LX 321/621 Syntax | Homework #2 v1.1
Fall 2022 | DUE FRI SEP 23

v.1.1: Added a Vt *bought* rule to the list of new lexical rules in problem 3.

1 Generalization

Bart chased Lisa is a sentence (S) with the pattern N V N. So presume we have this rule: S → N V N. Now consider the sentence *Marge said Bart chased Lisa*. One way to state the pattern of this sentence is adding a new rule: S → N V N V N. But there is a better way. **What is a better rule? What makes it better?**

2 PSRs and Trees IV

S →	NP Vt NP	Det →	*a*	N →	*Homer*
S →	NP Vd NP NP	N →	*beer*	N →	*Lisa*
NP →	Det N	N →	*gift*	Vd →	*bought*
NP →	NP *and* NP	N →	*Bart*	Vt →	*saw*
NP →	N	N →	*Marge*	Vd →	*sent*

A. Give the tree that these rules generate for the sentence *Homer bought Marge a gift*. The *that these rules generate* part is important here. That is: Don't recruit recollections from Intro or ideas from Wikipedia of how the sentence ought to be structured; this is just an exercise about getting from the rules to their application, written in tree form. This tree will not represent our final hypothesis about how such sentences are structured.

B. Give the tree that these rules generate for the sentence *Homer sent Marge Bart and Lisa*.

C. Give three additional English sentences that this grammar generates.

D. Give three additional non-English sentences that this grammar (erroneously) generates. To help ensure you're on the track I intended, let me note/suppose that (even though you can kind of make sense of it by forcing an interpretation where there is a class organized by name) *a Lisa* is not well-formed in English. Come up with a couple of other examples of the same sort, focusing on the noun positions rather than the verbs. Also, assume that the first noun is just a name for now (so even though the grammar does generate *a gift saw Lisa* let's ignore that for now and focus on the other nouns).

E. Revise the grammar so that it still produces sentences like those you gave in (C) above, but no longer produces sentences like those you gave in (D).

3 Funny

The sentences below are not handled by either grammar above.

(1) a. A fancy comedian sent Homer a beer.
b. A cold comedian saw Lisa.
c. A funny comedian bought a gift.

We can add rules to accommodate them. We will need to add at least the following five lexical rules, and then another one.

Adj →	*fancy*
Adj →	*funny*
Adj →	*cold*
Vt →	*bought*
N →	*comedian**

* Depending on how you answered part E above, this might not be category N, but whether it is or is not, it is the same category that *gift* and *beer* are.

A. What new rule in addition to the five new lexical rules above) must be added to the rules in the previous problem, in order to produce these sentences above in (1)?

B. The sentences in (1) all have an adjective as part of their subject (the first N), and we revised the grammar to ensure that sentences with adjectives in their subjects were generated. We did this with a single, simple rule. That solved the problem. But because it was a single simple rule, it was unable to distinguish between nouns on the basis of whether they are subjects or non-subjects, or whether they already have an adjective or not. So it leads the model to predict the grammaticality of a whole lot more sentences. Infinitely many, really. Give two examples of additional sentences the grammar predicts, beyond just sentences with an adjective in their subject.

C. Draw a tree for *Homer sent a cold funny comedian a fancy beer*.

4 PSRs and Trees V

S →	NP VP
VP →	Vi
VP →	Vt NP
VP →	Vd NP NP
NP →	Det N
N →	Adj N
NP →	Nn
NP →	N
NP →	NP Conj NP
VP →	VP Conj VP
S →	S Conj S

Conj →	*and*
Conj →	*or*
Det →	*a*
Adj →	*big*
Adj →	*fancy*
Adj →	*expensive*
N →	*beer*
N →	*gift*
Nn →	*Bart*
Nn →	*Marge*
Nn →	*Homer*
Nn →	*Lisa*
Vt →	*drank*
Vi →	*slept*
Vd →	*gave*

A. Give the tree that these rules generate for the sentence *Marge and Homer gave Bart and Lisa a big expensive gift*. This tree is relevant for B–F below.

For the following questions, "mark the nodes" could be accomplished either by writing the letter by the relevant nodes, or circling a group of nodes and marking the circle.

B. Mark the nodes that the Adj node over *big* c-commands with "B".
C. Mark the nodes that the Vd node over *gave* c-commands with "C".
D. Mark the nodes that the NP-daughter-of-S dominates with "D".
E. Mark the nodes that dominate *Bart* with "E".
F. Mark the nodes that precede *Bart* with "F".

G. Give the tree that the rules generate for *Homer drank a beer and slept*.

5 Korean

So far we have been concerned strictly with grammars for English. In this exercise, we will construct a grammar for a small fragment of Korean.

5.1 Basic Korean sentences

Observe the following data. Note: In all examples *SUB* stands for *subject marker* and *OBJ* stands for *object marker*. Depending on whether the object ends in a consonant, it

might be either *lul* or *ul*, but the difference is like English *a* vs. *an*. In your grammar, treat it as *lul* everywhere (don't have two different object markers).

(2) Chelswu ka ulessta.
Chelswu SUB cried
'Chelswu cried.'

(3) Sunhi ka ku sakwa lul poassta.
Sunhi SUB that apple OBJ saw
'Sunhi saw that apple.'

(4) Chelswu ka Sunhi lul conkyenghanta.
Chelswu SUB Sunhi OBJ respect
'Chelswu respects Sunhi.'

(5) Chelswu ka ku kemun kae lul cohanta.
Chelswu SUB that black dog OBJ like
'Chelswu likes that black dog.'

(6) Sunhi ka hakkyo e kassta.
Sunhi SUB school to went
'Chelswu went to school.'

(7) Chelswu ka Sunhi eykey chayk ul cwuessta.
Chelswu SUB Sunhee to book OBJ gave
'Chelswu gave a book to Sunhi.'

Part 1. Give a grammar that generates these Korean data.

Part 2. Check to see whether your grammar generates any of the ungrammatical examples below. It probably does (though it might not, it depends on how you answered the previous question). If your grammar does generate any of these, revise it so that they will be correctly excluded. Give the new set of rules (assuming you changed them). If your grammar already does not generate any of them, note that and move on to the next part.

(8) a. * Chelswu lul ulessta.
b. * Sunhi ka Chelswu lul ulessta.
c. * Sunhi ka poassta.
d. * Chelswu ka Sunhi lul chayk ul cwuessta.

Note: Any Korean speakers, consider (8c) to be ungrammatical. (It is grammatical, but for a reason we are not handling yet. It boils down to the possibility of having an

object that is there structurally but not pronounced. But for our purposes, and probably in actual reality, such an object is actually *there* even if you can't hear it.)

Part 3. Give the phrase markers (tree diagrams) that your grammar above assigns to sentence (2) through (7).