Assignment 3: Truth Conditional Semantics, Function Application

Ling 324; Fall 2007 Due on Oct. 19 in class

Your answers should be clear and well-organized, and written in full sentences in proper English when asked to provide explanations. Please type your answers or print very neatly.

- 1. Show that sentences (i) and (ii) jointly entail (iii). Do this by using the semantics of logical connectives in prose. Do not use truth tables.
 - (i) If Frodo lost the ring, the world will not be saved.
 - (ii) The world will be saved.
 - (iii) Frodo did not lose the ring.
- 2. Give a compositional semantics for the following sentences. That is, first provide the syntactic structure (using the syntactic rules for the fragment of English F1 provided in the lecture notes on *Truth Conditional Meaning of Sentences*) and then give semantic values for each node, arriving at the truth conditions for the entire sentence at the root node.
 - (a) It is not the case that [Gollum stole the ring but Bilbo destroyed the ring].
 - (b) [It is not the case that Gollum stole the ring] or [Bilbo destroyed the ring].
- 3. Do exercise 8, (2) to (7) on pg. 111 from *Meaning and Grammar*. Here is an example answer for (1).
 - (1) {Pavarotti} in V1 {Bond} in V2 {Loren} in V3.
- 4. Let Universe = {Jack, Bill, Kate}.
 Let [[introduced]]^V = {<Jack,Kate,Bill>, <Kate,Jack,Bill>, <Bill,Jack,Kate>}.
 - (a) Specify the characteristic function of $[[introduced]]^V$ using arrow notation.

(b) We want the Schönfinkelization of the characteristic function of $[[introduced]]^V$ to match the real syntactic structure of ditransitive verbs, as given in the tree below. (For the purposes of this exercise, treat *to Bill* as in the same way as a simple proper noun like *Jack*). So, specify the Schönfinkelization of the characteristic function of $[[introduced]]^V$ that does this (using the values you described in part (a)).

