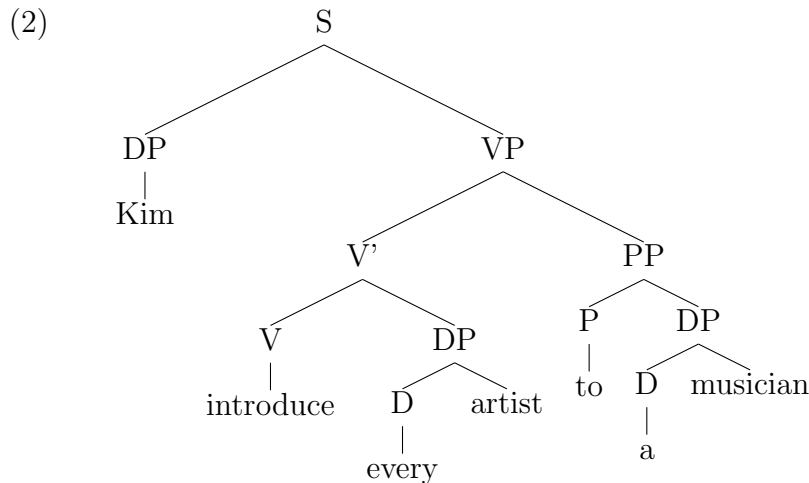


1 Practice derivations

Consider the sentence in (1), which has (at least) the two interpretations in (1a-b).

- (1) Kim introduced every artist to a musician.
 a. There is a musician y such that for every artist x , Kim introduced x to y .
 b. For every artist x , there is a musician y such that Kim introduced x to y .

Assume that the surface syntactic form of (1) is (2), and that the basic meanings of the lexical items are as shown in (3), where f_S and g_S represent the sets of things that satisfy f and g , respectively. (If you like, you can adopt different metalanguage representations of the meanings, but you should assume the same types and equivalent truth conditional content.)



- (3) For any assignment function g :
- $\llbracket Kim \rrbracket^g = kim$
 - $\llbracket introduce \rrbracket^g = \lambda x \lambda y \lambda z. z \text{ introduces } x \text{ to } y$
 - $\llbracket artist \rrbracket^g = \lambda x. x \text{ is an artist}$
 - $\llbracket musician \rrbracket^g = \lambda x. x \text{ is a musician}$
 - $\llbracket to \rrbracket^g = \lambda x. x$ (the identity function)
 - $\llbracket every \rrbracket^g = \lambda f_{\langle e,t \rangle} \lambda g_{\langle e,t \rangle}. f_S \subseteq g_S$
 - $\llbracket a \rrbracket^g = \lambda f_{\langle e,t \rangle} \lambda g_{\langle e,t \rangle}. f_S \cap g_S \neq \emptyset$

Part A Show how the two readings can be derived using type-shifting rules.

Part B Show how the two readings can be derived using Quantifier Raising and Heim & Kratzer's syntax/semantics for movement.

2 The Theta Criterion revisited

In Chomsky's *Lectures on Government and Binding* and a lot of subsequent work in syntax it is assumed that it is impossible (for various syntactic reasons — the Theta Criterion, principles of case assignment; take your pick) to move a phrase from one theta position to another. For example, a structure like (4), which is intended to represent movement of the object of a transitive verb to subject position, is supposed to be ungrammatical because it violates (one formulation of) the Theta Criterion: *George* receives two theta roles from the verb, but it's only supposed to receive one.

(4) *_S George [_{VP} admires *t*]

Among other things, the various constraints that rule out structures like (4) are supposed to explain why the corresponding surface string, *George admires*, cannot be used to express the proposition that George admires himself, which is what we would presumably expect if a single DP could be assigned multiple theta roles through movement.

Part A What does Heim & Kratzer's theory of the syntax and semantics of movement have to say about these matters? In particular, what does it predict about movement from one theta position to another vs. movement from a theta position to a non-theta position? Does it make any broader predictions about the types of movement we should/should not see in language?

NB: This question is a bit vague on purpose, and one of your first tasks (maybe the hardest part of the problem) should be to make precise exactly what is meant by "(non-)theta position". Keep in mind that while we want to disallow movements like the one in (4), we do want to allow movement of e.g. the underlying object of a passive or unaccusative verb to subject position, as well as movements of the sort we have been discussing in class (Quantifier Raising, relativization, etc.).

Part B One potential counterexample to the claim that structures like (4) are impossible comes from verbs like *bathe*, which seem to have exactly the meaning that (4) doesn't have when they surface with only one argument: (5b) (only) means *Dick bathed himself*.

- (5) a. Dick bathed George.
b. Dick bathed.

Given your conclusions in Part A, what kind of analysis can you give for verbs like *bathe*?