Homework 6: hand in before or with your squib

- Dynamic semantics practice. Give LFs and node-by-node derivations (ignoring VP-internal subjects) for the following two texts. For text (2), you should assume that negation out-scopes the object DP. In each case, say whether binding was achieved. Discuss whether your result for (2) is a good one.

  (1) John likes Mary_1, and she_1 is French.

  (2) John doesn't like Mary_1, and she_1 is French.

  Use the following meanings (π abbreviates $\langle a,\langle a,t\rangle\rangle$, the type of relations on assignment functions, and $\mathbb{Q}$ abbreviates $\langle\langle e,\pi\rangle,\pi\rangle$, the type of scope-taking DPs). In some cases these meanings differ from those provided in class (this is to help keep your calculations as simple as possible).

Node	**Meaning**	**Type**
John	j	e
like	$\lambda Q.\lambda y.Q\left(\lambda x.\lambda g.\begin{cases}\{g\} \text{ if } like'(x)(y)\\ \text{else } \emptyset\end{cases}\right)$	$\langle\mathbb{Q},\langle e,\pi\rangle\rangle$
Mary_1	$\lambda P.\lambda g.P(m)(g^{[\text{m}/1]})$	$\langle\langle e,\pi\rangle,\pi\rangle$
is French	$\lambda x.\lambda g.\begin{cases}\{g\} \text{ if } french'(x)\\ \text{else } \emptyset\end{cases}$	$\langle e,\pi\rangle$
she_1	$\lambda P.\lambda g.P(g(1))(g)$	$\mathbb{Q}$
and	$\lambda r.\lambda l.\lambda g.\{h : k \in l(g), \text{ and } h \in r(k)\}$	$\langle\pi,\langle\pi,\pi\rangle\rangle$
doesn't	$\lambda P.\lambda x.\lambda g.\begin{cases}\{g\} \text{ if } P(x)(g) = \emptyset\\ \text{else } \emptyset\end{cases}$	$\langle\langle e,\pi\rangle,\langle e,\pi\rangle\rangle$

  Bonus: redo one of the above derivations with an indefinite like *a linguist* in place of *Mary*.

- Binding reconstruction. Though you may not have noticed, moving assignments into the model theory (i.e. allowing them to live in the domains and ranges of functions) has a startling consequence: whereas before, we could not give an account of binding reconstruction, now we can!

  (3) $[\text{Himself}_i]_j$, John_i likes t_j.

  Show how our dynamic theory of anaphora can be used to derive the indicated reading of (3) (without relying on accidental coreference). Give an LF and a detailed derivation. As ever, you shouldn't attempt to QR *John* over *himself* (the grammar will be angry). In addition to the meaning for *likes* given in the previous problem, you'll need the following pieces:

Node	**Meaning**	**Type**
himself_n, t_n	$\lambda P.\lambda g.P(g(n))(g)$	$\mathbb{Q}$
$\mathcal{T}_n$	$\lambda P.\lambda g.g(n)(P)(g)$	$\mathbb{Q}$
n	$\lambda \mathcal{R}.\lambda v.\lambda g.\mathcal{R}(g^{[v/n]})$	$\langle\pi,\langle\sigma,\pi\rangle\rangle$, for **any** σ

A plan of attack:

- ▷ Think about our old approach to semantic reconstruction. Notice in this respect that the meaning given for the abstraction index n allows its second argument v to be of *any* type σ. In other words, this is a (less notationally cumbersome) version of the generalized notion of **PA** from earlier in the class.
- ▷ We also have a new type of trace, $\mathcal{T}_n$, which reverses the functor-argument relationship between P and $g(n)$.
- ▷ Work from the following tree (notice that I do not specify the types of the discourse referents; that is, for any n and g, $g(n)$ might be type e or type $\mathbb{Q}$):