LX 321/521/621 Syntax
Spring 2024

Homework #3
DUE FRI FEB 16

1 Korean (continued)

This continues the exercise about Korean from the previous homework. In that homework, recall, you put together a grammar for Korean that can handle the distinction between subject and object markers. The grammar you came up with probably won't look exactly like this, but just so we're starting in the same place, here is a grammar we can use.

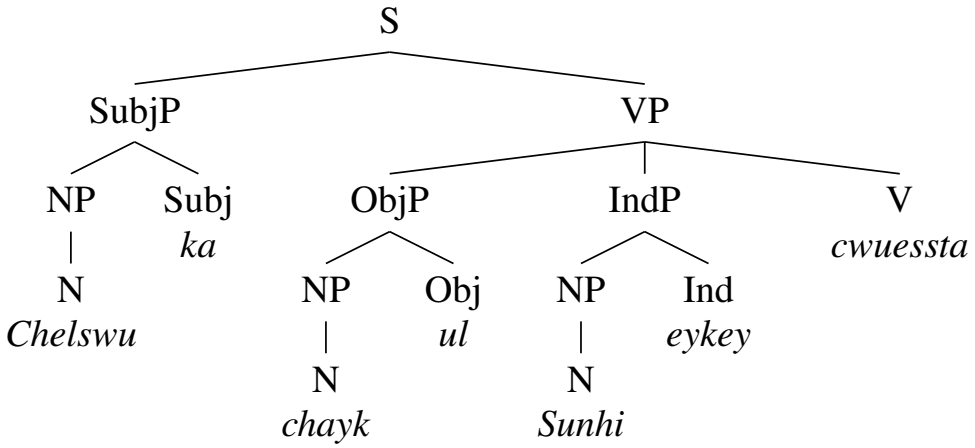
Note too: the way the lexicon is represented has been updated to reflect things that we have covered since the previous homework. In the previous homework the lexicon was represented as rewrite rules. Now the lexicon is represented as a collection of items with form, category, and features, and rules can contain subcategorization frame features.

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

Sunhi,	N
Chelswu,	N
Jae,	N
kemun,	Adj
ulessta,	V, [+ _]
kassta,	V, [+ PP _]
poassta,	V, [+ ObjP _]
cohanta,	V, [+ ObjP _]
conkyenghanta,	V, [+ ObjP _]
cuwessta,	V, [+ ObjP IndP _]
kuliko,	Conj

eykey,	Ind
ka,	Sub
(l)ul,	Obj
e,	P
i,	D
ku,	D
sakwa,	N
kae,	N
hakkyo,	N
chayk,	N
phyen,	N

S →	SubjP VP
VP →	V
VP →	PP V
VP →	ObjP V
VP →	ObjP IndP V
NP →	D N
NP →	N
N →	Adj N
SubjP →	NP Subj
ObjP →	NP Obj
IndP →	NP Ind
PP →	NP P



Consider the following additional Korean facts:

(2) Chelswu ka i chayk ul kuliko ku phyen ul Sunhi eykey cwuessta.
Chelswu SUB this book OBJ and that pen OBJ Sunhi to gave
'Chelswu gave this book and that pen to Sunhi.'

(3) Chelswu ka chayk ul Sunhi eykey kuliko Jae eykey cwuessta.
Chelswu SUB book OBJ Sunhi to and Jae to gave
'Chelswu gave a book to Sunhi and Jae.'

Now do the following. (Parts 1–3 were on the previous homework, hence "Part 4.")

Part 4. State what rules you must add to the grammar above in order to generate the conjunctions in (2) and (3). (What I mean here is adding rules that will each have Conj on the right-hand side. So, your answer would look like S $\rightarrow$ S Conj S, except with some different category there other than S.)

Part 5. Give the tree structure that the rules above (including your additions in the previous part) assign to (2).

Here is one more additional sentence to consider:

(4) Chelswu ka ku chayk ul Sunhi eykey kuliko i phyen ul Jae eykey
Chelswu SUB that book OBJ Sunhi to and this pen OBJ Jae to
cwuessta.
gave
'Chelswu gave that book to Sunhi and this pen to Jae.'

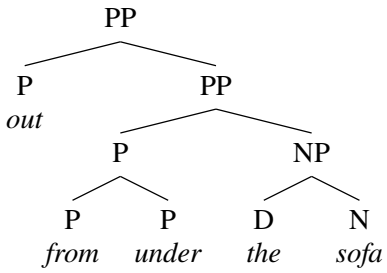
Part 6. Do your rules also generate (4)? (*Hint*: Nope.) Describe what it is about (4) that eludes the rules we have so far. No need to fix the problem, just describe it.

There are a few different ways to fix this, all of which require fairly major adjustments and for which we would want to find evidence. You do not need to proceed past describing the problem(s), but if you wish to speculate about possible solutions, feel free. (Offhand, I can think of three basic ways one could approach this, involving pronunciation, constituency, or moving things around.) We won't actually have settled the grammar for this example for quite some time, but it's useful to see places where work still needs to be done.

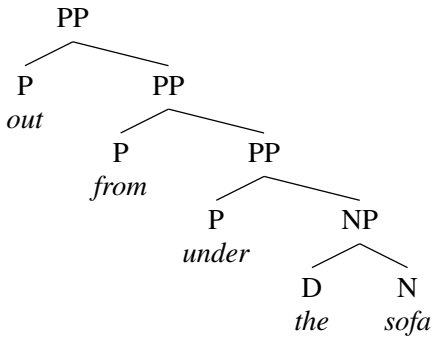
2 Out from under the sofa

Along with simple PPs like *under the sofa*, English contains more complex PPs like those in *Bart jumped out from under the sofa* and *Lisa came in out of the rain*. Three potential structures for the PP out *from under the sofa* are shown in (5), (6), and (7). Consider the sentences (where (9), (10), and (15) are to be understood as meaning the same as (8)).

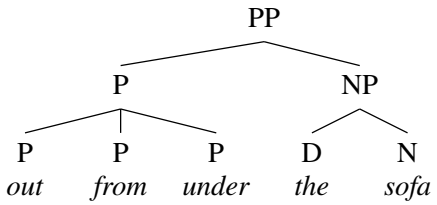
(5)



(6)



(7)



(8) Bart jumped out from under the sofa and out from behind the chair.

(9) Bart jumped out from under the sofa and from behind the chair.

(10) Bart jumped out from under the sofa and behind the chair.

(11) Bart jumped out from under the sofa and Lisa jumped out from there too.

(12) Bart jumped out from under the sofa and Lisa jumped out from under it too.

(13) From under the sofa, Bart jumped out.

(14) Out from under the sofa, Bart jumped.

(15) Bart jumped out from under the sofa and the chair.

Part 1. Look at each box in the table below. Put a check in the box if the tree structure *does* predict the sentence to be grammatical. Put an x in the box if the tree structure *does not* predict the sentence to be grammatical.

Tree/Sentence	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
(5)								
(6)								
(7)								

Part 2. Given your results in Part 1, which tree diagram—(5), (6), or (7)—seems to give the best account of the structure of *out from under the sofa*? Explain your reasoning.

Part 3. What problem does the following well-formed example raise for the results so far? (Again, describe the problem, but no need to attempt to solve it.)

(16) Kids jumped out from under and out from behind the sofa.

3 Constituents

Let's return briefly to constituency and constituency tests. And let's just focus on one test for these, the clefting test. So, for example, to see if *a barrel of syrup from Québec* is a constituent, we would test the sentence in (18). All you need to do for the parts of this problem is come up with the test sentence—you do not need to judge whether the test sentence is grammatical or not. The test sentence in (18) happens to be grammatical, and so the conclusion from that would be that *a barrel of syrup from Québec* is a constituent in (17).

(17) They stole a barrel of syrup from Québec.

(18) It is a barrel of syrup from Québec that they stole.

Part 1. Give the sentence we would use to test whether *from Québec* is a constituent using the clefting test.

Part 2. Give the sentence we would use to test whether *a barrel of syrup* is a constituent, using the clefting test.

(19) Mary heard the rumor that Pat kissed Chris.

Part 3. Come up with clefting test sentences that we could use to show that, in (19), *the rumor that Pat kissed Chris* is a constituent, but that *Chris* seems not to be. If you formed the test sentences correctly, native speakers would find the first to be grammatical and the second one to be ungrammatical.

Now, of course—*of course*—*Chris* is a constituent in (19). So why is it failing the constituency test? It turns out that the clefting test *systematically fails* when trying to test a constituent that is inside a noun phrase (a noun phrase like *the rumor that Pat kissed Chris*). In other words, something about this is incompatible with the *test* and therefore we can't trust the test's results.

Let me make that salient by putting it in bold in a box.

The clefting test will fail (will produce ungrammatical test sentences) if you test a constituent that is inside a larger noun phrase.

Now, back to Québec and syrup. The sentence in (17) is ambiguous—it can mean a couple of different things, depending on what you understand to be *from Québec*. First, convince yourself of that. (17) can describe a situation where the *syrup* is from Québec, but could have been stolen from anywhere, and the barrel containing the syrup could be from anywhere. So, for example, in a barrel from Peru, stolen from Paris, containing syrup from Québec. That's one meaning. It can also describe a situation in which the *barrel* is from Québec, but could have been stolen from anywhere and contain any kind of syrup. For example, a barrel from Québec full of Portuguese syrup, stolen from Seattle. Lastly, it can describe a situation where the stealing was from Québec, and the barrel and syrup could have been from anywhere. The difference in the meanings depends on what *from Québec* is understood to modify.

We hypothesize that the syntax and semantics of sentences are tied together fairly closely, and in particular, we will be assuming the following (which I will again make bold and enbox):

A modifier must form a syntactic constituent with the thing it modifies.

Although we aren't looking at trees specifically for these sentences (we don't have rules in place that can construct such trees), we do have information about constituent structure. From the discussion above, we learn that if *from Québec* is understood to be a modifier of *syrup*, then *syrup from Québec* must be a constituent. It must act as a unit. When we draw a tree eventually, there must be a single node of the tree that dominates the modifier, modifiee, and nothing else. Now we come to your task.

Part 4. The clefting test sentences in (18) and parts 1–2 are not as ambiguous as the original sentence in (17). Specifically, the sentence in 18 allows the barrel or syrup to be from Québec, but cannot be understood as saying that the stealing was from Québec. The sentences in parts 1 and 2 must mean that the *stealing* was from Québec (it can't be just the barrel or just the syrup that are québécois). Your task for this part is to explain why the test sentences are less ambiguous than the original sentence in (17). The things in boxes above are going to be relevant. This is a little bit challenging. Write your explanation of why certain meanings are missing from the test sentences in (relatively succinct) prose, making reference to the principles outlined above.