Chapter 11.1-11.3

Existentials

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The Passive Lexical Rule

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

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Questions About the Entry for *be*

$$\left\langle \text{be}\ , \begin{bmatrix} \textit{be-lxm} & \\ \text{ARG-ST} & \left\langle \boxed{1}\ , \begin{bmatrix} \text{SYN} & \begin{bmatrix} \text{HEAD} & \begin{bmatrix} \textit{verb} & \\ \text{FORM} & \text{pass} \end{bmatrix} \\ \text{VAL} & \begin{bmatrix} \text{SPR} & \langle\ \boxed{1}\ \rangle \\ \text{COMPS} & \langle\ \rangle \end{bmatrix} \end{bmatrix} \\ \text{SEM} & \begin{bmatrix} \text{INDEX} & s \end{bmatrix} \end{bmatrix} \right\rangle \\ \text{SEM} & \begin{bmatrix} \text{INDEX} & s \\ \text{RESTR} & \langle\ \rangle \end{bmatrix} \end{bmatrix} \right\rangle$$

- What is the category of its complement (i.e. its 2nd argument)?
- What is its semantic contribution?
- Why is the first argument tagged as identical to the second argument's SPR value?

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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?

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Where We Are, and Where We're Going

- We've met the passive *be*.
- But *be* occurs in lots of other environments (for example?), so we want a more general lexical entry
- Today, we'll start by formulating that entry.
- Then we'll look at another *be*, which occurs in existential sentences starting with *there*, e.g. *There is a monster in Loch Ness*.
- That will lead us to look at this use of *there*
- *there* is just one of a variety of non-referring NPs. Next time we'll look at some others

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Other Complements to *be*

- PPs: *A stranger is **at the door**.*
- Adjective Phrases: *They are **fond of him**.*
- NPs: *Pat was **the winner**.*
- VPs headed by progressive participles: *We were **eating dinner**.*
- We would like to have a single lexical entry for *be* to cover all these possibilities

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The Feature PRED

- [PRED +]: occurs as a complement to *be*
- [PRED -]: doesn't occur as a complement to *be*
- Adjectives have lexical differences in PRED values
  - *ablaze* is [PRED +]
  - *utter* is [PRED -]
  - *red* is lexically underspecified for PRED
- Verbs are generally [PRED -], but lexical rules creating present and passive participles change the PRED value to +

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Entry for *be* with PRED

$$\left\langle \text{be}\ ,\ \begin{bmatrix} \textit{be-lxm} & \\ \text{ARG-ST} & \left\langle \boxed{1}\ ,\ \begin{bmatrix} \text{SYN} & \begin{bmatrix} \text{VAL} & \begin{bmatrix} \text{HEAD} & [\text{PRED}\ +] \\ & \begin{bmatrix} \text{SPR} & \langle\ \boxed{1}\ \rangle \\ \text{COMPS} & \langle\ \rangle \end{bmatrix} \end{bmatrix} \\ \text{SEM} & \begin{bmatrix} \text{INDEX} & s \end{bmatrix} \end{bmatrix} \right\rangle \\ \text{SEM} & \begin{bmatrix} \text{INDEX} & s \\ \text{RESTR} & \langle\ \rangle \end{bmatrix} \end{bmatrix} \right\rangle$$

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Comments on the Entry for *be*

- This assumes that PPs following *be* have nonempty SPR lists
- They do subject-sharing, like [PRED +] VPs
- Easy to formalize: some prepositions are lexically [SPR <NP>]

$$\left\langle \text{be}, \begin{bmatrix} \textit{be-lxm} & \\ \text{ARG-ST} & \left\langle \boxed{1}, \begin{bmatrix} \text{SYN} & \begin{bmatrix} \text{HEAD} & [\text{PRED} \ +] \\ \text{VAL} & \begin{bmatrix} \text{SPR} & \langle \boxed{1} \rangle \\ \text{COMPS} & \langle \ \rangle \end{bmatrix} \end{bmatrix} \\ \text{SEM} & \begin{bmatrix} \text{INDEX} & s \end{bmatrix} \end{bmatrix} \right\rangle \\ \text{SEM} & \begin{bmatrix} \text{INDEX} & s \\ \text{RESTR} & \langle \ \rangle \end{bmatrix} \end{bmatrix} \right\rangle$$

- We also need NPs with non-empty SPR values, which is trickier; see footnote 2, p. 335.

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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*.

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Lexical Entry for the Existential *be*

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

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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?

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

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The Entry for Existential *there*

$$\left\langle \text{there}\ ,\ \begin{bmatrix} \textit{pron-lxm} & \\ \text{SYN} & \begin{bmatrix} \text{HEAD} & \begin{bmatrix} \text{FORM} & \text{there} \\ \text{AGR} & \begin{bmatrix} \text{PER} & \text{3rd} \end{bmatrix} \end{bmatrix} \\ & \\ \text{SEM} & \begin{bmatrix} \text{MODE} & \text{none} \\ \text{INDEX} & \text{none} \\ \text{RESTR} & \langle\ \rangle \end{bmatrix} \end{bmatrix} \end{bmatrix} \right\rangle$$

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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?

$$\left\langle \text{there}\ ,\ \begin{bmatrix} \textit{pron-lxm} & & \\ \text{SYN} & \begin{bmatrix} \text{HEAD} & \begin{bmatrix} \text{FORM} & \text{there} \\ \text{AGR} & \begin{bmatrix} \text{PER} & \text{3rd} \end{bmatrix} \end{bmatrix} \end{bmatrix} \\ \text{SEM} & \begin{bmatrix} \text{MODE} & \text{none} \\ \text{INDEX} & \text{none} \\ \text{RESTR} & \langle\ \rangle \end{bmatrix} \end{bmatrix} \right\rangle$$

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Some Constraints on Existentials

- The NP after *be* is usually indefinite:
  There was a child crying
  ??There was the child crying

  but the latter is OK in reply to *What made the flight so unpleasant?*

- The [PRED +] complement can't be an NP:
  **There was a student the winner*

- Some [PRED +] adjectives are no good here, too:

  **There was a student tall*

- We argue that these constraints are semantic/pragmatic -- suggesting that our semantics for this construction is too simple

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