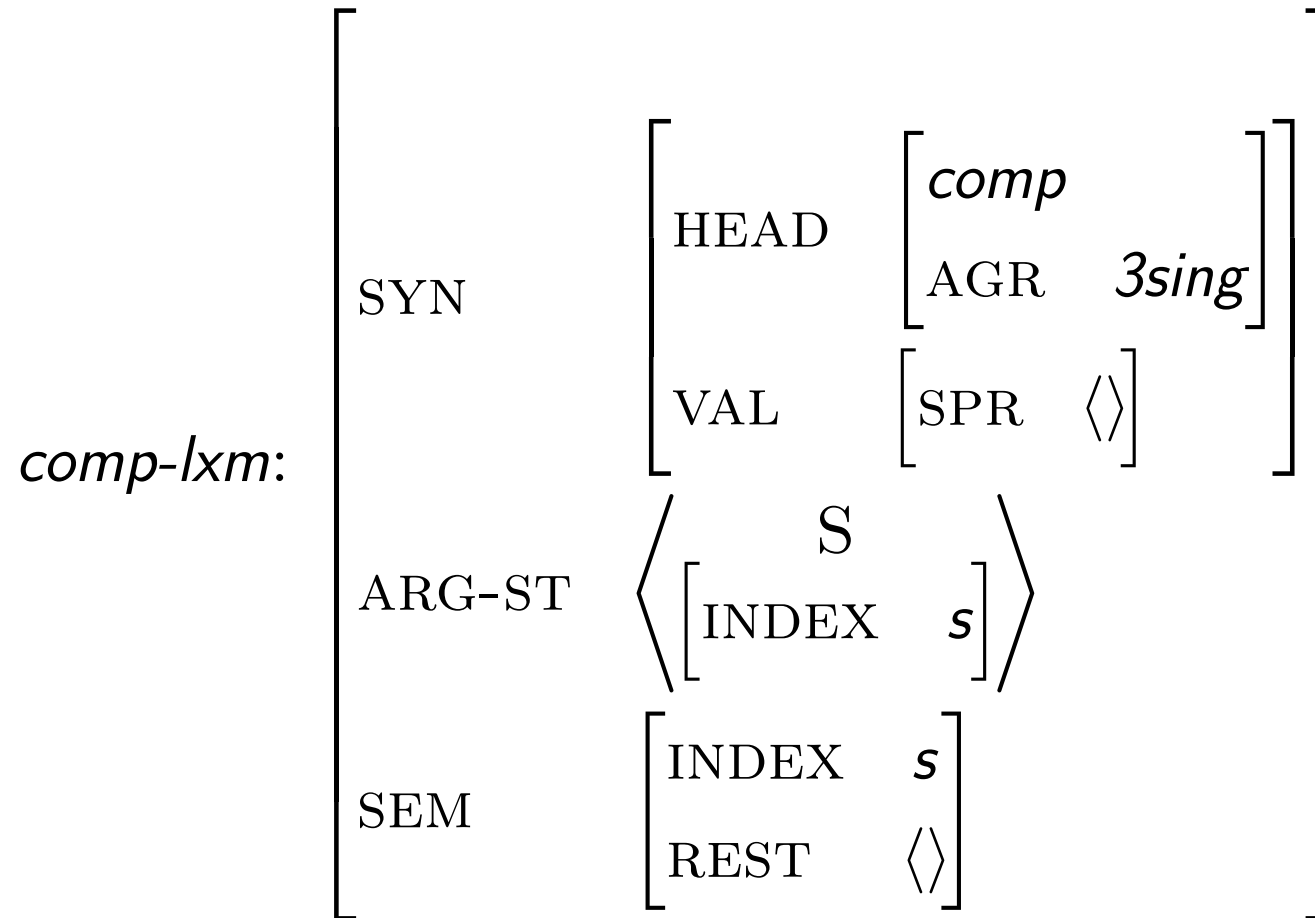
## Questions About Dummy *it*

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

⟨ <i>it</i> ,	<i>prn-lxm</i>	⟩														
	<table><tr><td>SYN</td><td>HEAD</td><td><table><tr><td>FORM</td><td><i>it</i></td></tr><tr><td>AGR</td><td><i>3sing</i></td></tr></table></td></tr><tr><td>SEM</td><td>MODE</td><td><i>none</i></td></tr><tr><td></td><td>INDEX</td><td><i>none</i></td></tr><tr><td></td><td>REST</td><td>⟨ ⟩</td></tr></table>		SYN	HEAD	<table><tr><td>FORM</td><td><i>it</i></td></tr><tr><td>AGR</td><td><i>3sing</i></td></tr></table>	FORM	<i>it</i>	AGR	<i>3sing</i>	SEM	MODE	<i>none</i>		INDEX	<i>none</i>	
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SEM	MODE	<i>none</i>														
	INDEX	<i>none</i>														
	REST	⟨ ⟩														

# A New Type of Lexeme: Complementizers

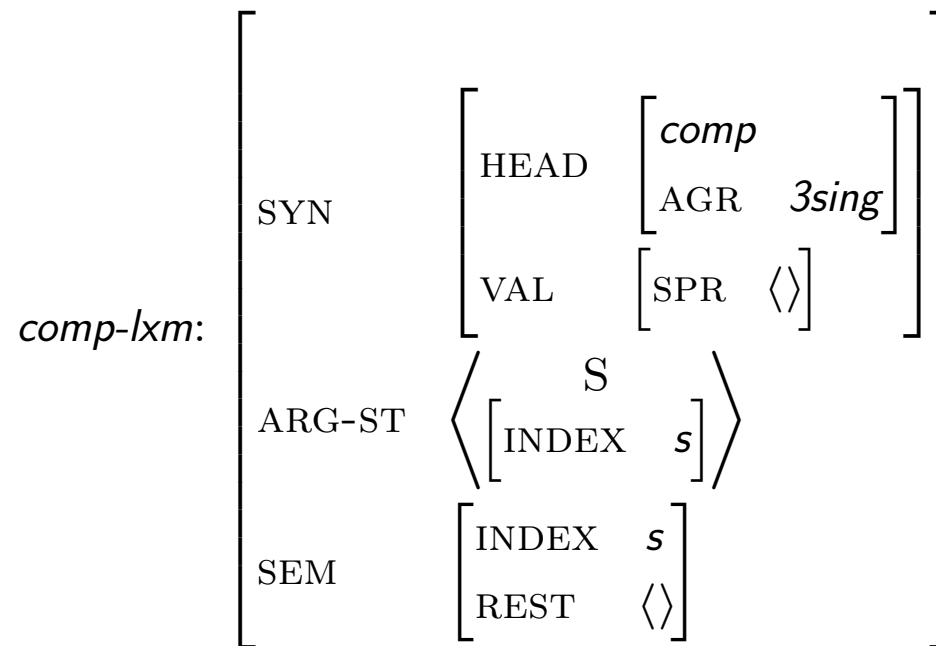




## Questions About the Type *comp-lxm*

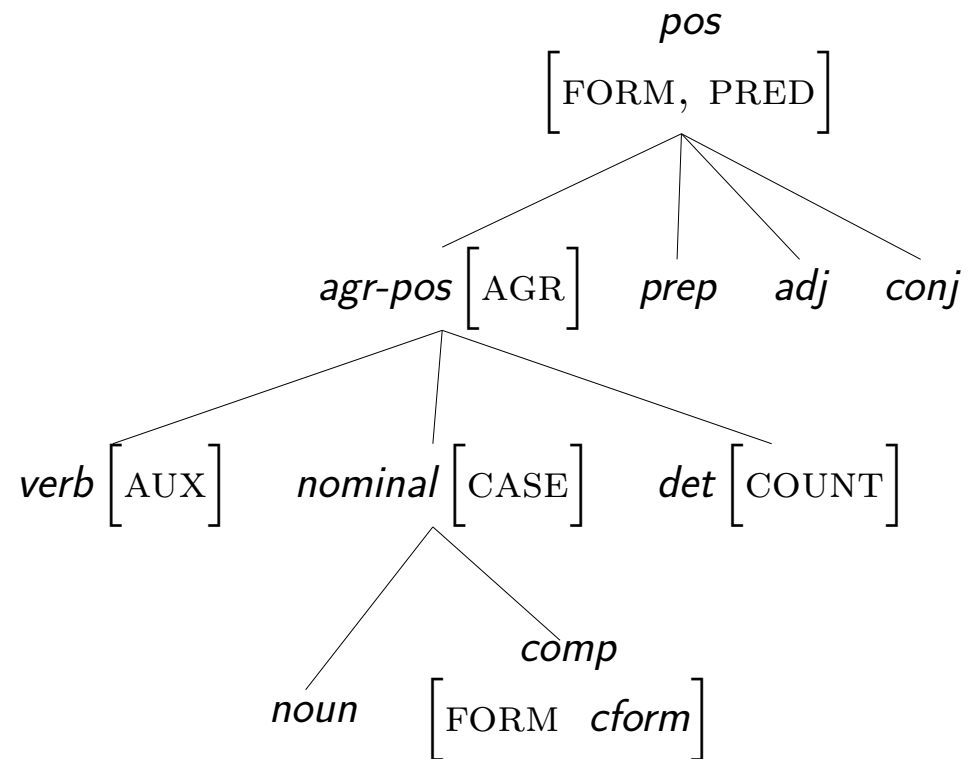
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- Why does it stipulate values for both SPR and ARG-ST?
- Why is its INDEX value the same as its argument's?
- What is its semantic contribution?



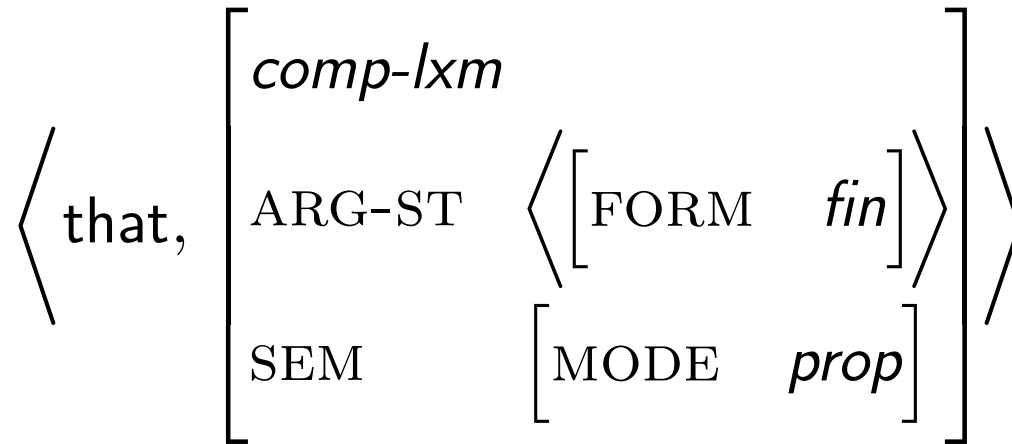
# The Type comp

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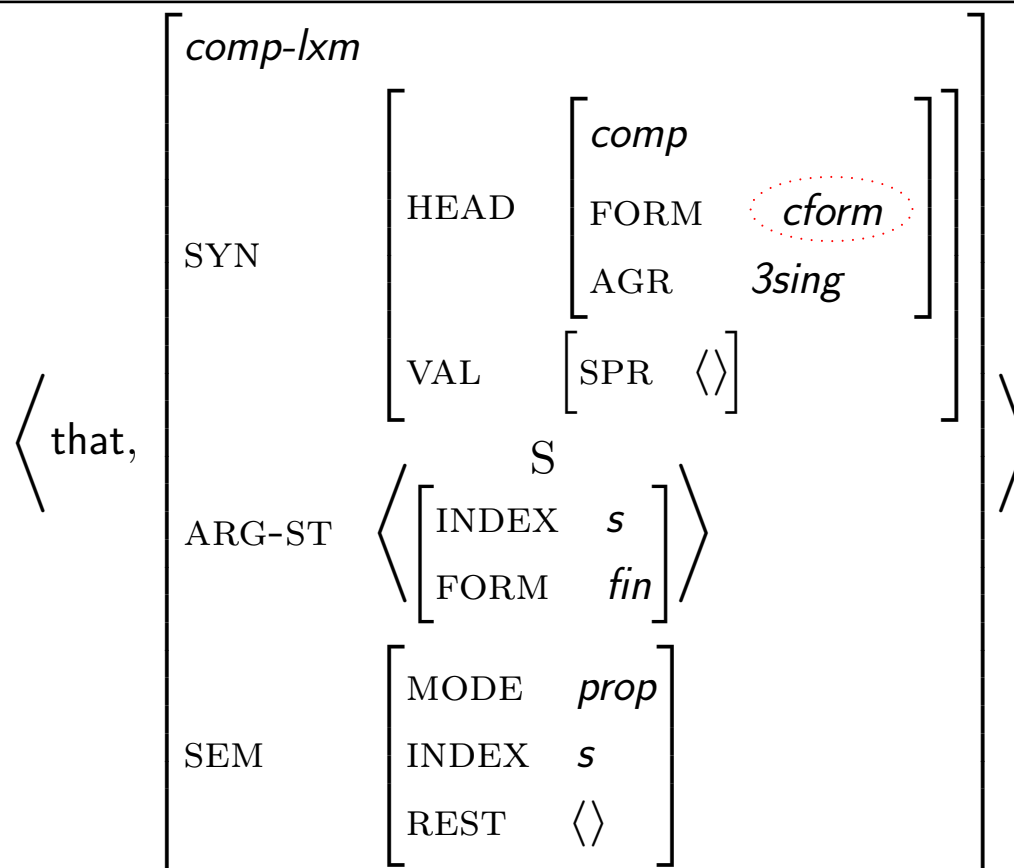


## The Lexical Entry for Complementizer *that*

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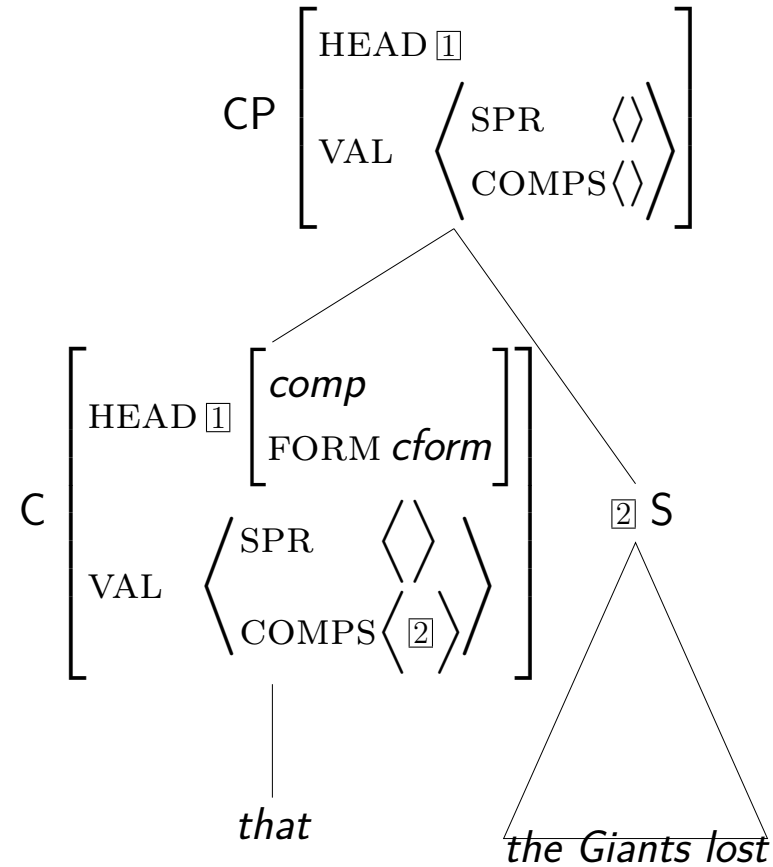
## ...with inherited information filled in



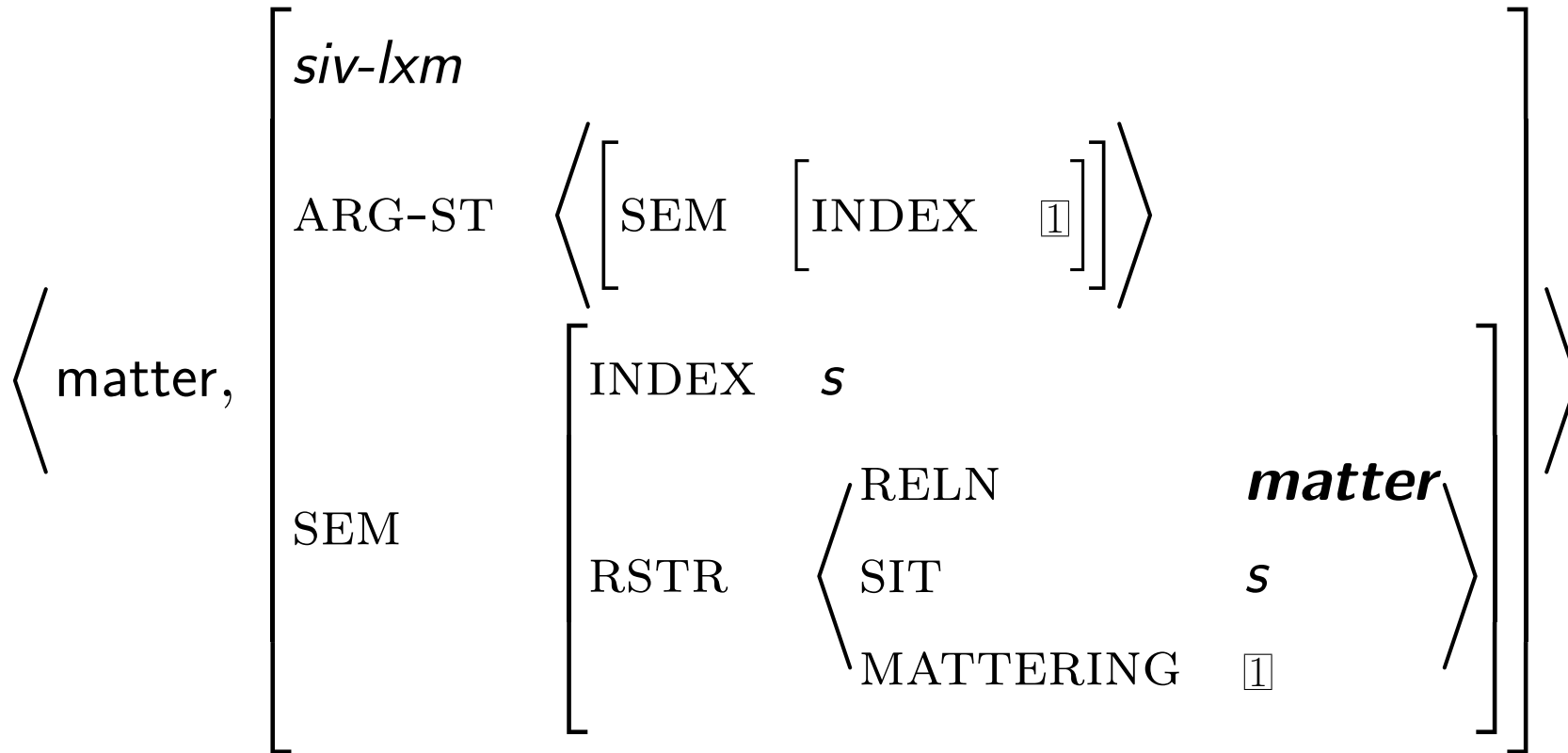
➤ Question: Where did [FORM *cform*] come from?

# Structure of a Complementizer Phrase

(10) *that the Giants lost*



## Sample Verb with a CP Subject



Note: the only constraint on the first argument is semantic

## A Problem

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➤ We constrained the subject of matter only semantically. However...

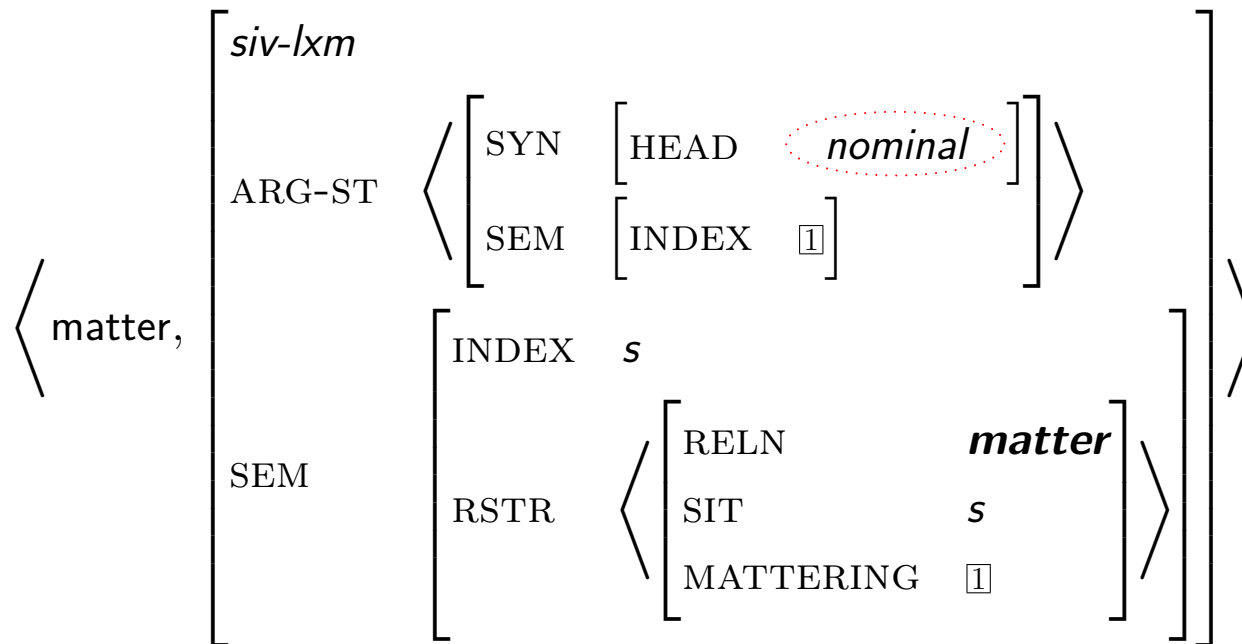
➤ CP and S are semantically identical, but we get:

(11) *That Bush won matters* vs. *\*Bush won matters*

➤ Argument-marking PPs are semantically identical to their object NPs, but we get:

(12) *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*.



## Extraposition (at last)

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- Extraposition alters word order so that a relatively "heavy" constituent appears to the right of its canonical position.

(13) a. That you were wrong follows.

b. It follows that you were wrong.

(14) a. That I mistyped it was frustrating.

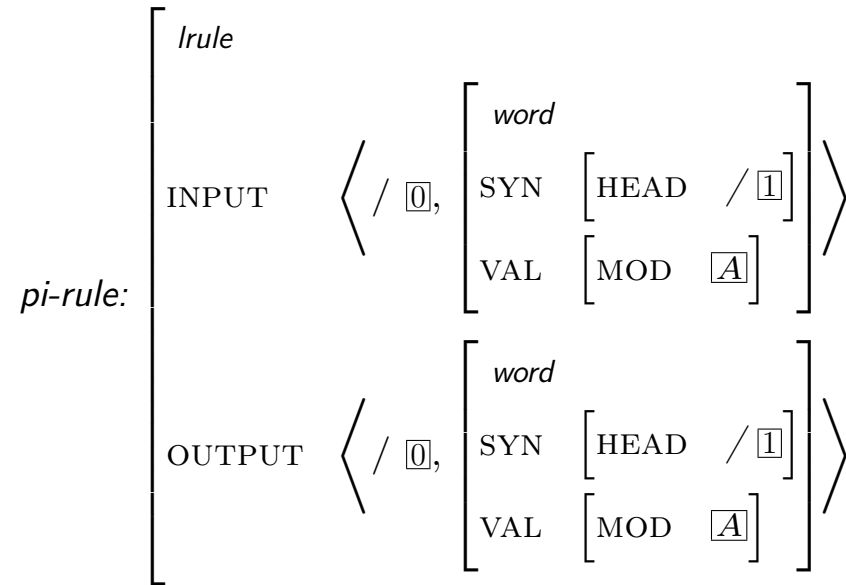
b. It was frustrating that I mistyped it.

(15) a. Did that this happened surprise you?

b. Did it surprise you that this happened?

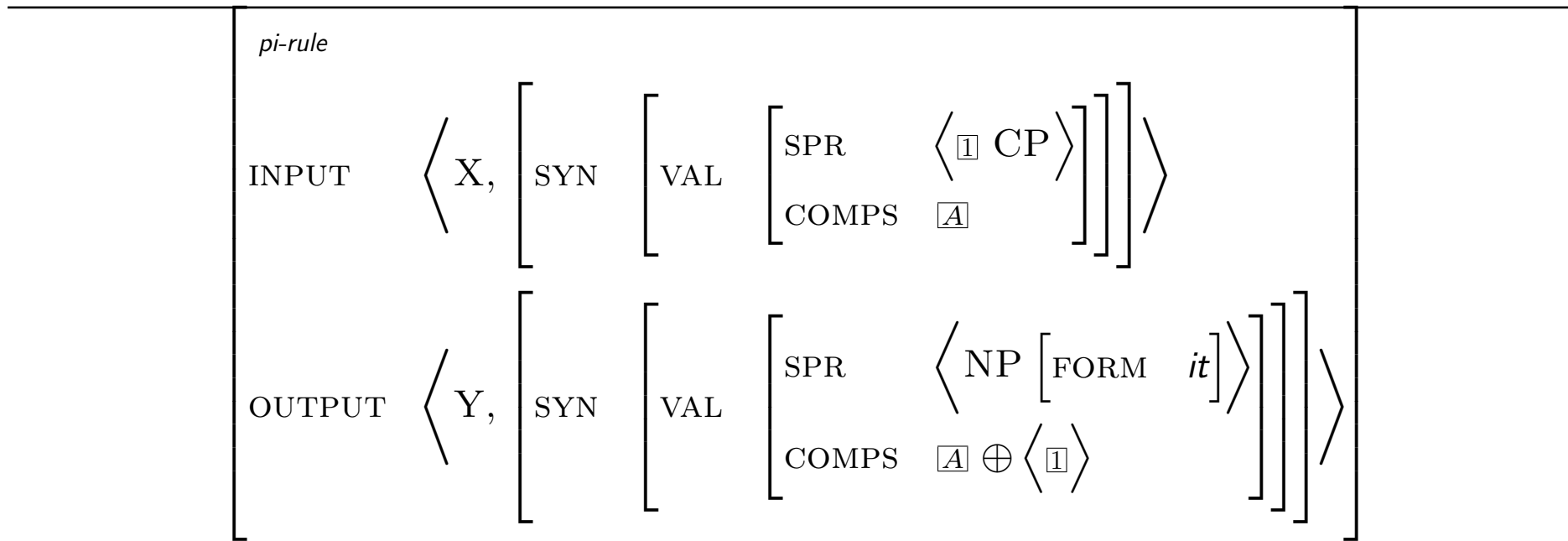
## Post Inflectional Lexical Rule: *pi-rule*

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We use this when we expect the structure to largely formed, and we want to change the order of things, ...

# The Extraposition Lexical Rule



- Why is the type *pi-rule*?
- Why doesn't it say anything about the semantics?
- Why is the COMPS value [A] not ⟨ ⟩ ?

## Extraposition with verbs whose comps lists are nonempty

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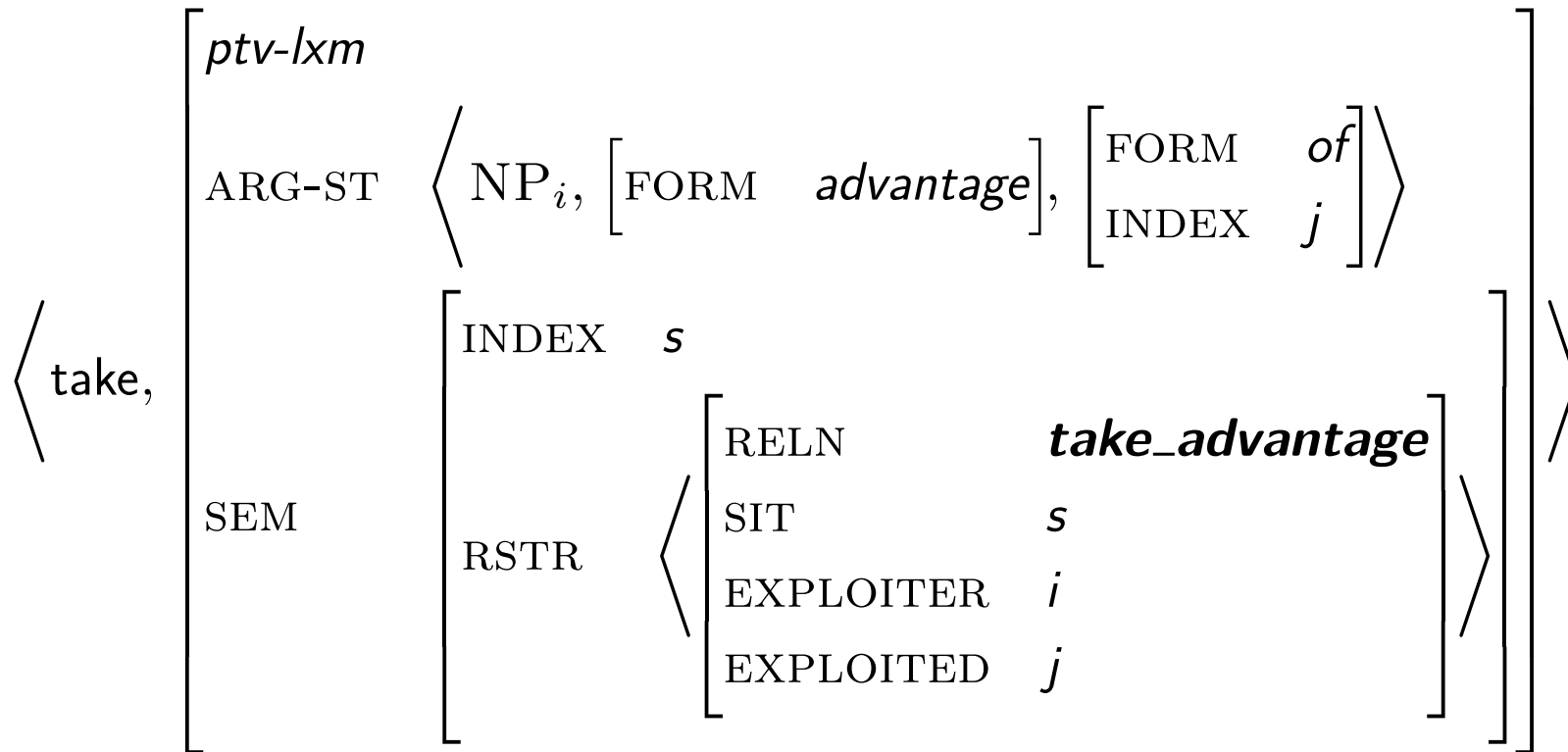
- (16) *It worries me that war is imminent.*
- (17) *It occurred to Pat that Chris knew the answer.*
- (18) *It endeared you to Andy that you wore a funny hat.*

## Another nonreferential noun: *advantage*

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

## The verb that selects *advantage*



## Our analyses of idioms and passives interact...

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➤ We generate

(19) *Advantage was taken of the situation by many people.*

(20) *Tabs are kept on foreign students.*

➤ But not:

(21) *Many people were taken advantage of.*

➤ Why not?

# Overview

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- Existentials (*there*, *be*)
- Extraposition (*that*, *it*, LR)
- Idioms (*take\_advantage*, ...)



## P1: *there* and Agreement

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The analysis of existential *there* sentences presented so far says nothing about verb agreement.

- A. Consult your intuitions (and/or those of your friends, if you wish) to determine what the facts are regarding number agreement of the verb in *there* sentences. Give an informal statement of a generalization covering these facts, and illustrate it with both grammatical and ungrammatical examples. [*Note: Intuitions vary regarding this question, across both individuals and dialects. Hence there is more than one right answer to this question.*]
- B. How would you elaborate or modify our analysis of the *there* construction so as to capture the generalization you have discovered? Be as precise as you can.

## P2: Passing Up the Index

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A. Give the `RESTR` value that our grammar should assign to the sentence in (i). Be sure that the `SIT` value of the *smoke* predication is identified with the `ANNOYANCE` value of the **annoy** predication.

(i) *That Dana is smoking annoys Leslie.*

[Hint: This sentence involves two of the phenomena analyzed in this chapter: predicative complements of *be* and CP subjects.]

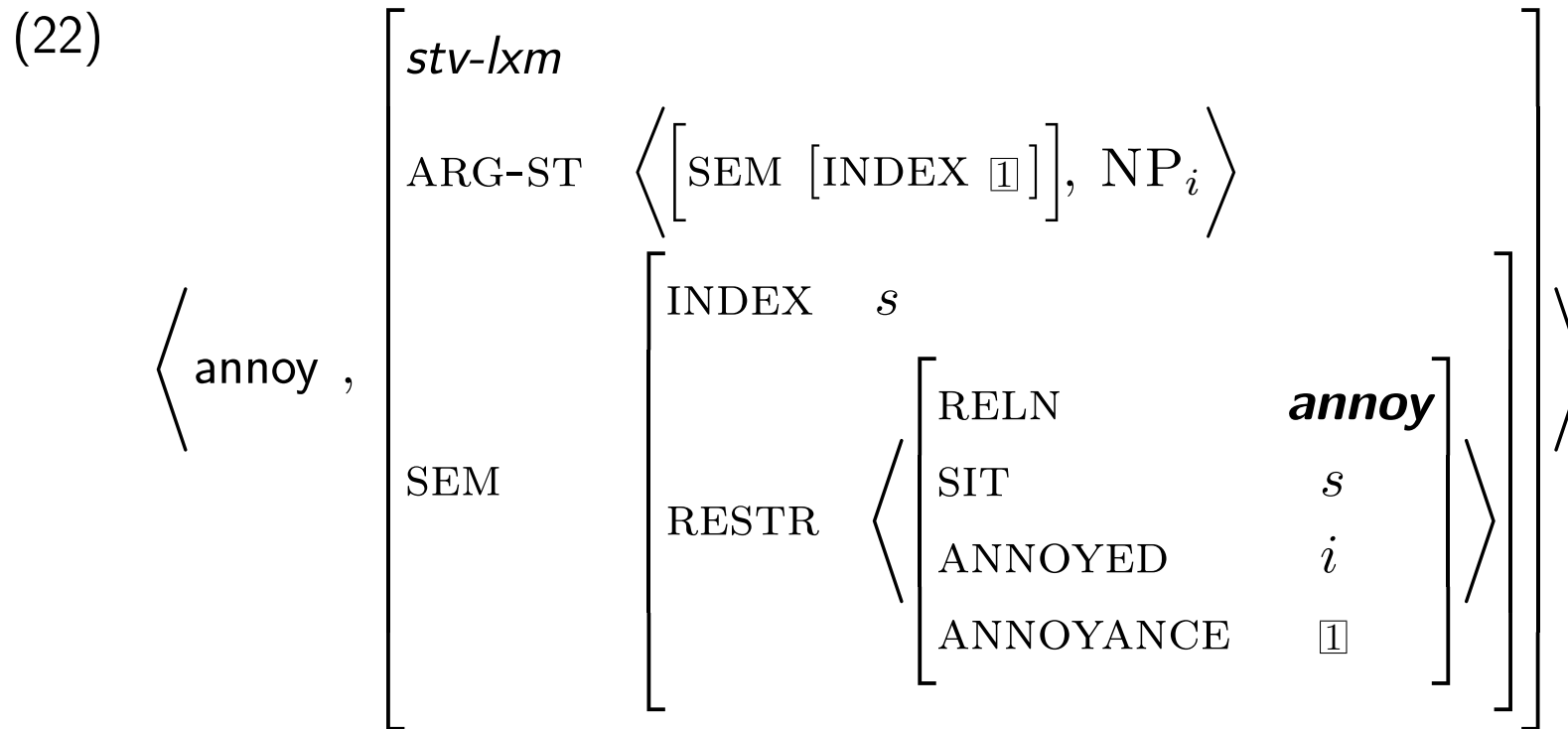
B. Draw a tree for (i). Use abbreviations for node labels, but show the index on each node.

C. Explain how the `SIT` value of the **smoke** predication gets identified with the `ANNOYANCE` value of the **annoy** predication. Be sure to make reference to lexical entries, phrase structure rules, and principles, as appropriate.

## P3: An Annoying Problem

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Assume that the lexical entry for the verb *annoy* is the following:



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- A. What constraints are imposed on the lexical sequences that result from applying the **3rd-Singular Verb Lexical Rule** to this entry (including those that involve inheritance of constraints from the entry's supertypes)?
- B. What constraints are imposed on lexical sequences that result from applying the **Extrapolation Lexical Rule** to your answer to part (A)?
- C. Draw a tree structure for the sentence in (23). You should show the value of all SEM features on all of the nodes, as well as the SPR and COMPS features for *annoys*.

(23) *It annoys Lee that Fido barks.*

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D. The lexical entry for *annoy* allows NP subjects as well, as in (24). Why doesn't the grammar then also license (25)?

(24) *Sandy annoys me.*

(25) \*It annoys me Sandy.