1 Copular constructions

For each of the following analyses of be, provide a semantic parsetree for the sentence Superman is Clark Kent using any combination of Partee’s type-shifters, assuming that Superman and Clark Kent both translate as expressions of type e.

i. \((\lambda x \lambda y (x = y)) : \langle e, \langle e, t \rangle \rangle\)

ii. \((\lambda f \lambda y (f y)) : \langle \langle e, t \rangle, \langle e, t \rangle \rangle\)

iii. \((\lambda y \lambda f (f y)) : \langle e, \langle \langle e, t \rangle, t \rangle \rangle\)

iv. the type-shifter BE : \langle \langle \langle e, t \rangle, t \rangle, \langle e, t \rangle \rangle\)

2 Determiners and type-shifters

The following Japanese sentence is ambiguous between definite and indefinite interpretations of its subject. (The subject is also ambiguous between singular and plural, but let’s set that aside.)

Hime wa kirei.
princess TOPIC pretty
‘The/A princess is pretty.’

Partee suggests that we might relate such ambiguities to type-shifting and the absence of an overt determiner. We’ve seen that it can be challenging to keep track of the predictions such analyses make. Your tasks:

i. Show that Partee’s type-shifters can derive both of the above readings.

ii. Assess the extent to which it also follows, from your account and assumptions like those of fragment 1, that a princess in English cannot be interpreted as definite.

Hat-tip to Judy Kroo for the initial version of this question.

3 Scope islands and Cooper Storage

Barker (2015:§1.6) reports that “tensed clauses are generally thought to be scope islands for universal quantifiers”. Provide a way of capturing this constraint in the context of Cooper Storage. You should assume that you have free access to features in the syntax (this seems clearly to be a syntax–semantics interface constraint). It’s fine to state this as a constraint on derivations, but it’s even better to redefine the Cooper Storage system so that it follows as a theorem.
4 Scope and negation

Provide a compositional account of the ambiguity summarized in (1):

(1) Every student didn’t pass.

a. Surface: for all students $x$, $x$ did not pass

b. Inverse: it is not the case that, for all students $x$, $x$ passed

5 Continuization intuitions

This question is based in an interactive worksheet:

http://web.stanford.edu/class/linguist230b/assignments/ling230b-assign03.html

The steps are basic. The goal is to give you a feel for what continuized grammars are like. Your answer can be just a sequence of expressions pasted out of the interactive tutorial.

References