Homework for Friday October 10, 2014

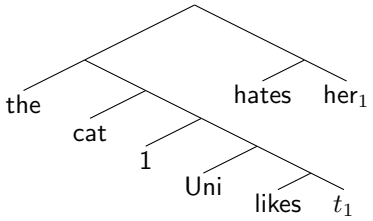
1 More practice with λs

- Reduce the following as much as possible. Show and justify each step in your calculation.

$$(\lambda m.\lambda n.m(\lambda f.n(\lambda x.f(x))))(\lambda k.k(\text{left}'))(\lambda k.k(x))$$

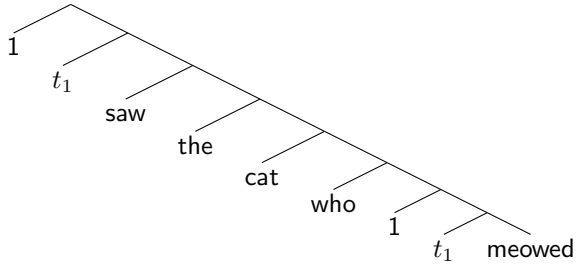
2 Relative clauses

- Here's a possible tree for the sentence the cat Uni likes hates her.



  - ▷ Assign this tree an interpretation relative to an arbitrary assignment function g. (It's probably best to go top-down like we did in class.)
  - ▷ Is the trace t_1 bound or free in this tree (that is: does the choice of assignment function matter for its interpretation)? Is the object pronoun her$_1$ bound or free in this tree?
  - ▷ What does this tell you about what needs to hold for a variable to get bound by an abstraction index?

- Here's a possible tree for the bigger relative clause in the DP the man who saw the cat who meowed.



  - ▷ Assign this tree an interpretation relative to an arbitrary assignment function g. (It's probably best to go top-down like we did in class.)
  - ▷ Which abstraction index binds which trace?
  - ▷ What does this tell you about what needs to hold for a variable to get bound by an abstraction index?

3 Quantifiers

- Give type-$\langle\langle e,t\rangle,t\rangle$ meanings for the following quantificational DPs. Feel free to mix set and function talk, but be explicit about it. Don't worry about the internal composition of the "determiners".

  1. not every phonologist
  2. three out of four dentists
  3. every linguist except John
  4. at least four but no more than ten hotels
  5. more than ten or fewer than five semanticists

- Derive a meaning for the sentence the dog every linguist knows skijors.

- We saw that trying to assign type e meanings to quantificational DPs was destined to fail. But what about vice versa? Can you think of a way to assign type $\langle\langle e,t\rangle,t\rangle$ meanings to proper names like New Jersey and definite descriptions like the Queen of England?

- We saw in class that there was no way to compose a transitive verb (type $\langle e,\langle e,t\rangle\rangle$) with a quantificational DP (type $\langle\langle e,t\rangle,t\rangle$). Here is one possible (though partial) fix. Assume the following silent morheme is freely available:

$$[\![\mathsf{BLA}_\emptyset]\!]^g := \lambda R_{\langle e,\langle e,t\rangle\rangle}.\lambda\mathcal{Q}_{\langle\langle e,t\rangle,t\rangle}.\lambda x_e.\mathcal{Q}(\lambda y.R(y)(x))$$

  - ▷ Use $\mathsf{BLA}_\emptyset$ to derive a meaning for the ambiguous sentence somebody likes everybody. Be clear about what truth conditions you've derived. Do you see any way to derive the other reading using $\mathsf{BLA}_\emptyset$?

4 Bonus (not required)

- Devise a silent lexical item, perhaps along the lines of $\mathsf{BLA}_\emptyset$, that allows you to assign the other interpretation to *somebody likes everybody.*