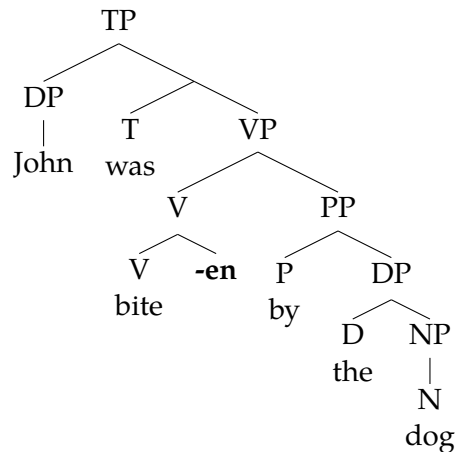


Problem Set 4

Due February 27 before class. Submit on IVLE > Files > Student Submission > PS4.

1. **Passivization:** Propose a semantics for the passive morpheme $[-en]$ for the following tree. (“bite-en” is pronounced “bitten.”) Assume $[[by]] = Id$, the identity function.



Then compute the truth conditions for this sentence, giving semantic types, denotations, and the rule used for each node.

2. **The Tagalog linker:** Tagalog has a morpheme often described as a “linker.”¹ If the word preceding the linker is vowel-final, the linker is *-ng* and attaches to the preceding word; otherwise it is *na*.

Consider the following data on the distribution of the linker.

Note: (*LINKER) means the linker *cannot* be used; *(LINKER) means the linker *must* be used.

- (1) maganda-*(**ng**) bahay
beautiful-*(LINKER) house
'beautiful house' (NP)
- (2) bahay *(**na**) maganda
house *(LINKER) beautiful
'beautiful house' (NP)
- (3) malaki-*(**ng**) maganda-*(**ng**) bahay
big-*(LINKER) beautiful-*(LINKER) house
'big beautiful house' (NP)
- (4) Maganda-*(**ng**) ang bahay.
beautiful-*(LINKER) the house
'The house is beautiful.' (S)

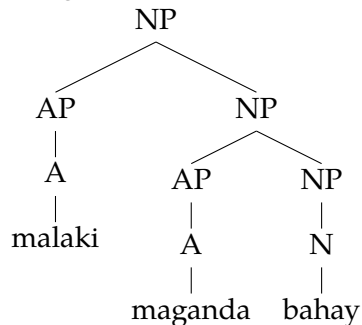
¹If you think you've seen this problem before from another class of mine, just forget about that and try this again.

- (5) Malaki-*(ng) ang maganda-*(ng) bahay.
 big-*(LINKER) the beautiful-*(LINKER) house
 'The beautiful house is big.' (S)

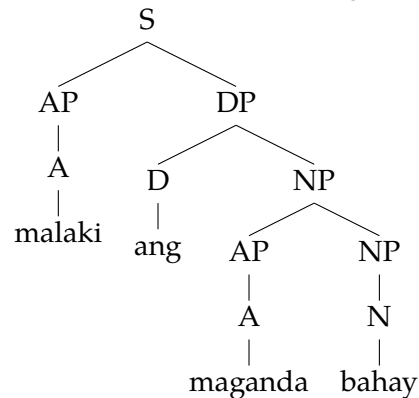
In case you know Tagalog: Answer this question based solely on the data here.

- i. Compute the denotations for examples (3) and (5), using the trees here below which *do not illustrate any linkers*. For each node in the trees, give its (a) semantic type, (b) denotation, and (c) the composition rule used (TN, NN, FA, or PM). Use the lexical entries below. Show your work.

malaki-ng maganda-ng bahay (3)
 'big beautiful house':



Malaki ang maganda-ng bahay. (5)
 'The beautiful house is big.':



Lexicon:

- $\llbracket \text{malaki} \rrbracket = \lambda x_e. x \text{ is big}$
- $\llbracket \text{maganda} \rrbracket = \lambda x_e. x \text{ is beautiful}$
- $\llbracket \text{bahay} \rrbracket = \lambda x_e. x \text{ is a house}$
- $\llbracket \text{ang} \rrbracket = \lambda P_{\langle e,t \rangle} : \text{there is a unique } x \text{ such that } P(x) = 1 .$

the unique y such that $P(y) = 1$

- ii. What is the generalization for where the linker occurs? Make sure your generalization accounts for all the data above. (Your generalization should make reference to how the semantic composition works, not the syntax.)
- iii. Consider example (6). Are you surprised? Why or why not?

- (6) peke-*(ng) diploma
 fake-*(LINKER) diploma
 'fake diploma' (NP)

3. **Bonus:** What did you learn at GLOW in Asia?