Understanding English Grammar: A Linguistic Introduction

Additional Exercises for Chapter 8: Advanced concepts in English syntax

1. A "Toy Grammar" of English

The following "phrase structure rules" define a range of phrasal categories in a "toy" version of English:

S → DP + IP

IP → (AUX) + { VP, DP, AP }

VP → V + (DP) (PP)

DP → D + NP

DP → PRO

NP → (ADJ) + N + (PP)

NP → NP CONJ NP

PP → P + DP

The grammar of this toy language includes only the following lexical categories and items:

AUX	V	N	D	PRO	ADJ	P	CONJ
be	see	cat	the	they	sick	on	and
0	watch	dog	a	she	pretty	with	
	move	sidewalks	0		moving		
	chase	television			unusual		
		man			ugly		

A.   Draw a constituent structure tree for the following sentence:

   The ugly dog chased the pretty cat on the sidewalks.

B.   Give three additional sentences that are grammatical in this "language":

C.   Now give three strings that are not grammatical in this "language" (using the same lexicon and phrase structure rules):

D.   The following sentence is grammatical according to the toy grammar, but is structurally ambiguous. Draw two constituent structure trees, one for each of the possible structures that underly this sentence:

   They are moving sidewalks.

E.   How would the toy grammar need to be changed to allow for the following sentence?:

   She is an unusual sick cat.

2. Phrase Structure Trees

Draw phrase structure trees for each of the following sentences. Label all nodes, including terminal nodes, for their phrasal or lexical category. Assume the DP, IP and GP hypotheses.

a. The King's stinking son fired me.

b. Mr. Frodo's not going anywhere without me.

c. The owls are sleeping near the fireplace.

d. Hagrid walks his pet dragon in the woods.

e. The school of wizardry lies behind a mountain.

f. Hagrid always feeds his pet dragon at dawn.

g. Hermione sent Harry a message.

3. Translating bracketing into trees

"Translate" the following labeled and bracketed strings into constituent structure trees. Be sure to label each node correctly.

a. $[_x [_y [_z A]_z [_z B]_z [_x C]_x]_y [_w [_z D]_z [_z E]_z]_w]_x$

b. $[_x [_y [_z A]_z [_z B]_z C]_y [_w [_y [_z D]_z E]_y F]_w]_x$

c. $[_s [_{dp} [_d 0]_d [_{np} [_n Death]_n]_{np}]_{dp} [_{ip} [_i cannot]_i [_{vp} [_v stop]_v [_{dp} [_d 0]_d [_{np} [_{adj} true]_{adj}$
       $[_n love]_n]_{np}]_{dp}]_{vp}]_{ip}]_s$

d. $[_s [_{dp} [_d 0]_d [_{np} [_n Wesley]_n [_{conj} and]_{conj} [_n Buttercup]_n]_{np}]_{dp} [_{ip} [_i 0]_i [_{vp} [_v raced]_v [_{pp} [_p$
       $along]_p [_{dp} [_d the]_d [_{np} [_n ravine]_n [_n floor]_n]_{np}]_{dp}]_{pp}]_{vp}]_{ip}]_s$

4. syntactic argumentation

Consider the first verse of the Lewis Carroll poem:

'Twas brillig, and the slithy toves
Did gyre and gimble in the wabe;
All mimsy were the borogoves,
And the mome raths outgrabe.

There are two possible constituent structures for the last clause: *The mome raths outgrabe* (ignore *and* for purposes of this exercise).

A. Draw two phrase structure trees corresponding to the two possible structures.

B. Argue for why one structure is more plausible in this context than the other.

Note: No special knowledge of the "meanings" of any of the words (except maybe *the*) is needed to complete this exercise. In other words, you are not being asked to give the "official" analysis of this clause, which is in fact provided in the original book. Just given your knowledge of English, what constituent structure analyses are possible for the string *The mome raths outgrabe,* and why would you choose one over the other? The official analysis may actually confuse the issue.

5. Conjunction and Disjunction

Based on the problem titled "Everyone is a little molistic in a way", by Dragomir Radev. Copyright © 2009. North American Computational Linguistics Olympiad

Imagine that the following were meaningful English sentences:

a. Jane is molistic and slimpy.

b. Jennifer is cluvious and brostic.

c. Molly and Kyle are slimpy but danty.

d. The teacher is danty and plamby.

e. Mary is blitty but plamby.

f. Jeremiah is not only sleshful but also weasy.

g. Even though tramsy, Jim is sleshful.

h. Strungy and struffy, Diane was a pleasure to watch.

i. Even though weasy, John is strungy.

j. Carla is blitty but struffy.

k. The salespeople were cluvious and not slimpy.

A. Then, which of the following would be meaningful, and which would seem contradictory?

l. Meredith is blitty and brostic.

m. The singer was not only molistic but also cluvious.

n. Mary's boyfriend is danty but sleshful.

B. What quality or qualities would you appreciate in a person? (Choose one or more)

o. blitty

p. weasy

q. sleshful

r. tramsy

C. Explain your reasoning.