

Homework 6

Rules and Trees

You may complete these trees by hand or using a computer. If you choose to draw your trees by hand, please use unlined paper. If you would like to use a computer, you may find the following website to be useful: <http://ironcreek.net/phpsyntaxtree/>

As always, please give the names of anyone you worked with.

- Determine whether each of the examples in (1–12) is a grammatical or ungrammatical sentence of English. Mark the ungrammatical sentences with an asterisk (*).
- Then, decide whether the grammatical sentences can be generated by the set of phrase structure rules provided below. If you encounter sentences that are grammatical but cannot be generated using this set of rules, explain how the rules must be modified to account for all of the grammatical sentences. (The easiest way to do this is to rewrite the relevant rule.) It is safe to assume that unfamiliar capitalized words are the names of people.
- Make a single tree for each of the sentences that you did not mark as ungrammatical (i.e., the grammatical ones).

- (1) Bill trains dragons.
- (2) Does not wizard know he is a Harry.
- (3) Hagrid flew his motorcycle to the island.
- (4) Harry put his books in the trunk with a broken latch.
- (5) Harry knows that himself needs school supplies.
- (6) The short salesman knows that that wand belongs to Harry.
- (7) Hagrid gave Harry a flute for Christmas.
- (8) Harry thinks that there is certain to be Professor-Dumbledore in the forest.
- (9) Harry thinks that Snape is cruel.
- (10) Ron said that Hermione thinks that the three-headed dog guards the powerful stone.
- (11) The snitch and the seeker flew over the lake and through the woods.
- (12) The owl with the white feathers flapped around the cat with the sore paw.

Phrase Structure Rules

$S \rightarrow NP VP$

$NP \rightarrow (Det) (A)^* N (PP)$

$VP \rightarrow (Aux) V (NP) (PP) (CP) [Adv]$

$PP \rightarrow P NP$

$CP \rightarrow C S$

$X \rightarrow X \text{ conj } X$

- The sentence in (13) is structurally ambiguous. Paraphrase at least two interpretations of the sentence (you may write these out or provide pictures to illustrate) and draw the tree of sentence (13) that corresponds to each paraphrase. Make sure we can tell which paraphrase goes with which tree.

- (13) Harry cursed the wizard with the wand.