Quantifiers

[Heim-Kratzer ch. 6, Keenan-Stavi, van der Does et al.]

1. Quantificational Noun/Determiner Phrases (N/DPs).

- Some DPs do not denote objects of type e: the ones in (2a-b) don't; if the ones in (3) did, we would not expect the failure of certain entailments (book 6.1.1) nor the ambiguities/readings in (5) and (7).

(1) Type e:
  a. Proper names: **Paul**, **Mathias, Tegucigalpa, Kosovo**.
  b. Definite descriptions: **the person next to me, my older sister** (="the older sister of mine").
  c. Pronouns and traces: **him$_1$, she$_5$, t$_3$**.

(2) Not type e:
  a. ⟦**No man**⟧ = ???
  b. ⟦**Only Susan**⟧ ≠ Susan, since ⟦ (2c) ⟧ ≠ ⟦ (2d) ⟧.
  c. **Only Susan came.**
  d. **Susan came**.

(3) Type e?:
  a. ⟦**Every woman**⟧ =? ⟦**the women**⟧ = the group or plural individual of all women.
  b. ⟦**At least one woman**⟧ =? A particular group of women that includes at least one woman (e.g., the group formed by Stephanie and Emily).
  c. ⟦**More than three women**⟧ =? A particular group of women that includes more than three women (e.g., the group formed by Sue, Jana, Eva and Kate).

(4) It didn't snow on Christmas Day.
(5) It didn't snow on more than two of these days.
  a. "It is not the case that it snowed on more than two of these days."
  b. "More than two of these days are such that it didn't snow on them."

(6) a. Sue, Jana and Shaleigh saw Erwin and Matts.
  b. Sue, Jana and Shaleigh are such that they saw Erwin and Matts.
  c. Erwin and Matts are such that Sue, Jana and Shaleigh saw them.
(7) a. Exactly three women saw every man.
  b. Exactly three women are such that they saw every man.
  c. Every man is such that exactly three women saw him.

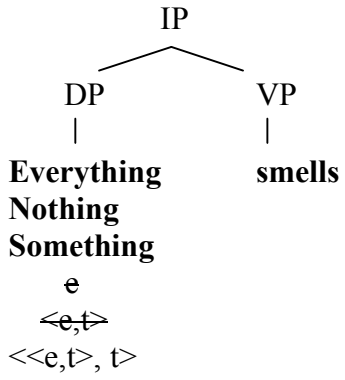
- Those problematic DPs do not denote fucntions of type <e,t> either: having the denotations in (8) leads to problems.

(8) a. ⟦**everything**⟧ = D_e
  b. ⟦**nothing**⟧ = ∅

EXERCISE: Do exercise in book pp. 138-139, parts (a) and (b).

■ The solution: those DPs denote functions of type <<e,t>, t>.

(9)



■ Idea: When we had proper names as Subjects, the VP was predicating or saying something of the proper name Subject; when we have a quantificational DP as Subject, it is the QuDP that predicates or says something of the VP, e.g., that its denotation equals D_e, that it equals ∅, or that it does not equal ∅.

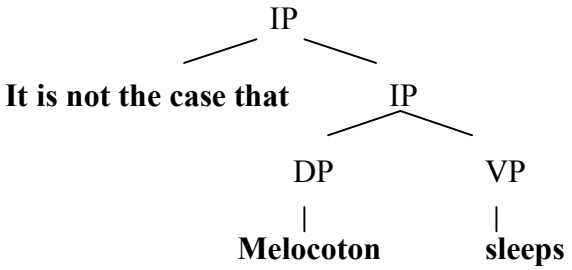
(11) [[**everything**]] = $\lambda Y_{<e,t>}.\ \forall x_e\ [Y(x)]$

(12) [[**nothing**]] = $\lambda Y_{<e,t>}.\ \forall x_e\ [\neg Y(x)]$
= $\lambda Y_{<e,t>}.\ \neg\exists x_e\ [Y(x)]$

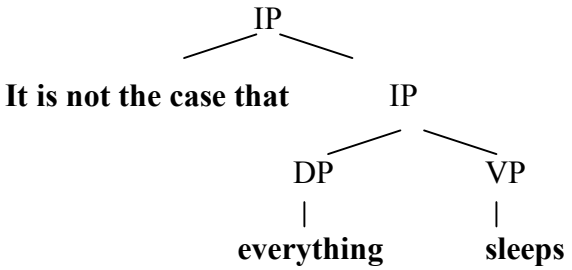
(13) [[**something**]] = $\lambda Y_{<e,t>}.\ \exists x_e\ [Y\ (x)]$

QUESTION 1: Spell out the semantic computation of (14)-(17):

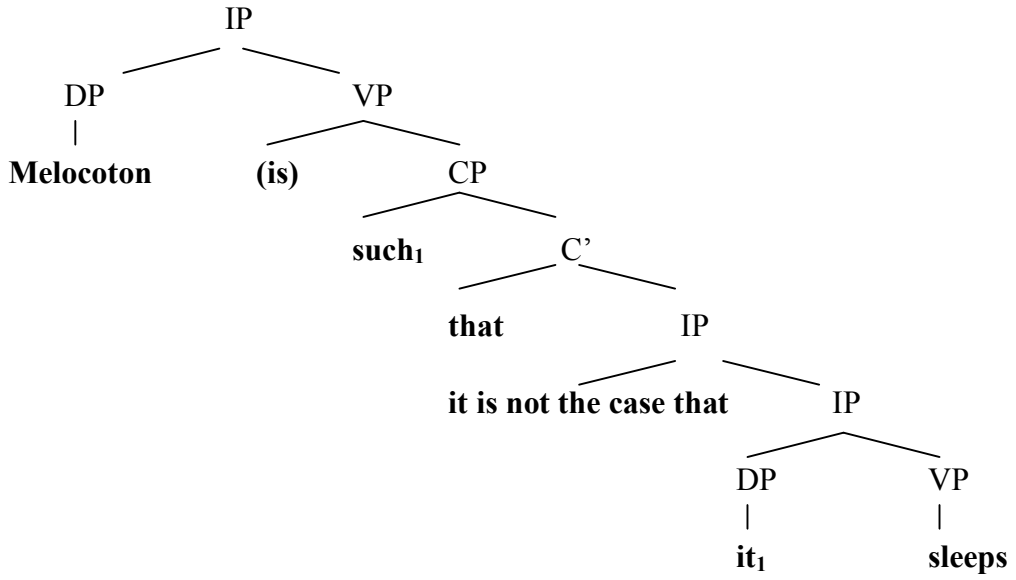
(14)



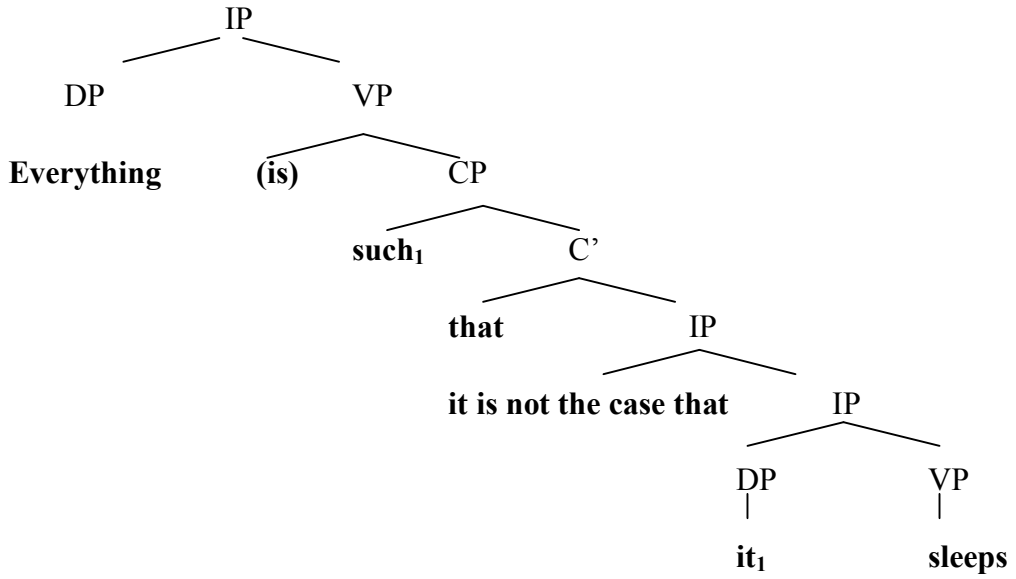
(15)



(16)



(17)



2. Quantificational Determiners: semantic type and denotation.

■ The type of quantificational Determiners:

(18)