Homework 3: TAGs and DGs

Syntactic Theory Lab
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Due May 30, 2018

1. Consider the following sentence:

   (1) The big elephant seems to be eating sugarcane

   Your task is to come up with a TAG analysis of this sentence. This means you need to provide elementary trees, a derivation tree, and a derived tree.

   Try to provide a linguistically reasonable analysis that conforms to the following constraints:

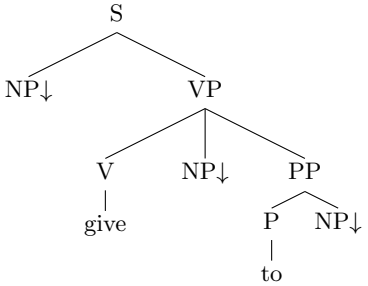
   (a) Lexicalisation: all elementary trees have (at least) one node with a terminal symbol (a word)

   (b) Fundamental TAG hypothesis: every syntactic dependency is expressed locally with an elementary tree. In particular, a word assigns a theta role t if and only if there is a frontier substitution or adjoin node in its elementary tree for t.

   (c) Condition on Elementary Tree Minimality: Everything in an elementary tree should be either part of the (extended) projection of the lexical anchor or a substitution or adjunction node.[1]

   If you can't, or don't think you can anyway, see how minimally you can break a contraint, or how mildly unreasonable your analysis can be, to get what you need. Discuss the problem you encountered and how you came to your solution, or if there was no problem, explain how you chose your analysis.

[1] It's not entirely clear what this means. I've found explanations that would make this elementary tree a violation, and explanations that would not:



Alexander Koller says that TAG people tend to be pragmatic, so even if the above tree would technically violate the CETM, they might use it anyway. He also said that the XTAG project can be taken as definitive for English, and indeed they use a tree like the above (http://www.cis.upenn.edu/~xtag/tech-report/node36.html)

Hints:

- *seem* is a raising verb, so it doesn't assign a theta-role to its syntactic subject *the big elephant*.
- *to be eating sugarcane* is traditionally analysed as a non-finite clause. However, we've seen that the raising verb *seem* tends to be analysed as a VP-adjunct in TAGs. Is this a problem?
- *sugarcane* is a compound N, so just treat it as a single word
- *be* is an auxilliary verb

2. In an earlier assignment, you drew an X-bar tree for the following Hixkaryana sentence:

   (2) Toto hena komo yonoye kamara
   person dead all ate jaguar
   'The jaguar ate all the dead people'

   Provide a TAG analysis that derives the same or similar tree. I recommend you use adjunction at the XP level, instead of the X' level, to make your TAG trees more familiar.

3. Draw a dependency tree for each of the following sentences. Use the Universal Dependency guidelines (but don't drive yourself crazy trying to figure out exactly what they would want you to do.) If you make a choice you think warrants an explanation, write a couple sentences about it.

   (3) Luke trained hard with Yoda

   (4) Leia stole the plans for the Death Star

   (5) Leia stole the plans for the Rebels

   (6) I heard that Luke and Leia are twins

   (7) Which TIE-fighter was Poe flying when he crashed?

   (8) That Rey found the Millenium Falcon surprised Han Solo

4. Depending on exactly how you decide to analyse a sentence, the TAG derivation tree and a dependency tree can look awfully similar. Why do you think this is? Do you think that if you chose the right TAG and DG analyses, you could deterministically switch between them?

5. Draw a dependency tree for (1) above. How similar is it to the TAG derivation tree you gave? Did you make any semi-arbitrary choices in either analysis which you could change to make the trees the same, or nearly the same?

6. Pick a language you're fluent in and provide a UD and TAG analysis of a sentence of your choice. Try to pick something mildly interesting/different from English in the language, but not too much work. (If you can't satisfy both constraints, go for something simple like a transitive clause.) Don't forget to include a gloss and a translation.