LX 321/521/621 Syntax
Spring 2024

Homework #2
DUE FRI FEB 9

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. This is illustrated below; the blank space in the grammar on the left can be filled in with the rule under Option A on the right. But there is a better option. **Fill in Option B with a better rule, and give two of the reasons why Option B is better than Option A.**

(1)

Grammar	
S →	N V N
S →	
N →	*Bart*
N →	*Marge*
N →	*Lisa*
V →	*chased*
V →	*said*

← *either A or B*

Option A	
S →	N V N V N

Option B	
S →	

← *you fill in this part*

2 PSRs and Trees IV

S →	NP Vt NP	N →	*chainsaw*	Conj →	*and*
S →	NP Vd NP NP	N →	*gift*	D →	*a*
NP →	D N	N →	*Bart*	Vd →	*bought*
NP →	NP Conj NP	N →	*Marge*	Vt →	*saw*
NP →	N	N →	*Homer*	Vd →	*sent*
		N →	*Lisa*		

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.

But wait. It also generates some non-English sentences. For example, *gift bought a Maggie a Bart* or *chainsaw saw a Homer*. Specifically, it seems that the D (*a*) must be there with some nouns and cannot be there with other nouns.

D. Revise the grammar so that it still produces sentences like those you gave in (C) above, but no longer produces sentences like *chainsaw saw a Homer*. You'll need to change the category of some of the lexical items, and modify a rule or two to reflect that category change.

3 Funny

The sentences below are not handled by either grammar above.

(2) a. A fancy comedian sent Homer a chainsaw.
b. A cold comedian saw Lisa.
c. A cold 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 $\rightarrow$	*fancy*
Adj $\rightarrow$	*funny*
Adj $\rightarrow$	*cold*
Vt $\rightarrow$	*bought*
N $\rightarrow$	*comedian**

* Depending on how you answered the preceding question, this might not be category N, but regardless, it should be the same category as *gift* and *chainsaw* 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 (2)?

B. The sentences in (2) all have an adjective as part of their subject (the first NP), 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 that the grammar predicts, containing one or more adjectives that are not part of the subject.

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

4 PSRs and Trees V

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

Conj →	*and*
Conj →	*or*
D →	*a*
Adj →	*big*
Adj →	*fancy*
Adj →	*expensive*
N →	*chainsaw*
N →	*gift*
Nn →	*Bart*
Nn →	*Marge*
Nn →	*Homer*
Nn →	*Lisa*
Vt →	*bought*
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.

B. How many nodes does the Adj node over *big* c-command?
C. How many nodes does the Vd node over *gave* c-command?
D. How many nodes does the NP-child-of-S (subject) dominate?
E. How many nodes dominate *Bart*?
F. How many nodes precede *Bart*?

G. Give the tree that the rules generate for *Homer bought a chainsaw and slept*.

5 Korean

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, the object marker might be either *lul* or *ul*, but the difference is like the difference between English *a* and *an*. We'll treat it as pure phonology, two ways to realize the same underlying morpheme. In your grammar, treat it as *lul* everywhere (don't have two different object markers).

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

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

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

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

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

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

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

Note to any Korean speakers: Consider (9c) to be ungrammatical. (It is grammatical, but for a reason we are not handling yet. Specifically, it is generally possible to have an object that is there structurally but not pronounced. For our purposes, and probably in actual reality, such an object is actually *there* even if you can't hear it. For this problem, we will assume that anything that is structurally there is also pronounced.)

Part 1. Give a grammar that generates these Korean data. To constrain your answers a little bit, *make sure that Chelswu ka* in the first sentence is a constituent.

Part 2. Give the phrase markers (tree diagrams) that your grammar above assigns to sentence (3) through (8).

Part 3. On the basis of your results above, compare the structure of Korean with that of English. Discuss any similarities and differences you can see in their syntactic patterning and/or their phrase structure rules. Be as precise and explicit as you can.