# Ling 566 Feb 13, 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:

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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

$$\begin{bmatrix} d\text{-}rule \\ \text{INPUT} & \left\langle \mathbbm{1}, \begin{bmatrix} tv\text{-}lxm \\ \text{ARG-ST} & \left\langle \left[ \text{INDEX } i \right] \right\rangle \oplus \mathbbm{A} \right] \right\rangle \\ \text{OUPUT} & \left\langle \mathbbm{1}, \begin{bmatrix} part\text{-}lxm \\ \text{SYN} & \left[ \text{HEAD} & \left[ \text{FORM pass } \right] \right] \\ \text{ARG-ST} & \mathbbm{A} \oplus \left\langle \left( \begin{bmatrix} \text{PP} \\ \text{FORM} & \text{by} \\ \text{INDEX} & i \end{bmatrix} \right) \right\rangle \end{bmatrix}$$

#### Questions About the Passive Rule

$$\begin{bmatrix} d\text{-}rule \\ \text{INPUT} & \left\langle \mathbbm{1}, \begin{bmatrix} tv\text{-}lxm \\ \text{ARG-ST} & \left\langle \left[ \text{INDEX } i \right] \right\rangle \oplus \mathbbm{A} \right] \right\rangle \\ \text{OUPUT} & \left\langle \mathbbm{1}, \begin{bmatrix} part\text{-}lxm \\ \text{SYN} & \left[ \text{HEAD} & \left[ \text{FORM pass } \right] \right] \\ \text{ARG-ST} & \mathbbm{A} \oplus \left\langle \left( \begin{bmatrix} \text{PP} \\ \text{FORM} & \text{by} \\ \text{INDEX} & i \end{bmatrix} \right) \right\rangle \end{bmatrix} \right\rangle$$

- 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

$$\begin{bmatrix} d\text{-}rule \\ \text{INPUT} & \left\langle \mathbb{I}, \begin{bmatrix} tv\text{-}lxm \\ \text{ARG-ST} & \left\langle \text{[INDEX } i \right] \right\rangle \oplus \mathbb{A} \end{bmatrix} \right\rangle$$

$$\begin{bmatrix} \text{OUPUT} & \left\langle F_{PSP}(\mathbb{I}), \begin{bmatrix} part\text{-}lxm \\ \text{SYN} & \left[ \text{HEAD} & [\text{FORM pass }] \right] \\ \text{ARG-ST} & \mathbb{A} \oplus \left\langle \begin{pmatrix} \text{PP} \\ \text{FORM by} \\ \text{INDEX } i \end{bmatrix} \right) \right\rangle \end{bmatrix}$$

- 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....

$$\left\langle \text{love ,} \begin{vmatrix} stv\text{-}lxm \\ \text{ARG-ST} & \langle \text{ NP}_i \text{ , Y}_j \rangle \\ & \begin{bmatrix} \text{INDEX } s \\ \\ \text{RESTR} & \langle \begin{bmatrix} \text{RELN} & \text{love} \\ \text{SIT} & s \\ \\ \text{LOVER } i \\ \\ \text{LOVED } j \end{bmatrix} \right\rangle \right]$$

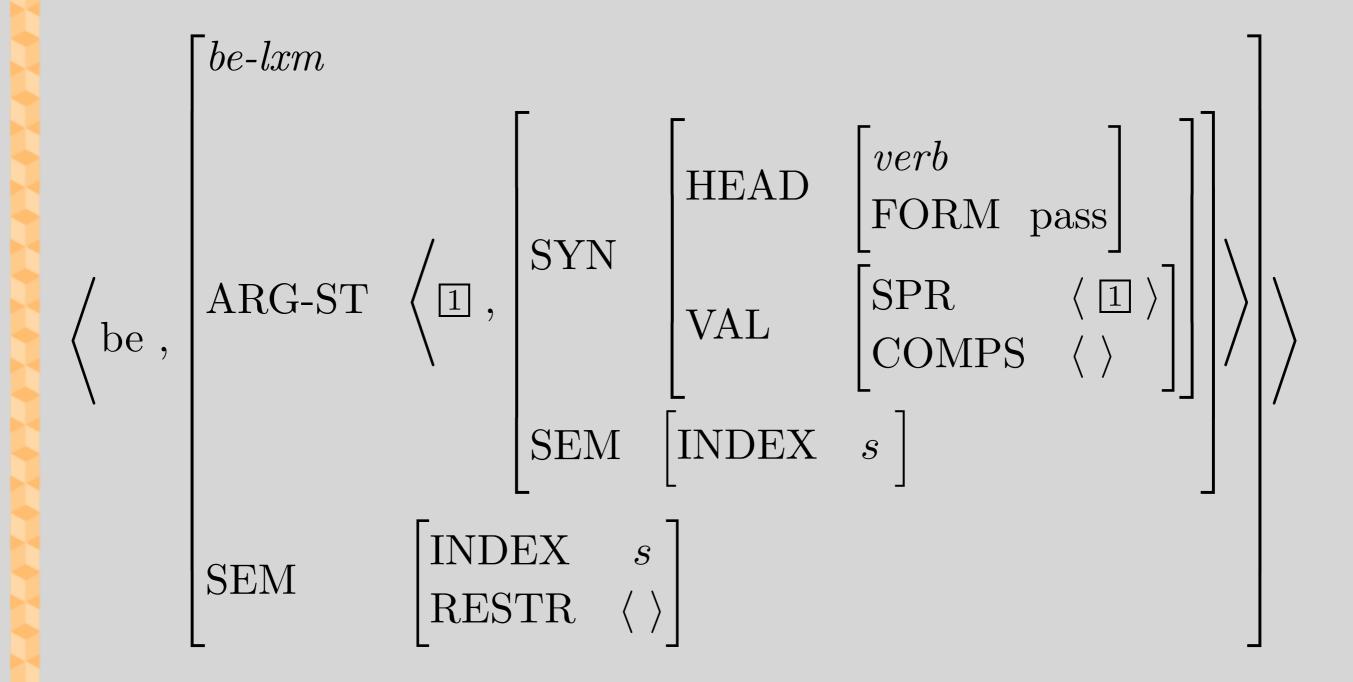
Then you also get one of these....

$$\left\langle \text{loved ,} \right| \begin{bmatrix} part\text{-}lxm \\ \text{SYN} & \left[ \text{HEAD } \left[ \text{FORM pass} \right] \right] \\ \text{ARG-ST } \left\langle \mathbf{Y}_j \right., \left( \begin{bmatrix} \text{PP} \\ \text{FORM by} \\ \text{INDEX } i \end{bmatrix} \right) \right\rangle \\ \left| \text{SEM} \right| \left| \begin{bmatrix} \text{INDEX } s \\ \text{SIT} \\ \text{LOVER } i \\ \text{LOVED } j \end{bmatrix} \right\rangle$$

#### Actually...

$$\left| \begin{array}{c} \text{part-lxm} \\ \text{SYN} \end{array} \right| \left| \begin{array}{c} \text{HEAD} & \begin{bmatrix} verb \\ \text{FORM} & \text{pass} \end{array} \right| \\ \left| \begin{array}{c} \text{PP} \\ \text{INDEX} & i \end{array} \right| \right\rangle \\ \left| \begin{array}{c} \text{MODE} & \text{prop} \\ \text{INDEX} & s \end{array} \right| \\ \text{SEM} \\ \left| \begin{array}{c} \text{RESTR} & \left\langle \begin{bmatrix} \text{RELN} & \text{love} \\ \text{SIT} & s \\ \text{LOVER} & i \\ \text{LOVED} & j \end{array} \right| \right\rangle \\ \end{array} \right|$$

#### The be that Occurs with Most Passives



#### Questions About the Entry for be

$$\left\langle \text{be} \right., \begin{bmatrix} be\text{-}lxm \\ \text{ARG-ST} \\ \text{STN} \end{bmatrix} \left[ \begin{array}{c} \text{HEAD} \\ \text{SYN} \\ \text{VAL} \\ \text{SPR} \\ \text{COMPS} \\ \text{COMPS} \\ \text{SEM} \end{bmatrix} \right] \right\rangle \right\rangle$$
 SEM 
$$\left[ \begin{array}{c} \text{INDEX} \\ \text{RESTR} \\ \text{COMPS} \\ \text{SEM} \\ \end{array} \right]$$

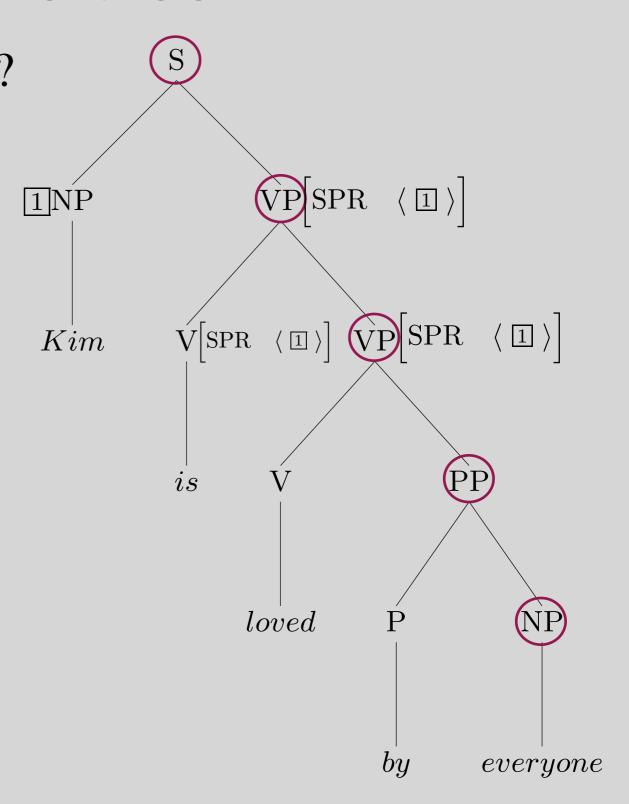
- Why doesn't it include valence features?
- What is the category of its complement (i.e. its 2<sup>nd</sup> argument)?
- What is its contribution to the semantics of the sentences it appears in?
- Why is the first argument tagged as identical to the second argument's SPR value?

#### 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

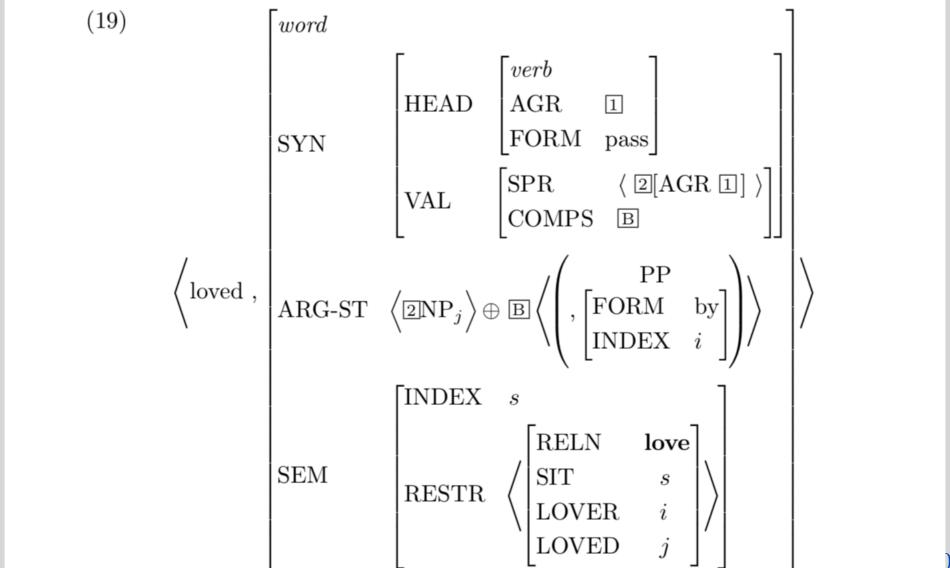
  and not

  \*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

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• Why are the parentheses for the PP inside the angle brackets? I think the whole B tag should be optional thus the angle brackets and the B box should be in the parentheses.



3 CSLI Publications

• I don't quite get how the constant lexeme rule changes (18) into (19). On page 315 it says the only effect of this rule is to change the type of the second member of the lexical sequence to word. I am not sure how this is showed in (19)

 Families of lexical sequences represented by (18), (19), (28), and (29) all contain SHAC the constraint (represented by the identity tags). My thought is that since the lexeme type in question is part-lxm and therefore const-lxm, SHAC should not be imposed on them. Why is the SHAC present in those lexical sequences?

• The past participles of verbs actually do not have any NUMBER or PERSON value, and since the specifier of be and the specifier of the passive verb are identical, the specifier in fact only needs to satisfy the agreement constraints imposed by the relevant inflected form of be. So, my question is why is it necessary to keep this identification between the AGR value of the verb's specifier should agree with the verb's head's AGR value as shown in the resulted lexeme like (18) after applying the Passive Lexical Rule?

 Does a verbal lexeme go through the Constant Lexeme Lexical Rule before or after the Passive Lexical Rule?

• So does our grammar build *The cat bitten* by the dog?

• While *the cat bitten by the dog* isn't an S, it seems to work as an NP. How do we handle this?

I saw the cat under the table

I saw the cat bitten by the dog

The cat sat under the table

\*The cat sat bitten by the dog

The blue cat

\*The cat blue

\*The bitten by the dog cat

The cat bitten by the dog

• Why is it okay that the grammar uses the preposition as the FORM value for the PP argument when we would not be allowed to do something similar to specify a particular word as a head for a phrase like an NP or VP? It is because prepositions are constant lexemes, or is it something else?

• The beginning of 10.3 says that the semantics should remain unchanged, but that the active subject can be omitted. What effect does omitting the active subject have on the final semantics? Is there then an unresolved index, or do the affected predications simply lose an argument? The argument can't just become invisible if we stay surface-oriented, and it would be strange to say that A message was sent to Chris carries as much information as An old friend sent Chris a message.

• I was interested by the choice not to make the semantics of Passive different than that of Active. I guess it's possible it's just omitted in this book because it might be a little much for a non-semantics text. In any case, it seems like we would want a slightly different semantics to be generated, even from the simple standpoint of people wouldn't use passive if it didn't mean something different than the active. I guess you could argue this is in the realm of Information Structure...but I've done quite a bit with IS and never heard passive come up. Could it maybe have semantics more similar to a determiner/ quantifier? Or like tense?

• On p320, why doesn't (18) use tags to show the identification between the SPR value and the first element on the ARG-ST list as in (19)?

(18)	part-lxm	
	SYN	$\begin{bmatrix} verb \\ AGR & 1 \\ FORM & pass \end{bmatrix}$ $VAL \begin{bmatrix} SPR & \langle [AGR & 1] \rangle \end{bmatrix}$
$\left\langle \mathrm{loved} \right.$	ARG-ST	$\left\langle \text{NP}_{j} \left( \begin{bmatrix} \text{PP} \\ , \begin{bmatrix} \text{FORM} & \text{by} \\ \text{INDEX} & i \end{bmatrix} \right) \right\rangle$
	SEM	$\begin{bmatrix} \text{INDEX} & s \\ \\ \text{RESTR} & \left\langle \begin{bmatrix} \text{RELN} & \textbf{love} \\ \text{SIT} & s \\ \text{LOVER} & i \\ \text{LOVED} & j \end{bmatrix} \right\rangle \end{bmatrix}$

• Clarification question about (17) and (18) (where the lexeme *love* undergoes the Passive Lexical Rule): At first glance it seems like the specifier is unchanged by the rule, but is it accurate to say that the ARP ensures that the SPR value in (17) corresponds to NP\_i and in (18) it corresponds to NP\_j? Furthermore, does this mean that we would not need to include tags indicating the ARP unless a question specifically indicates that we should (in other words, since we have the ARP as a constraint on the grammar, tags would be redundant here)?

# Passive Input & Output

If you have one of these....

$$\left\langle \text{love ,} \begin{vmatrix} stv\text{-}lxm \\ \text{ARG-ST} & \langle \text{NP}_i \text{ , Y}_j \rangle \\ & \begin{bmatrix} \text{INDEX } s \\ \\ \text{RESTR} & \langle \begin{bmatrix} \text{RELN} & \text{love} \\ \text{SIT} & s \\ \\ \text{LOVER } i \\ \\ \text{LOVED } j \end{bmatrix} \right\rangle \right]$$

Then you also get one of these....

$$\left\langle \text{loved} \right. \left. \left[ \begin{array}{c} \text{part-lxm} \\ \text{SYN} & \left[ \text{HEAD} \left[ \text{FORM pass} \right] \right] \\ \\ \text{ARG-ST} & \left\langle \begin{array}{c} \text{Y}_j \\ \text{NOEX} \end{array} \right. \left. \left[ \begin{array}{c} \text{PP} \\ \text{FORM by} \\ \text{INDEX} \end{array} \right] \right\rangle \right. \right\rangle$$
 
$$\left| \begin{array}{c} \text{INDEX} \quad s \\ \text{SEM} \end{array} \right. \left. \left[ \begin{array}{c} \text{RELN} \quad \text{love} \\ \text{SIT} \quad s \\ \text{LOVER} \quad i \\ \text{LOVED} \quad j \end{array} \right] \right\rangle \right|$$

• In the passive lexical rule (8), when we rearrange the ARG-ST list, what exactly happens to the SPR and COMPS features? In this example, we have two elements in the INPUT ARG-ST list. Since the second item in the list is A, this must mean that the COMPS list is also A. When we rearrange the ARG-ST list in the OUTPUT such that "A" is now at the head of the list, does this mean that "A" has also become the SPR value?

• On page 213 it says "In order to change the subject and complements, the passive rule must specify either different SPR and COMPS values or different ARG-ST values on the INPUT and OUTPUT. The passive rule given immediately below specifies different ARG-ST values...". Is there any specific reason that we go with this option rather than the first one mentioned in this paragraph?

• P317, (16):

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... by themselves/them (passive version)

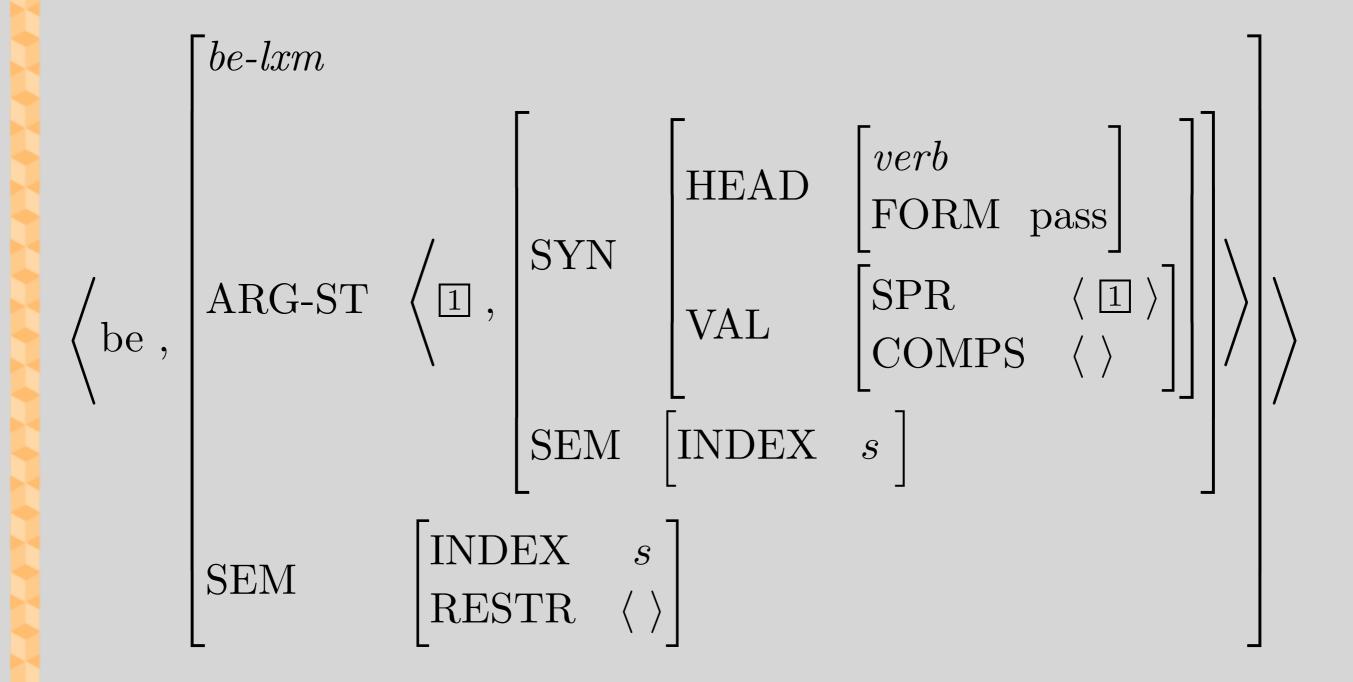
They ... (active version)
```

- Which part of the rule guarantees the use of *themselves/them* instead of *they*?
- What part of our formation of the passive construction ensures that the recipient is in the nominative case?

• P.315: "[The] Case Constraint...applies to lexical trees (word structures), not to lexemes." This is talking about how all non-subject arguments of a verb must be [CASE acc]. I take this to mean that the verb help selects for a complement which is a word with [CASE acc]; him is valid but he is not. But don't *he* and *him* come from the same lexeme? Do lexemes never have a CASE feature? If he and him do share the same lexeme, is there some inflectional rule that maps from the CASE-less lexeme to the CASE-ful word, which is then selected by the verb via either SPR or COMPS?

• How come the entry for *be* doesn't lead to the RESTR of the subject getting added twice to the sentence's RESTR list?

#### The be that Occurs with Most Passives



• In example (23), the lexical entry for passive be. The ARG-ST has a [1], followed by a box of SYN/SEM values. If the second box is the VP that requires the form passive, how does it require the NP [1] to be its specifier? Isn't there be in between them? In the tree (33, Chris was handed a note by Pat), the phrase that included was is specified by Chris, and not handed a note by Pat

• Based on the example (20a), do we also need to add a lexeme *get* which is similar to the lexeme *be*? Can we get a more general lexeme which includes both *get* and *be*?

(20a) The cat got bitten (by the dog).

• How would we handle a different active/ passive alternation, such as Leaves covered the rock. and The rock was covered in/with leaves.? I know we could say The rock was covered by leaves but is there a way to allow for the other prepositions?

• Is the footnote that "French confirms this conclusion" there to give us a more intuitive feeling? I'm kind of hung up on why a phenomenon in French confirms anything about English, but perhaps I'm cognitively making "confirms" do more work than intended.

• I'm curious as to how well this generalizes cross-linguistically. Especially for languages where passive/causative information is given by inflecting verbs instead of rearranging arguments. Would this rule be unnecessary and replaced by an i-rule?

• So in the case of the passive, the 'be' and the passive participle both require the same specifier [1]. Together they form a VP, which in turn takes this as its specifier, with a nice binary structure, right? Why not also apply this to the V, NP, PP to get a binary structure. Wouldn't this be cleaner?

• I can see why the passive has had such a huge influence on the development of syntactic theory, given the very English-centric focus of many syntacticians, but I wonder what would've happened had the bulk of linguistic inquiry been focused on a different language or languages. Are there processes in other languages that would've more expediently motivated a syntactic theory like HPSG? Are there any significant canonical issues in other languages that complicate the grammar in this book?