The Violation of the Coordinate Structure Constraint at LF

Introduction: Ross (1967) proposes the Coordinate Structure Constraint (henceforth, CSC), given in (1). As (1) shows, the CSC consists of two parts of statements. One is “no conjunct may be moved”. The ungrammatical sentence in (2a) falls under this part because in (2a), one of the conjoined elements, that is, what is extracted. The other is “nor may any element contained in a conjunct be moved out of the conjunct”, which rules out (2b) is ruled. What is extracted in (2b) is not a conjoined element, but an element embedded in the phrase which is conjoined. I will refer to the former part of the CSC as the CSC (1) and refer to the latter part of the CSC as the CSC (2), here. It is well known that in order to resolve the violation of the CSC (2), we have an option, that is, Across-the Board movement (henceforth ATB movement), which extracts an element out of both of the conjuncts. This is shown in (3).

Questions: Is a distinct element extracted from each conjunct, as shown in (4a) or extracted from some phrases which are conjoined, as shown in (4b)? This question has not been paid attention to in the literature. The movements in (4) behave like ATB movement in that each conjunct involves a gap but the crucial difference between them is that in (3), extracted elements are identical element while in (4), distinct elements are extracted. I will investigate whether the derivations illustrated in (4) are possible, considering Quantifier Raising at LF.

Proposals: First let us consider the situation illustrated in (4a). Example (5) is ambiguous. One reading is that the subject indefinite takes wide scope over the object quantifier. Crucially, (5) has the other reading where the object quantifier, every professor and every associate professor take wide scope over the subject quantifier. The relevant interpretation is given in (6). The LF representation of (5) is (7) in the interpretation where the objects take scope over the subject. As (7) shows, every professor and every associate professor undergo QR and adjoin to TP. I claim that (7) is an instantiation of (4a). Thus, (4a) is allowed like ATB movement. One might say that the wide scope reading of the object quantifiers is available in (5) because the whole conjoined NP every professor and every associate professor undergoes QR. However, this possibility has a problem. Clause-internal scrambling in Japanese can affect the scope interpretation like Quantifier Raising in English. As (8b) shows, the scrambled quantified expression hotondo-no syntactician to hotondo-no phonologist-o take wide scope over the subject quantifier. In (8b), it is true that scrambling of the object QP makes possible the wide scope reading of the object over the subject QP. However, the interpretation of (8b) is given in (9a), not (9b). The crucial difference between (9a) and (9b) is that in (9b), each pair of a syntactician and a phonologist must have a single student, like (6). In contrast, in (9a), the students can vary with respect to the syntacticians and the phonologists. If the whole coordinate structure underwent QR at LF in (5), it is predicted that (5) would have the interpretation given in (10), like (9a). Thus, I reject the possibility that (9) has the derivation with pied-piping. Next, let us examine whether (4b) exists. In (11), the conjoined elements are VP, which involves a quantified expression, respectively. Interestingly, (11) is unambiguous, unlike (5). The subject indefinite takes a wide scope over the object but the object quantifier cannot take wide scope over the subject. Thus, I conclude that the derivation like (4b) is not allowed.

Consequences: The conclusion of this paper provides another supporting evidence for Merchant’s (1999) view on the CSC. He argues that the CSC (1) is a condition at PF and that the CSC (2) is a condition at LF, based on ellipsis phenomena. If the CSC (1) is a condition at PF, it is predicted that the CSC (1) is violated at LF, as shown in (4a). This is because LF
computation is irrelevant to the PF component. On the other hand, if the CSC (2) is a condition at LF, I can expect that CSC (2) must be respected at LF.

**Examples**

1. In a coordinate structure, no conjunct may be moved, nor may any element contained in a conjunct be moved out of the conjunct.  
   (Ross 1967: 89)

2. a. *What1 did [TP John [NP [NP apples] and [t1]]]?  
   b. *What1 did [TP John [VP [VP eat apples] and [drink [t1]]]]?  

3. What1 did [TP John [VP [VP buy [t1] and [drink [t1]]]]?  

4. a. $X \quad Y \quad [t_X \quad \text{and} \quad t_Y]$  
   
   b. $X \quad Y \quad [\{t_X\} \quad \text{and} \quad \{t_Y\}]$

5. A student respects [every professor] and [every associate professor]. (a> every, every> a)

6. For every professor x, x is respected by a student z and for every associate professor y, y is respected by a student z.

7. [TP [every professor]1 [TP [every associate professor]2 [TP a student respects [t1 and t2]]]]

8. a. Hitori-no gakusei-ga [hotondo-no syntactician to hotondo-no one person-Gen student-Nom most-Gen syntactician Conj most-Gen phonologist-o]1 sonkei-siteiru.  
   phonologist-Acc $t_1$ respect  
   (*most> one, one> most)  
   
   b. [Hotondo-no syntactician to hotondo-no phonologist-o]1 hitori-no  
   most-Gen syntactician Conj most-Gen phonologist-Acc one person-Gen  
   gakusei-ga $t_1$ sonkei-siteiru.  
   student-Nom respect  
   (most> one, one> most)  
   ‘One student respects most syntacticians and most phonologists.’

9. a. For most syntactician x, x is respected by a student z and for most phonologist y, y is respected by a student w.  
   
   b. For most syntactician x, x is respected by a student z and for most phonologist y, y is respected by a student z.

10. For every professor x, x is respected by a student z and for every associate professor y, y is respected by a student w.

11. A student [respects every professor] and [hates every associate professor].  
   (a> every, *every> a)

**References**
