

Ling 566
Nov 5, 2019
Passive Construction

Overview

- Passive
 - Arguments for lexicalist account
 - Details of our analysis
- Reading Questions

The Passive in Transformational Grammar

- Passive was the paradigmatic transformation in early TG.
- Motivations
 - Near paraphrase of active/passive pairs.
 - Simplified statement of cooccurrence restrictions.
 - E.g. *devour* must be followed by an NP, *put* by NP-PP
 - Such restrictions refer to pre-transformational (“deep”) structure.
 - Intuition that active forms were more basic, in some sense.
- Its formulation was complex:
 - Promote object
 - Demote subject, inserting *by*
 - Insert appropriate form of *be*, changing main verb to a participle.

But transforming whole sentences is overkill

- Passive sentences look an awful lot like some actives:

The cat was chased by the dog VS

The cat was lying about the dog

- Passives occur without *be* and without the *by* phrase:

Cats chased by dogs usually get away.

My cat was attacked.

So a lexical analysis seems called for

- What really changes are the verb's form and its cooccurrence restrictions (that is, its valence).
- There are lexical exceptions
 - Negative:
 - Pat resembles Bo* but **Bo is resembled by Pat*
 - That look suits you* but **You are suited by that look*
 - Positive
 - Chris is rumored to be a spy* but
 - *They rumor Chris to be a spy*

We posit a lexical rule

- Why not just list passive participles individually?
 - To avoid redundancy
 - To capture productivity (for example?)
- We make it a derivational (lexeme-to-lexeme) rule.
Why?
 - Our constraints on lexeme-to-word rules wouldn't allow us to make Passive one.

The Passive Lexical Rule

$$\left[\begin{array}{l}
 \text{d-rule} \\
 \text{INPUT} \left\langle \boxed{1}, \left[\begin{array}{l}
 \text{tv-lxm} \\
 \text{ARG-ST} \langle [\text{INDEX } i] \rangle \oplus \boxed{A}
 \end{array} \right] \right\rangle \\
 \text{OUTPUT} \left\langle \text{F}_{PSP}(\boxed{1}), \left[\begin{array}{l}
 \text{part-lxm} \\
 \text{SYN} \left[\text{HEAD} \left[\text{FORM } \text{pass} \right] \right] \\
 \text{ARG-ST} \left[\boxed{A} \oplus \left\langle \left(\begin{array}{l}
 \text{PP} \\
 \left[\text{FORM } \text{by} \right] \\
 \left[\text{INDEX } i \right]
 \end{array} \right) \right\rangle \right]
 \end{array} \right] \right\rangle
 \end{array} \right]$$

Questions About the Passive Rule

$$\left[\begin{array}{l}
 \text{d-rule} \\
 \text{INPUT } \left\langle \boxed{1}, \left[\begin{array}{l} \text{tv-lxm} \\ \text{ARG-ST } \langle [\text{INDEX } i] \rangle \oplus \boxed{A} \end{array} \right] \right\rangle \\
 \text{OUTPUT } \left\langle F_{PSP}(\boxed{1}), \left[\begin{array}{l} \text{part-lxm} \\ \text{SYN } \left[\text{HEAD } [\text{FORM } \text{pass}] \right] \\ \text{ARG-ST } \boxed{A} \oplus \left\langle \left(\begin{array}{l} \text{PP} \\ \left[\begin{array}{l} \text{FORM } \text{by} \\ \text{INDEX } i \end{array} \right] \right) \right\rangle \end{array} \right] \right\rangle \right] \right\rangle
 \end{array} \right]$$

- Why is the morphological function F_{PSP} ?
- Why do we have a separate FORM value pass? Why not say the output is [FORM psp]?
- What kind of a PP is the *by*-phrase (that is, argument-marking or predicational)?

More Questions

$$\left[\begin{array}{l}
 \text{d-rule} \\
 \text{INPUT} \left\langle \boxed{1}, \left[\begin{array}{l}
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 \text{ARG-ST} \langle [\text{INDEX } i] \rangle \oplus \boxed{A}
 \end{array} \right] \right\rangle \\
 \text{OUTPUT} \left\langle \text{F}_{PSP}(\boxed{1}), \left[\begin{array}{l}
 \text{part-lxm} \\
 \text{SYN} \quad \left[\text{HEAD} \quad [\text{FORM } \text{pass}] \right] \\
 \text{ARG-ST} \quad \boxed{A} \oplus \left\langle \left(\begin{array}{l}
 \text{PP} \\
 \left[\begin{array}{l}
 \text{FORM} \quad \text{by} \\
 \text{INDEX} \quad i
 \end{array} \right] \right) \right\rangle
 \end{array} \right] \right\rangle
 \end{array} \right]
 \end{array}
 \right.$$

- What makes the object turn into the subject?
- Why is the type of the input *tv-lxm*?
- What would happen if it were just *verb-lxm*?

Intransitives have passives in German

In der Küche wird nicht getanzt.

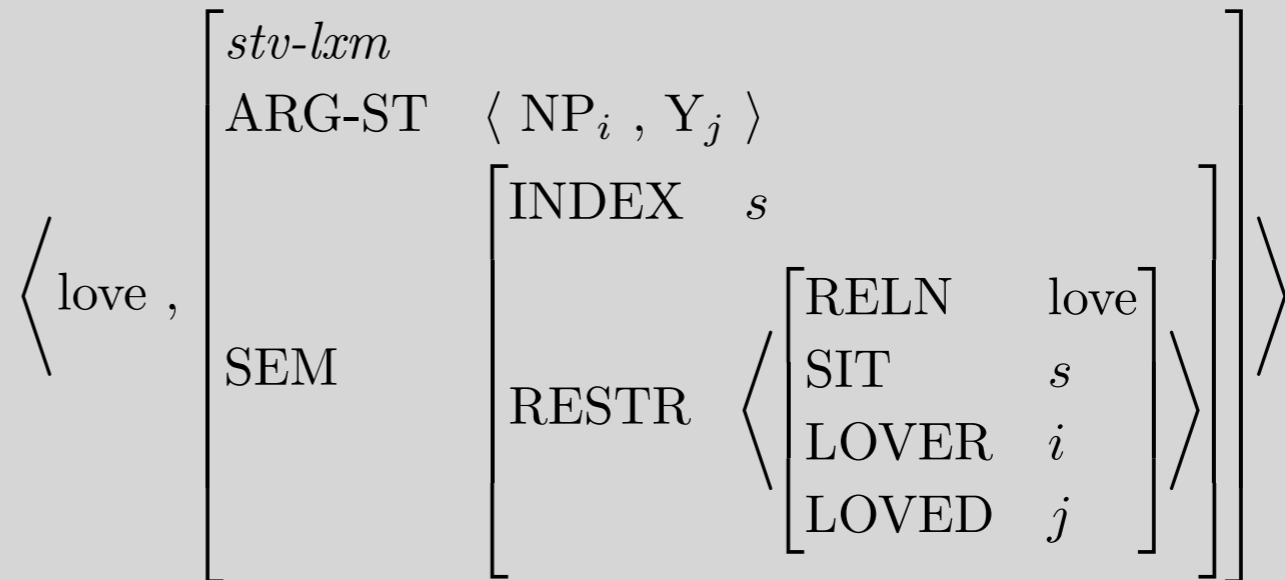
in the kitchen is not danced

‘There is no dancing in the kitchen.’

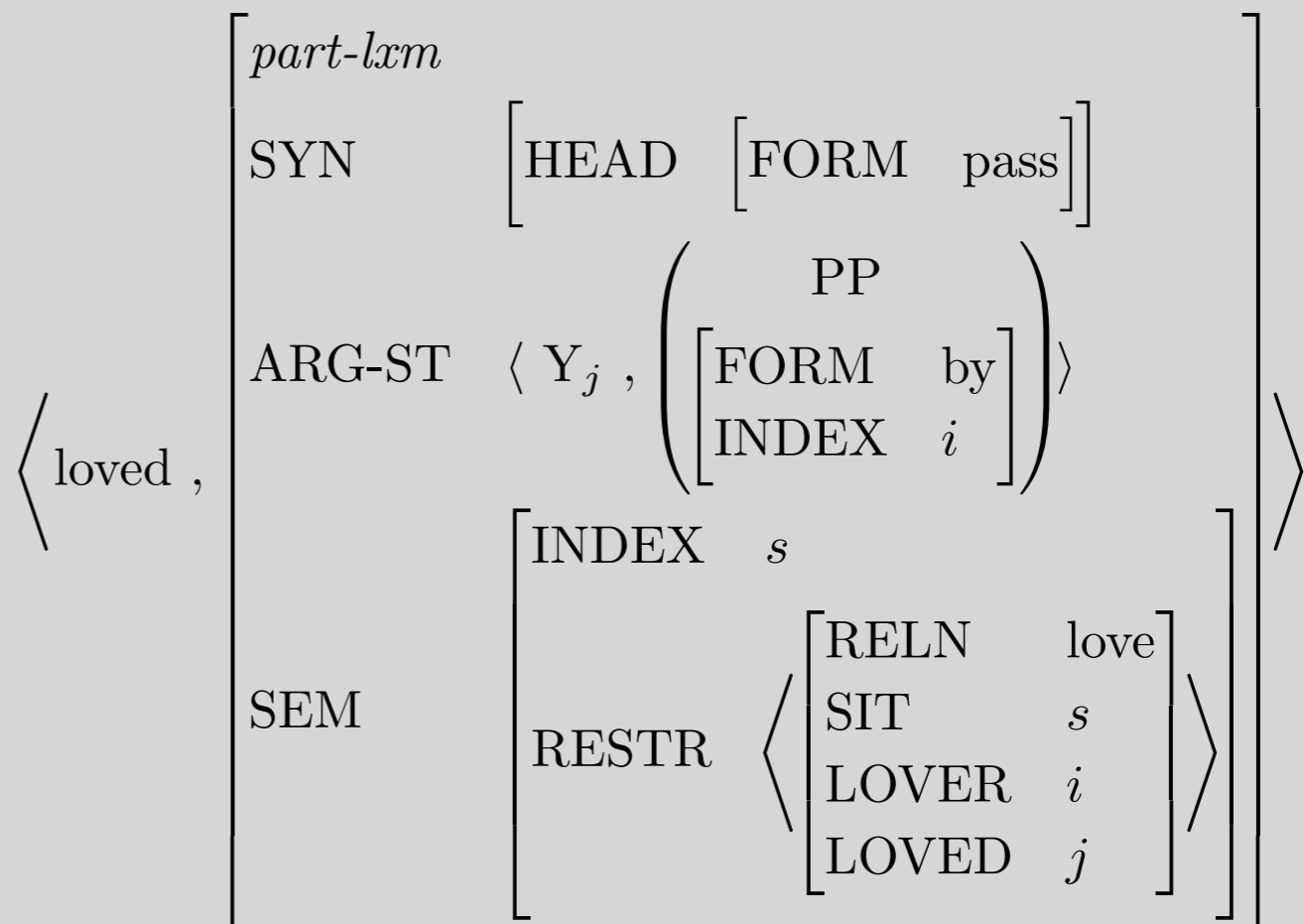
NB: The exact analysis for such examples is debatable, but German, like many other languages, allows passives of intransitives, as would be allowed by our analysis if the input type in the Passive LR is *verb-lxm*.

Passive Input & Output

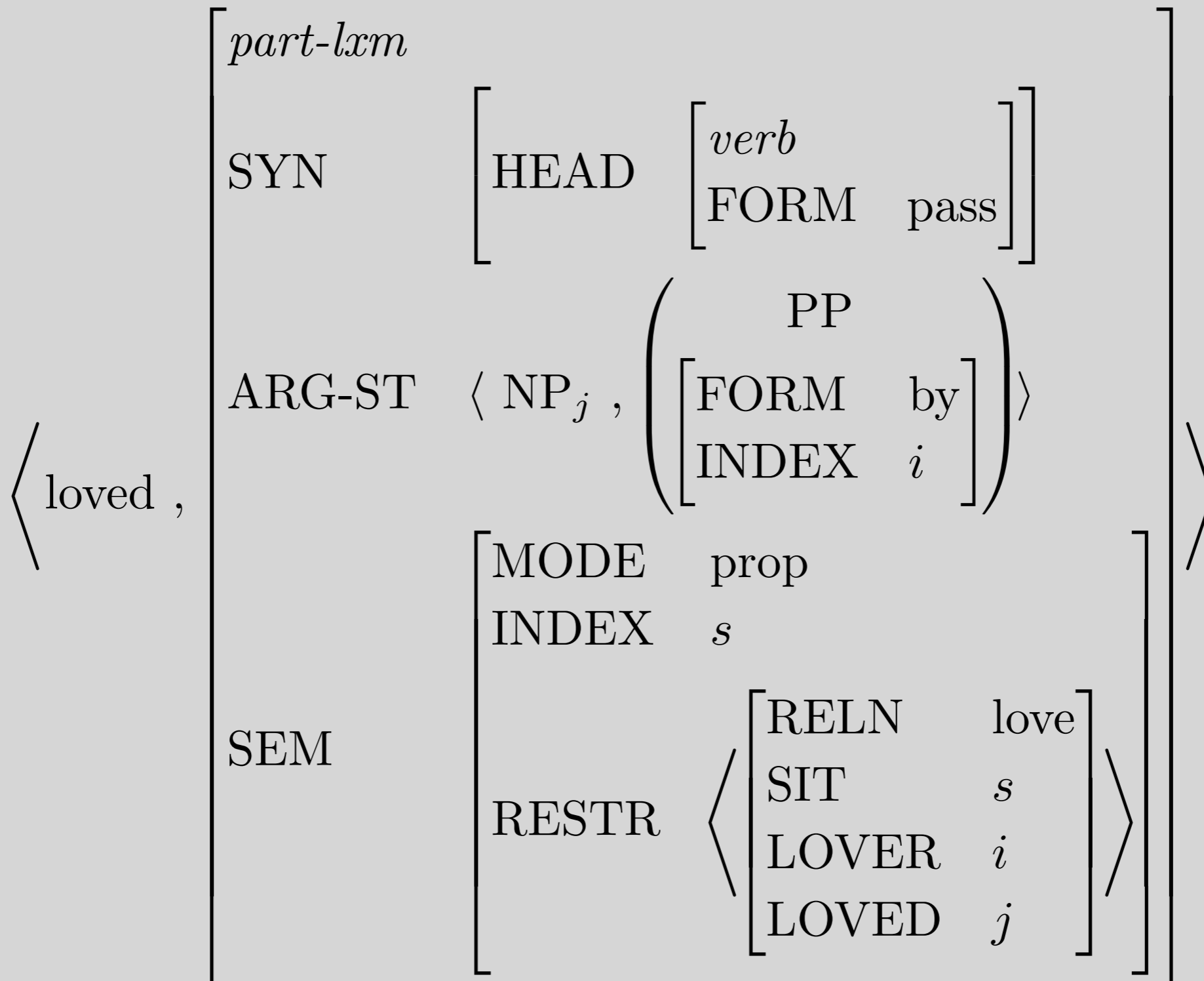
If you have one of these....



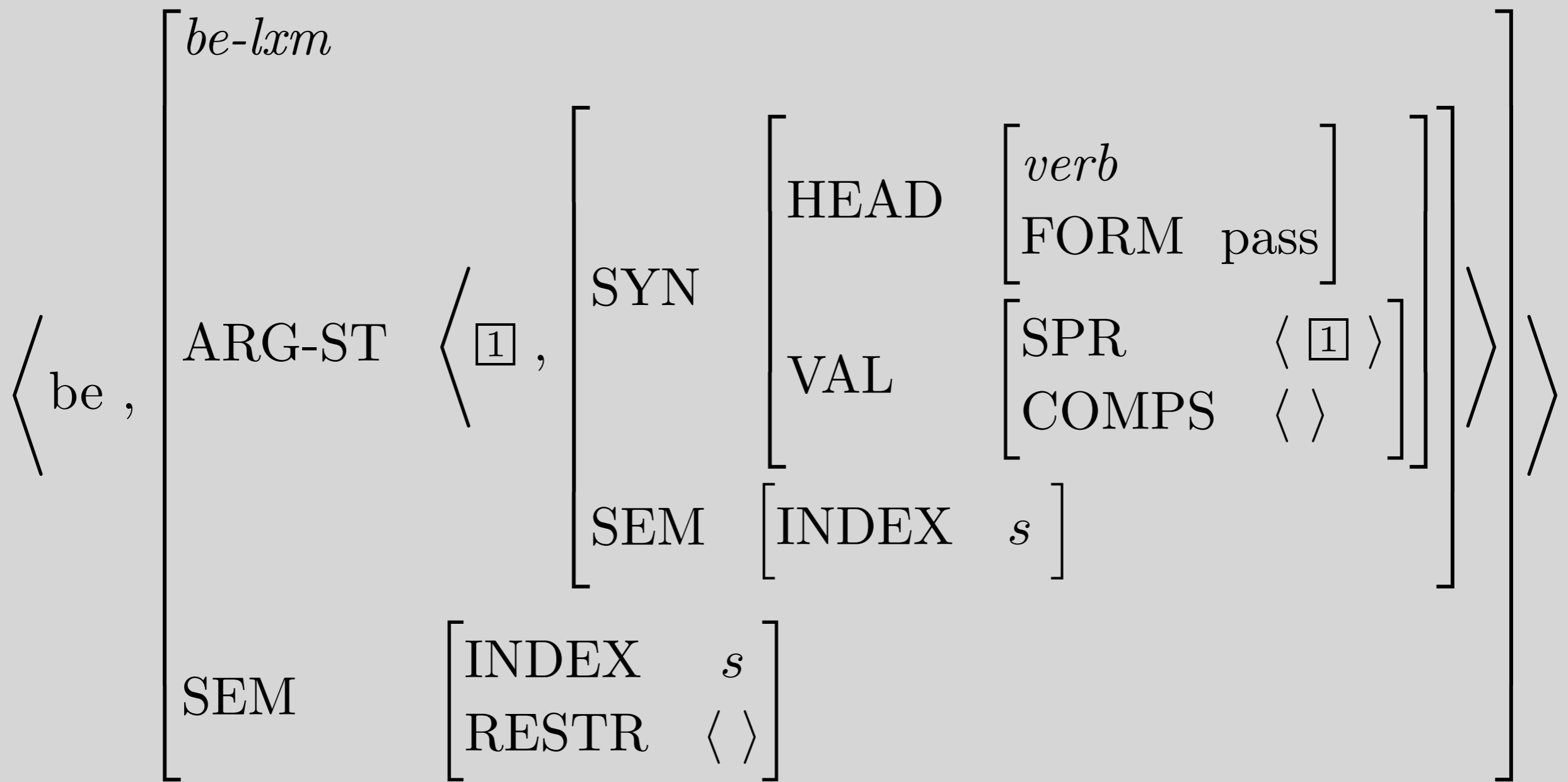
Then you also get one of these....



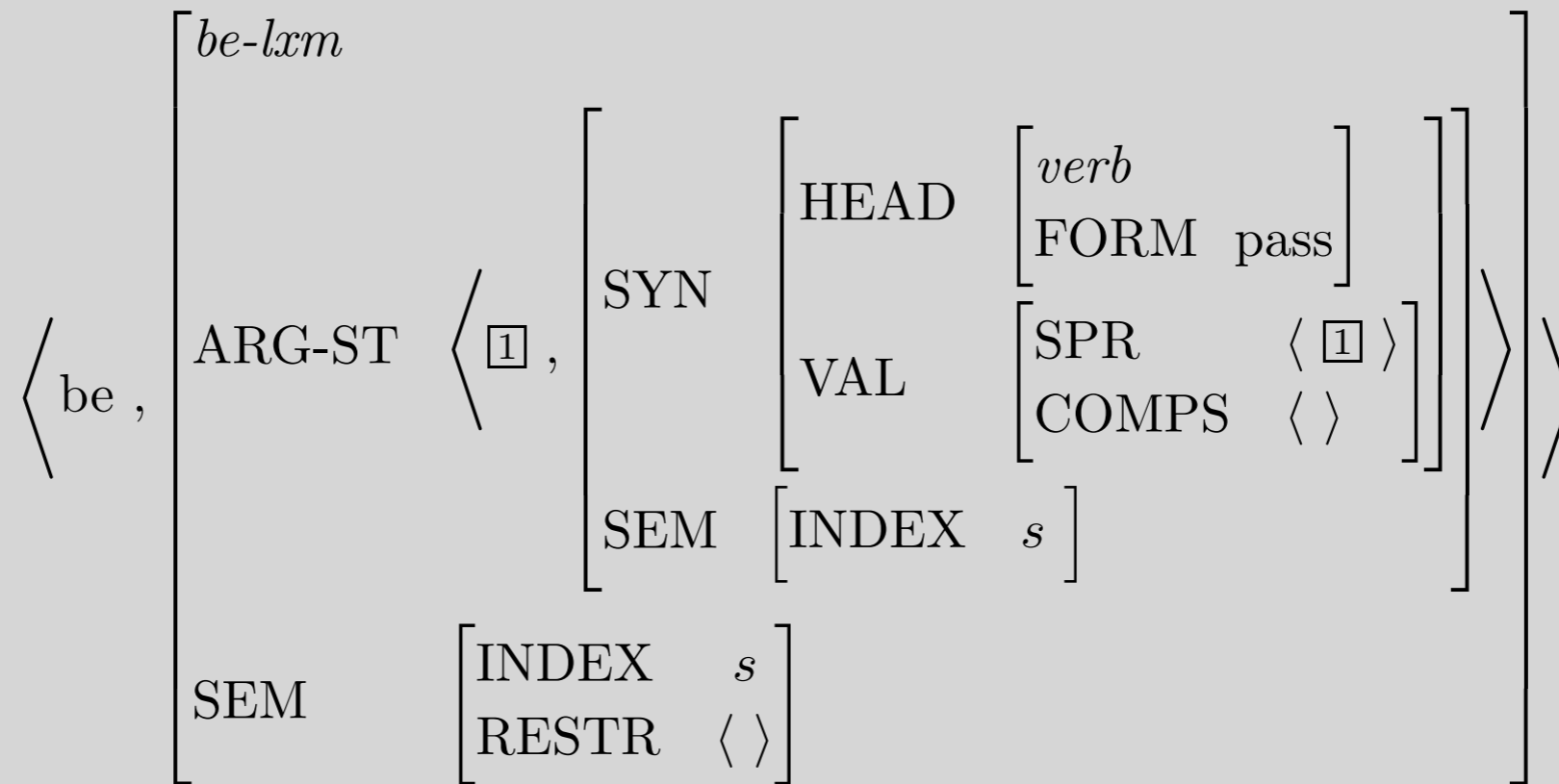
Actually...



The *be* that Occurs with Most Passives



Questions About the Entry for *be*



- Why doesn't it include valence features?
- What is the category of its complement (i.e. its 2nd argument)?
- What is its contribution to the semantics of the sentences it appears in?
- Why is the first argument tagged as identical to the second argument's SPR value?

Passive tree

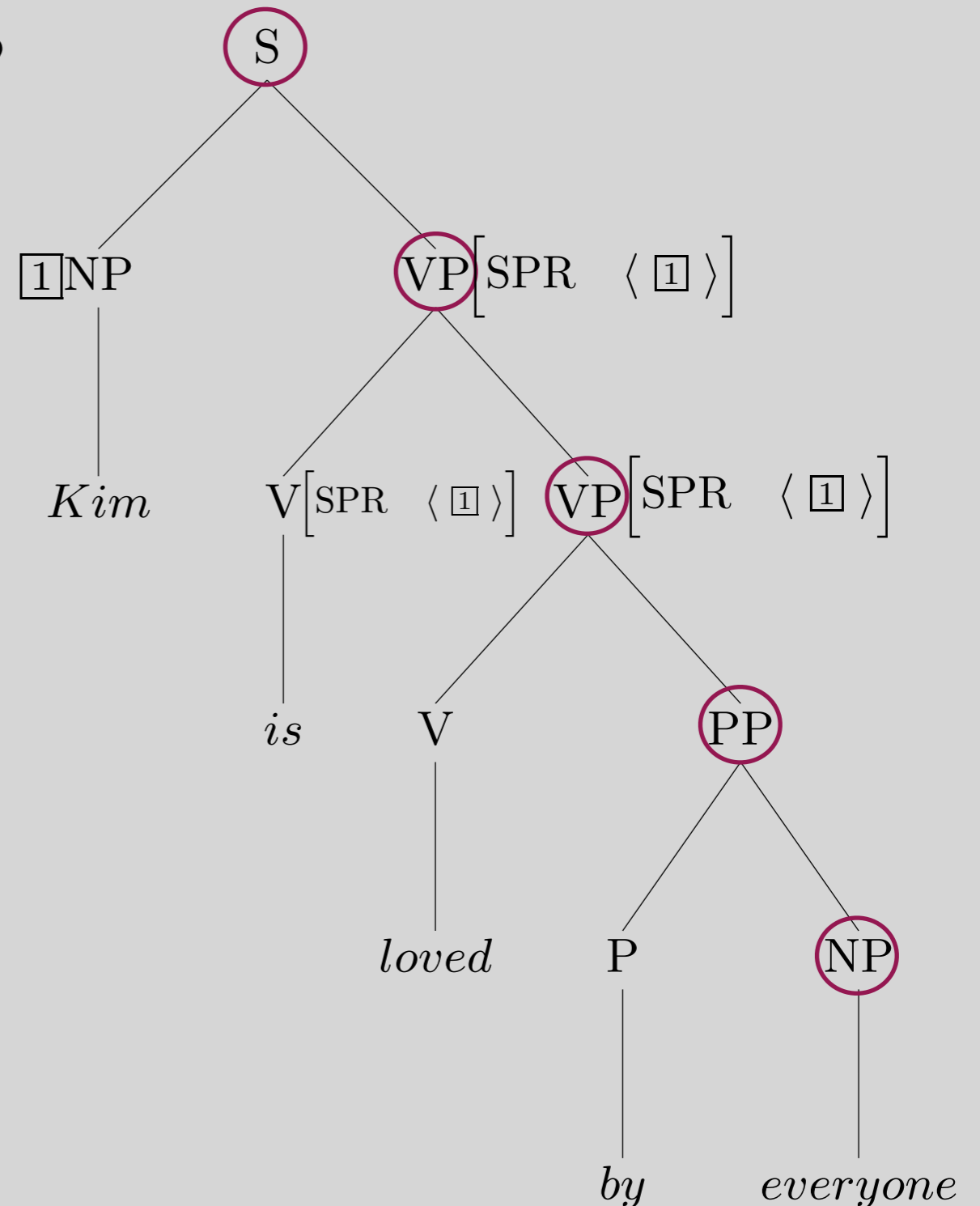
Which rule licenses each node?

What is the SPR value of the upper VP?

What is the SPR value of the lower VP?

What is the SPR value of *is*?

Any questions?



More Questions

- Why do we get
They are noticed by everyone
and not
**Them are noticed by everyone?*
- Why don't we get
**They is noticed by everyone?*
- What would facts like these entail for a transformational analysis?

Overview

- Passive
 - Arguments for lexicalist account
 - Details of our analysis
- Reading Questions

Reading Questions

- The *be-lxm* is mentioned as a subtype of *verb-lxm* but not further elaborated on in the chapter. Is *be* (including all its forms) the only member of that lexical type, or is it the lexical type that generates other words in similar roles within sentences? Also, where would modal auxiliaries fit in (such as *will* and *can*)?

Reading Questions

- If *be* gets its own subtype of *be-lxm*, how do we deal with the *get*-passive? Can we include it in type *be-lxm* if it is behaving similarly (taking a VP argument specified as FORM pass), or are there some other copula specific properties of *be-lxm* that would exclude it?

Reading Questions

- The verb *be* now belongs as a sub-type of *verb-lxm*. Honestly, I'm not 100% sure why this is. Are we going to start adding other lexemes as specific sub-types of their respective type as seen fit? When does it end? I understand that *be* is such an interesting word, but then couldn't we argue for adding more and more sub-types based on lexemes and then end up with an overly large hierarchy?

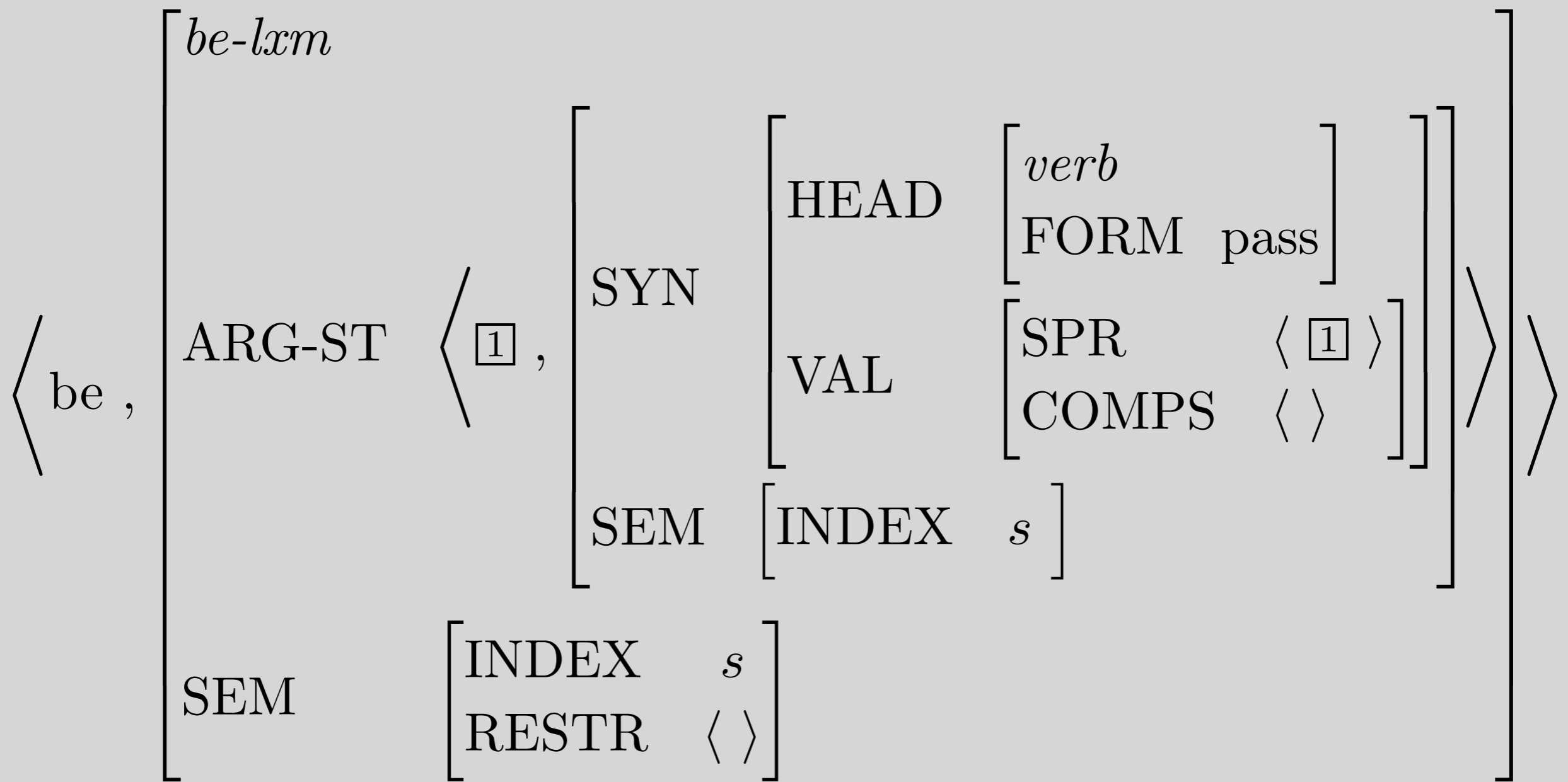
Reading Questions

- Are there any other verbs similar to *be* which require us to create special lexemes for them? What defines what verbs can be part of which lexemes?
- In the application, how do we distinguish *be* in *be-lxm* from *be* in other verb lexemes?

Reading Questions

- In the (23) entry, the *be* lexical entry does not specify SYN, why?

The *be* that Occurs with Most Passives



Reading Questions

- The verb *be* is getting quite a bit of special treatment. A lot of it in this particular chapter is due to its interaction with the passive form in English, but there are other ways *be* is unique in English such as having more forms than other verbs. Thinking about it, the verb for *to be* has behaved strangely or uniquely in the few other languages I've been exposed to as well. Do you find this to be true for most of the languages you have worked on grammar for?

Reading Questions

- I am unsure of how the subject of *was* is identified with the subject of the passive verb, and how the Valence Principle comes into play with this topic (like in example 22).
- Why does the *be-lxm* require that its subject “is identical to the SPR value of its VP[FORM pass]”? Aren’t there sentences where the verb *be* isn’t taking a complement that’s a passive verb? Simple sentences like *I am hungry*?

Reading Questions

- “Hence, though some form of *be* is typical in passive sentences, it would have been a mistake to try to build it into the rule introducing the passive form of verbs.” (page 319)
- Why wouldn't it have been acceptable to build *be* in a passive form with passive participle and without passive participle? If there are multiple lexical entries for same words in our lexicon, why can't this extend to *be* (and any of edge cases) to be in line with our lexicon heavy grammar?

Reading Questions

- Are all the values for each feature of [A] preserved between the input and output? The rule changes the order in the ARG-ST list, putting [A] at the front, but does it change anything else about that element?

The Passive Lexical Rule

$$\left[\begin{array}{l}
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 \text{part-lxm} \\
 \text{SYN} \left[\text{HEAD} \left[\text{FORM } \text{pass} \right] \right] \\
 \text{ARG-ST} \left[\boxed{A} \oplus \left\langle \left(\begin{array}{l}
 \text{PP} \\
 \left[\text{FORM } \text{by} \right] \\
 \left[\text{INDEX } i \right]
 \end{array} \right) \right\rangle \right]
 \end{array} \right] \right\rangle
 \end{array} \right]$$

Reading Questions

- "Likewise, since the verbal lexeme's object - the first element in the list [A] - is identified with the subject of the passive word, it follows that the index of the subject of the passive word is the same as that of the verbal lexeme's direct object. " (page 315) Where is the direct object coming from? If the object is a part of list [A], is the direct object also a part of list [A]? Or am I just missing something?

Reading Questions

- In the Passive Lexical Rule (p. 313), where does *a note* in *Pat handed Chris a note* reside?
- Why can't Passive be an *i-rule*? Is it just because we want to be able to chain the passive lexical rule with other lexical rules? Or is there a more structural incompatibility?

Reading Questions

- The passive lexical rule (8) seems to impose pretty strict argument order on when the PP[by] can occur. Is there a way to account for more flexible ordering? The following all seem equally acceptable to me:
 - B was killed by G in the lounge with a knife.
 - B was killed by G with a knife in the lounge.
 - B was killed in the lounge by G with a knife.
 - B was killed in the lounge with a knife by G.
 - B was killed with a knife by G in the lounge.
 - B was killed with a knife in the lounge by G.

Reading Questions

- The paragraph after (12) states that the semantic of the passive subject and active object remains unchanged. I still didn't quite understand how that happens. The paragraph is a bit confusing.

Reading Questions

- Is there anything in this account of passive constructions that is forcing a passive verb to occur along with another verb in the sentence? I'm not totally sure what prevents a sentence like **The cat bitten* since the Passive Lexical Rule doesn't say anything about other verbs taking the passive verb or VP as a complement.
- Is it that sentences have to have [FORM fin] (i.e. have a head with [FORM fin]) and so a passive verb can't be the head of the sentence since it has [FORM pass]?

Reading Questions

- Why are prepositions being represented by FORM values? Why can't they be specified through RELN values? It seems to me to be primarily a semantic distinction, but I understand the value of encoding this information syntactically. Indexes are referenced in the syntactic feature structure when identifying constraints on arguments, so why can't RELN values be referenced there as well?

Reading Questions

- How exactly is the FORM feature defined? I know FORM helps us differentiate different verb forms. But on page 316 it shows that we can specify the type of preposition, like: PP[FORM by]. In the Ch9 grammar summary FORM is shown as an incomplete list with an ellipsis... Is FORM a finite list? or something we can use whenever a specific word/type is required by the lexicon?

Reading Questions

- (23) shows the lexical entry for be, but doesn't include a value for the RESTR list. However, examples with was show an ellipsis in the RESTR list as if there could be something there. What is supposed to be there?

Reading Questions

- In (17) could we mark the NPj of the ARG-ST as optional to convey the intransitive use of the verb *love*, similar to how the passive PP *by* is surrounded by parentheses? Or is it marked as required because the verb needs to be transitive in order to become passive?

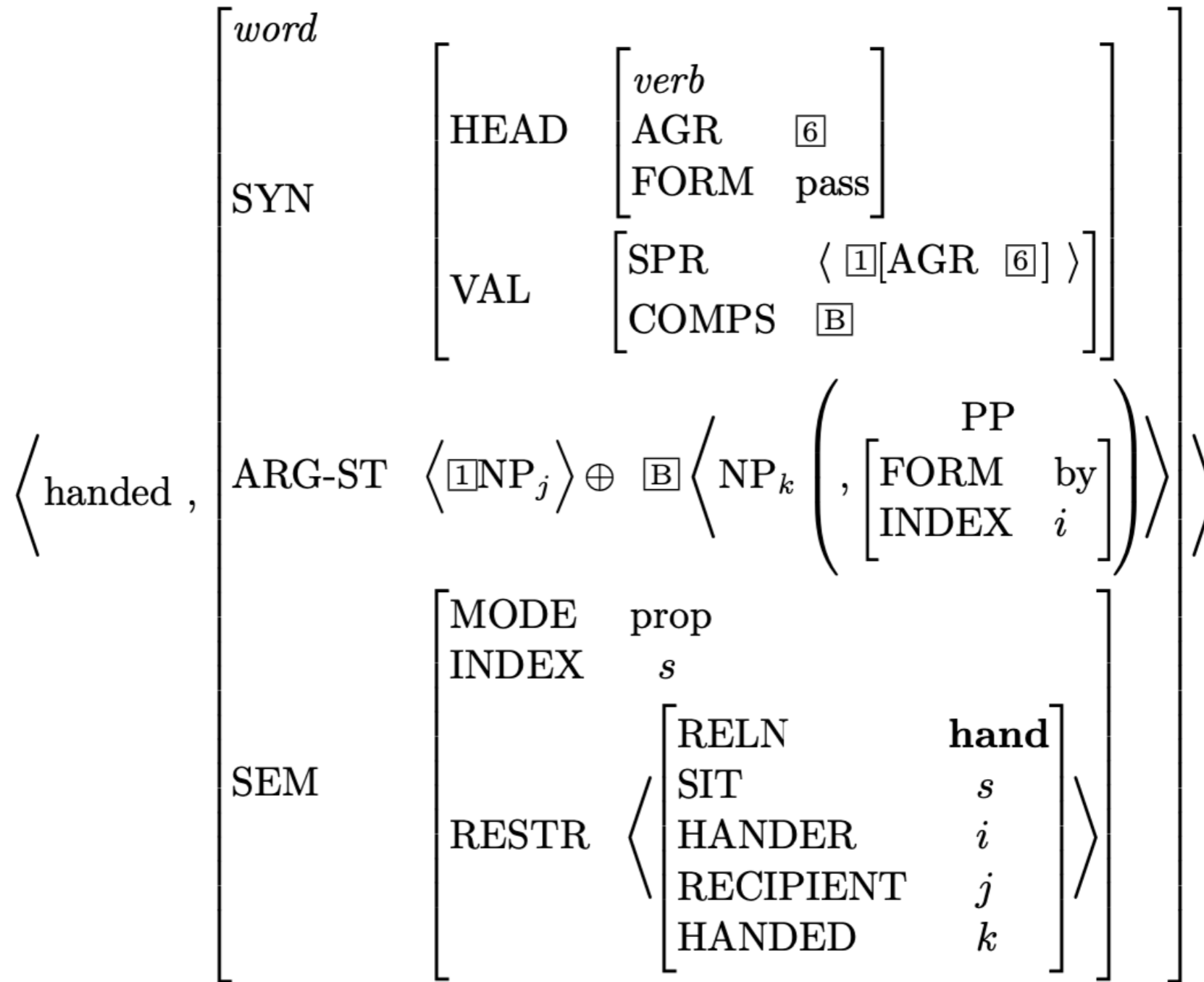
Reading Questions

- Computationally, how do we handle variables in the RESTR list for passive sentence that do not overtly state the agent (ie the optional PP)? Do we set the variable to NULL or is it always assigned a value since that instance must exist somewhere in the world?

Reading Questions

- The passive rule does not mention case. Furthermore, the Case Constraint only applies to lexical trees. Are there any lexical rules for English involving case that deal with lexemes?
- The text says of the word structure depicted in (30) that "the optionality of the PP is resolved, and the Case Constraint and the Binding Theory come into play" (p. 324). I can see what is meant by the first two of these observations, but it's not clear to me what the Binding Theory is contributing in getting from (29) to (30).

(29)



(30)

<i>word</i>	
SYN	$\left[\begin{array}{l} \text{HEAD} \left[\begin{array}{l} \textit{verb} \\ \text{AGR} \quad \boxed{6} \\ \text{FORM} \quad \textit{pass} \end{array} \right] \\ \text{VAL} \left[\begin{array}{l} \text{SPR} \quad \langle \boxed{1}[\text{AGR} \quad \boxed{6}] \rangle \\ \text{COMPS} \quad \langle \boxed{2}, \boxed{3} \rangle \end{array} \right] \end{array} \right]$
ARG-ST	$\left\langle \boxed{1}\text{NP}_j, \boxed{2}\text{NP}_k[\textit{acc}], \left[\begin{array}{l} \text{FORM} \quad \textit{by} \\ \text{INDEX} \quad i \end{array} \right] \right\rangle$
SEM	$\left[\begin{array}{l} \text{MODE} \quad \textit{prop} \\ \text{INDEX} \quad s \\ \text{RESTR} \left\langle \begin{array}{l} \text{RELN} \quad \textbf{hand} \\ \text{SIT} \quad s \\ \text{HANDER} \quad i \\ \text{RECIPIENT} \quad j \\ \text{HANDED} \quad k \end{array} \right\rangle \end{array} \right]$

handed

(39) **Lexical Licensing:**

A word structure of the form:

$$\begin{array}{c} \phi \\ | \\ \omega \end{array}$$

is licensed if and only if:

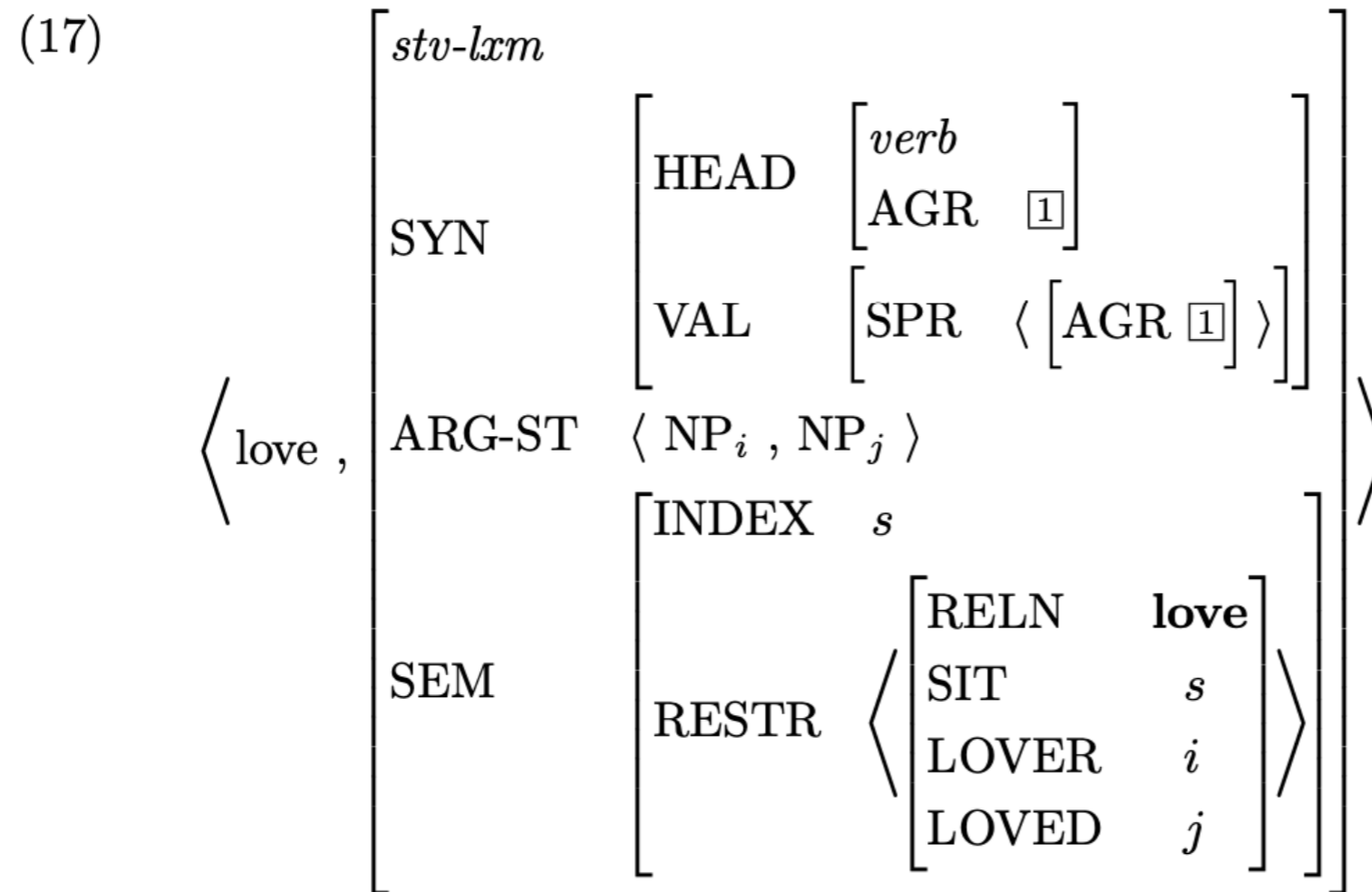
1. $\langle \omega, \phi \rangle$ is a lexical sequence, where ϕ is of type *word*,
2. (Case Constraint:) An outranked NP is [CASE acc], and
3. ϕ satisfies the Binding Theory.

Reading Questions

- I get confused sometimes about when it's okay to use tags, and when using tags is incorrect. For example, see example (17) on p.317. Would it be incorrect if I put tag [2] on the sole element of the SPR list, and put that same tag on the first NP in the ARG-ST list? I know that the ARP doesn't apply to this synsem because it's a lexeme and not a word, but it seems like you could still define a lexeme in such a way that the first element on the SPR has to be the same as the first element on the ARG-ST. But I'm not sure if my reasoning holds up.

Reading Questions

The effect of the Passive Lexical Rule, then, is to map lexemes like (17) into lexemes like (18):⁴



Reading Questions

- How does the grammar model passive phrases that function as modifiers?
 - (1) The cat bitten by the dog was bitten by the dog.
- Can we propose a non-branching grammar rule that turns a passive VP to a phrase whose MOD contains its original specifier? Can we also account for present participle phrases functioning as a modifier with the same rule, by allowing the FORM to be either pass or prp?
 - (2) The dog biting the cat is biting the cat.

Reading Questions

- I'm just curious about how to apply our grammar to the situation that passive voice works as an adverbial modifier like in:
Bitten by the cat, the dog cried.

Reading Questions

- This is probably beyond the scope of this course but it would be interesting to think about how HPSG would handle cases such as:
 - (1) This piano plays easily.
 - (2) *They play easily.
 - (3) This passage reads quite nicely.
 - (4) (?)The teacher reads quite nicely.

Reading Questions

- I am wondering how our grammar would interpret the expressions such as *I had/got my hair cut* or *We had the report done by Friday*. They seem to be similar to passives, but since they have more semantic and syntactic constraints, they should probably undergo some other analysis, it's interesting to see what it would be.

Reading Questions

- Seems like I can say (i) and (iii), but not (ii)

i - He was punched and kicked by the gnome.

ii - *He was punched by the gnome and kicked.

iii - He was punched by the gnome and laughed at (xyz).

- Am I wrong by saying (ii) is unacceptable because of different valence? It sounds weird to me. If not...
- Would our coordination rule disallow (iii)?
- Also, I think I'm willing to accept 2 if I'm given context like: He was standing in front of a punch-happy gnome and a kick machine. Would this be another example of a garden path? I know it's a silly example, but I'm curious about it.

Reading Questions

- Following our discussion about what in our grammar is universal and what is not, how universal is our formulation of the passive?
- This chapter left me thinking about how our analysis of passives can extend to other languages and if there are some languages where it breaks down/needs to be extended?

Reading Questions

- In terms of the theory behind the passive construction, does HPSG place more emphasis on derivational rules on the lexeme level to get the passive form, rather than thinking of the passive as a transformation from the active? I was curious about how this was developed with respect to other grammars.

Reading Questions

- Have there been any other constructions been "one of the most intuitive motivations" for generative (instead of transformational) grammar, in English or otherwise?
- Why is English's passive form "the most extensively discussed syntactic phenomenon in generative grammar"? Passive form isn't unique to English, so where is this curiosity coming from? Is it just the way that the sentence is rearranged to support it that is an oddity?