

v1.1: Added the lexical entry for *i* ‘this’ in problem 1.

## 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 might not look exactly like this, but just so we’re starting in the same place, here is a grammar that works for that.

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

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<i>eykey</i> ,	Ind
<i>ka</i> ,	Sub
<i>(l)ul</i> ,	Obj
<i>kemun</i> ,	Adj
<i>ulessta</i> ,	V
<i>kassta</i> ,	Vp
<i>poassta</i> ,	Vt
<i>cohanta</i> ,	Vt
<i>conkyenghanta</i> ,	Vt
<i>cuwessta</i> ,	Vd

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<i>i</i> ,	Det
<i>ku</i> ,	Det
<i>e</i> ,	P
<i>Sunhi</i> ,	N
<i>Chelswu</i> ,	N
<i>sakwa</i> ,	N
<i>kae</i> ,	N
<i>hakkyo</i> ,	N
<i>chayk</i> ,	N

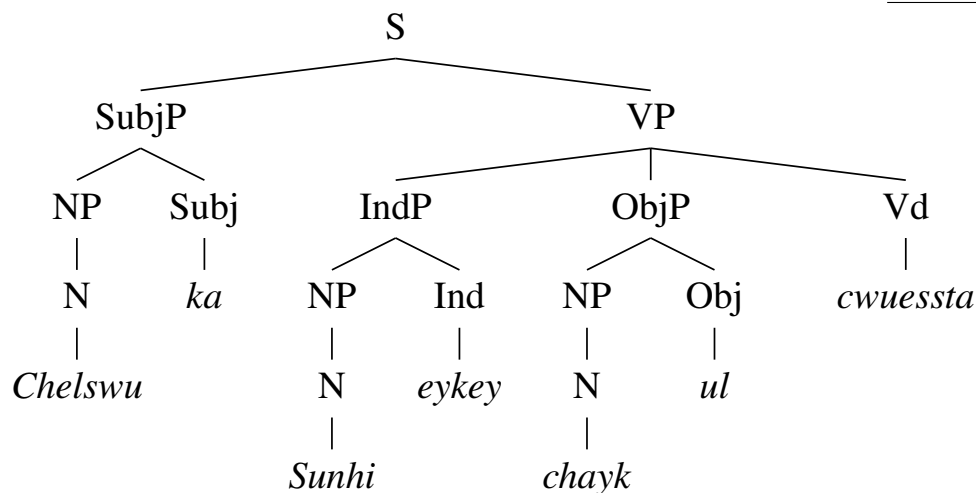
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S	→	SubjP VP
VP	→	V
VP	→	PP Vp
VP	→	ObjP Vt
VP	→	IndP ObjP Vd
NP	→	Det N
NP	→	N
N	→	Adj N
SubjP	→	NP Subj
ObjP	→	NP Obj
IndP	→	NP Ind
PP	→	NP P

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## 1.1 Incorporating conjunction

Consider the following additional Korean facts:

- (2) Chelswu ka Sunhi eykey i chayk ul kuliko ku phyen ul cwuessta.  
Chelsu SUB Sunhi to this book OBJ and that pen OBJ gave  
'Chelsu gave this book and that pen to Sunhi.'
- (3) Chelswu ka Sunhi eykey kuliko Jae eykey chayktul ul cwuessta.  
Chelsu SUB Sunhi to and Jae to books OBJ gave  
'Chelswu gave books 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 your grammar in order to generate the conjunctions in (2) and (3).

**Part 5.** Give the phrase marker your rules assign to (2).

Here is an additional sentence:

- (4) Chelswu ka ku chayk ul Sunhi eykey kuliko i phyen ul Jae eykey  
Chelsu 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.'

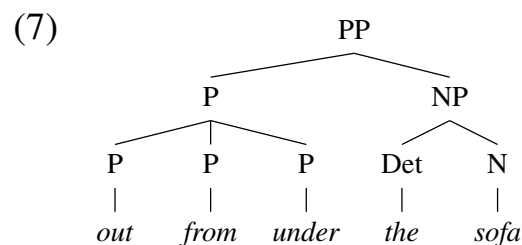
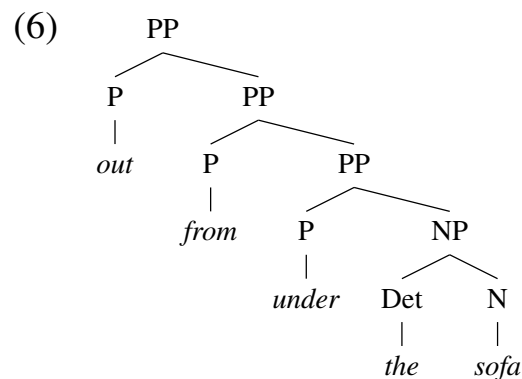
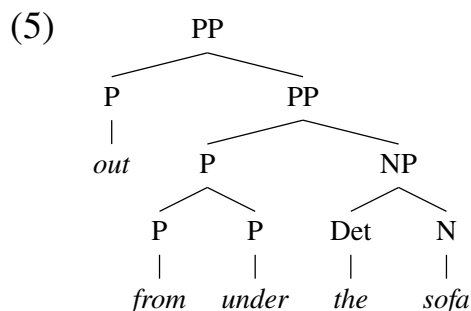
**Part 6.** Do your rules also generate (4)? (*Hint:* Nope.) Describe what it is about (4) that eludes the rules. There are a few different ways to fix this, all of which require fairly major adjustments and for which we would want to find evidence. You do not need to proceed past describing the problem(s), 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.

## 1.2 Reflection

**Part 7.** On the basis of your results and observations from last time (or, the part given at the top of the homework here) along with the part we just did with conjunction, 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. (Also, the exercise in Part 6 immediately above isn't really important for this answer, focus on the bigger similarities and differences.)

## 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)).



- (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?

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

### 3 Constituents

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

**Part 1.** Show that *a barrel of syrup from Québec* is a constituent by creating test sentences using the proform replacement and clefting tests.

**Part 2.** Show that *from Québec* is a constituent by creating test sentences using the proform replacement and clefting tests.

**Part 3.** Show that *a barrel of syrup* is a constituent by creating test sentences using the proform replacement and clefting tests.

- (18) Mary heard the rumor that Pat kissed Chris.

**Part 4.** Use the same kind of examples to show that *the rumor that Pat kissed Chris* is a constituent, but that *Chris* seems not to be. Give the test sentences as above and a sentence that says how you reach the conclusion about what is and isn't a constituent. You should wind up with four test sentences (two for the proform replacement test, two for the clefting test).

Now, of course—*of course*—*Chris* is a constituent in (18). So why is it failing some of the constituency tests? It turns out that the displacement and clefting test *systematically fail* when trying to test a constituent that is inside a noun phrase (like *the rumor that Pat kissed Chris*, which is ultimately a noun phrase headed by *rumor*). In other words, something about this is incompatible with the *test* and therefore we can't trust its results.

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

**The displacement and clefting tests 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. 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 yet looking at trees specifically, only at constituent structure, this means 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 5.** Notice that the test sentences you created *for the clefting test* in parts 1–3 are not as ambiguous as the original sentence in (17). Specifically, the sentences in parts 2 and 3 must mean that the *stealing* was from Québec (it can't be just the barrel or just the syrup that are québécois), while the sentence in part 1 can mean either that the syrup or the barrel is from Québec, but not the stealing. Your task for this part is to explain why the test sentences are less ambiguous than the original sentence in (17). Start with the test sentences for part 1, consider what I said above, and explain why the test sentences only allow interpretations where *from Québec* modifies *syrup* or *barrel (of syrup)*. Then, explain why the test sentences for parts 2–3 only allow modification of *stole (a barrel of syrup)*. These last two are a bit more complicated, but consider the implications of the bold things in boxes above. Just write your explanation of why certain meanings are missing from the test sentences in (relatively succinct) prose, making reference to the principles outlined above.