

On the Extraction of Adjectives in East Asian Languages

In Mandarin, Japanese and Korean (MJK), left branch extraction (LBE) of adjectives is impossible. Below are three ill-formed sentences in MJK all intended to mean “He ate a/the tasty cake.”

- (1) a.\*\*[Měiwèi de]<sub>i</sub> tā chī-le t<sub>i</sub> dàngāo. (M)  
tasty-DE 3sg eat-perf cake
- b.\*\*[Oishii]<sub>i</sub> kare-wa t<sub>i</sub> keiki-o tabe-ta. (J)  
tasty 3sg-top cake-acc eat-pst
- c.\*\*[Masiss-nun]<sub>i</sub> ku-ga t<sub>i</sub> keyiku-lul mek-ess-ta. (K)  
tasty-rel 3sg-top cake-acc eat-pst-dec

Böšković (2005) relates Uriagereka’s (1988:113) observation regarding the correspondence between the lack of articles in a language and the possibility of possessor extraction from their DPs to the claim that languages that allow adjectival LBE do not have overt DP layers. This correspondence, however, cannot be directly applied to MJK. Each of these languages lacks overt articles, but none of them allows adjectival LBE, though the lack of overt articles might allow some other types of LBE, e.g. extraction of genitive PPs, in Japanese and Korean as (2) shows.

- (2) a. [Dare-kara-no]<sub>i</sub> Taro-ga [<sub>DP</sub> t<sub>i</sub> tegami]-o sute-ta-no? (J)  
who-from-gen Taro-nom letter -acc discard-pst-q  
‘From whom, Taro discarded a letter?’ (Example from Takahashi 2013)
- b. [Sewul-eyse-uy]<sub>i</sub> na-nun [<sub>DP</sub> t<sub>i</sub> salm]-i cwoh-ta. (K)  
Seoul-at-gen I-top life -nom like-dec  
‘I like the life in Seoul.’

Therefore, there must exist factors other than the lack of articles that block LBE of adjectives from occurring in MJK. This paper argues that the theory of cyclic linearisation (CL) proposed by Fox and Pesetsky (2005) combined with a matching relative clause (RC) analysis for MJK adjectives provides an explanation for the ban on the extraction of adjectives.

The main claim of CL is as follows: “*Information about linearisation, once established at the end of a given Spell-out domain, is never deleted in the course of derivation.*” (Fox & Pesetsky 2005:6) CL is different from the Phase Impenetrability Condition (PIC) proposed by Chomsky (2001) in that it does not require the concept of “escape hatches” for a constituent to move out of a phase. Under CL, constituents can move out of a phase freely even after its spell-out as long as the order of the spelt-out syntactic elements remains the same. That is, each spell-out establishes a linearisation of all the elements it contains and this linearisation is preserved once and for all. I follow Ko (2014) in assuming any predicational domain to be a spell-out domain. Illustrations of licit and illicit movements adapted from Ko (2014:11) are shown below in (3): P<sub>1</sub>, P<sub>2</sub> and P<sub>3</sub> are all spell-out domains, each of which will undergo spell-out after the merger of all elements on its edge and establishes a linearisation. (3b) is licit because X has always preceded Y at the spell-out of P<sub>1</sub>, P<sub>2</sub> and P<sub>3</sub>; (3c), in contrast, is illicit since the relative order Y < X at the spell-out of P<sub>1</sub> contradicts the order X < Y at the spell-out of P<sub>2</sub>.

- (3) a. [ P<sub>1</sub> X Y [ P<sub>2</sub> Z ] ] : X < Y < Z (Original Order at P<sub>1</sub>)
- b. [ P<sub>1</sub> X [ P<sub>2</sub> t<sub>X</sub> Y [ P<sub>3</sub> t<sub>X</sub> t<sub>Y</sub> [ P<sub>1</sub> Z ] ] ] ] : X < Y at P<sub>1</sub>, P<sub>2</sub> & P<sub>3</sub> (Licit)
- c. \* [ P<sub>1</sub> Y [ P<sub>2</sub> X [ P<sub>3</sub> t<sub>X</sub> t<sub>Y</sub> [ P<sub>1</sub> Z ] ] ] ] : X < Y at P<sub>2</sub> & P<sub>3</sub>; \*Y < X at P<sub>1</sub> (Illicit)

Now let’s turn back to MJK adjectives. (For Mandarin, only adjectives with *-de* are considered.) There is ample evidence that adjectives in these languages all start out in RCs. First, adjectives can be tensed in Japanese and Korean, as shown in (4). Second, a relativiser is needed in adjectival modification in Mandarin and Korean, as shown in (5). Additionally, the temporal adverb *céng* “previously,” seen in (5a), cannot occur without the relativiser *-de*, suggesting that adjectives with *-de* have more complex structure than adjectives that occur without *-de* (not discussed here due to space constraints, but note that Sproat and Shih (1987), among others, propose that adjectives without *-de* form a compound with the nouns they modify. Therefore, it is expected that adjectival extraction from a nominal compound is impossible).

- (4) a. [<sub>RC</sub> yo-katta] hito (J) (5) a. [<sub>RC</sub> céng hǎo-de] rén. (M)  
 good-pst person previously good-rel person  
 b. [<sub>RC</sub> coh-te-n] salam (K) b. [<sub>RC</sub> coh-te-n] salam (K)  
 good-pst-rel person good-pst-rel person

RCs are generally considered to be strong islands that prevent any element from moving outside of it, so it may already seem clear at this point as to why adjectives in MJK can not be extracted. However, the islandhood of RCs is apparently not universal as some Scandinavian languages do allow extraction from RCs, as shown in (6).

- (6) [Det språket]<sub>i</sub> finns det många islänningar [som talar *t<sub>i</sub>*] (Swedish)  
 the language exist expl many Icelanders rel speak  
 'There are many Icelanders who speak that language.' (Example from Lindahl 2014)

Therefore, I argue for an explanation without recourse to the strong-islandhood analysis for RCs. The syntactic structure of sentences (1a-c) that I adopt is shown below in (7). A silent copy of *cake*, *CAKE*, is first base-generated in the Spec position of a PrP that predicates the adjective *tasty* of it, and then moves to the Spec position of a relative clause head (which projects a RelP) that will adjoin to an *nP* to complete the relativisation. Though the matching nominal is silent, I here argue that it also participates in cyclic linearisation so that its relative order with other elements should be consistent at all spell-outs throughout the derivation.

- (7) [<sub>nP</sub> [<sub>RelP</sub> *CAKE*<sub>i</sub> [<sub>Rel'</sub> [<sub>TP</sub> [<sub>PrP</sub> *CAKE*<sub>t</sub> [<sub>Pr'</sub> [<sub>AP</sub> *tasty*]]]]]]] [<sub>nP</sub> *cake*<sub>i</sub>]

Only relevant phrases are shown in (7) and they are enough to account for why *tasty* cannot be fronted. The linearisation established at the Spell-out of PrP is *CAKE* < *tasty*, which cannot be contradicted later, and that is why *tasty* cannot be fronted to end up preceding *CAKE*, no matter whether it is done through AP movement or remnant movement of another phrase (e.g. TP).

One might argue for the possibility that we can move the AP to an outer Spec,PrP so that the linear order will be *tasty* < *CAKE* at the spell-out of PrP. This, however, would be a violation of antilocality assuming the definition given by Abels (2003:92), whereby a constituent cannot raise to the Spec position of its selecting head because it should already satisfy the features of the head upon its base-merger.

I have shown that the impossibility of LBE of adjectives in MJK can be explained by the analysis that MJK all have a matching RC structure for adjectival modification and that CL disallows adjectives from being extracted from RCs. It is expected that languages that allow adjectival LBE must not have an RC structure for adjectives. In other words, if a language employs a relative clause in adjectival modification, we can predict that adjectives in this language must not be fronted away from nouns. The necessary conditions of adjectival LBE, besides the lack of overt D as mentioned by Bošković, should also include a non-RC structure for adjectival modification.

## Selected References

- Abels, Klaus. *Successive Cyclicity, Anti-locality, and Adposition Stranding*. 2003. University of Connecticut, PhD dissertation.  
 Bošković, Željko. "On the Locality of Left Branch Extraction and the Structure of NP". *Studia Linguistica*, vol. 59, no. 1, 2005, pp. 1–45.  
 Chomsky, Noam. "Derivation by Phase".