A note about *former* and its meanings

Someone asked me after class on Thursday about the two meanings of *former*, one as a modifier of one-place predicates and the other as a modifier of two-place predicates. The question was whether the second meaning could be derived from the first, and my answer is ‘yes’. Here I will write it out both with and without lambdas (with, for explicitness, and without, to help the intuitions of those for whom lambdas are new. You can find lots of introductory help with lambdas if you look at lectures 1-3 in any of my Moscow courses on my website’s ‘teaching’ page, http://people.umass.edu/partee/Teaching.htm.)

Recall from page 6 of Lecture 2:

a) *former* as CN/CN: former monastery, former dancer. [call this \( \text{former}_1 \)]

b) *former* as TCN/TCN: former owner, former friend. [call this \( \text{former}_2 \)]

And from page 9, discussing natural shifts that apply to adjective meanings: [not in NZ lectures so far]

(ii) from CN/CN
to TCN/TCN: \( \text{ADJ}_3(R)(y)(x) = \text{ADJ}_1'(R(y))(x) \)

These two together mean that the meaning \( \text{former}_2 \) of TCN-modifier \( \text{former}_2 \) will be definable in terms of \( \text{former}_1 \) as follows (I am using “prime” (Russian štrix) to indicate translation into a semantic metalanguage):

\[
\text{former}_2'(R)(y)(x) = \text{former}_1'(R(y))(x)
\]

(Note: If \( R \) is type \(<e,<e,t>,\) then \( R(y) \), the application of \( R \) to its first argument, is type \(<e,t>, \) the type of a one-place predicate.)

Applying this to Mary’s former mansion for illustration: when \( \text{former}_2 \) applies to mansion-of’ (our ‘\( R \)’ here), and then the result applies to Mary’ (our \( y \) ), that result will be the same as if \( \text{former}_1 \) were applied to mansion-of’(Mary’).

With lambdas: \( \text{former}_2' = \lambda R \lambda y \lambda x \left[ \text{former}_1'(R(y))(x) \right] \)

By the way, an important note: These formulas help show why it is that *former* appears to take the possessive in its scope on its relation-modifying reading, even though in fact it just modifies the noun. If the noun is relational, it is modifying the relation, and with a relational noun, the possessive relation is coming from the noun, so the possessive relation gets modified – intuitively we may say “formerly Mary’s”, but on this analysis it’s really “formerly mansion-of”.

Optional addition to complete the picture:
Recall from Lecture 1: there we said *former* could be defined as follows:

\[
\forall x \forall P[\text{former}_1'(P)(x) \leftrightarrow \text{PAST}(P(x)) \& \neg P(x)]
\]

Using lambdas, that is equivalent to the following:

\( \text{former}_1' = \lambda P \lambda x [\text{PAST}(P(x)) \& \neg P(x)] \)

Then it follows (in two or three steps – you can try working it out) that:

\( \text{former}_2' = \lambda R \lambda y \lambda x [\text{PAST}(R(y)(x)) \& \neg R(y)(x)] \)