

A Smuggling approach to Korean Raising-to-Object construction

This paper examines the Raising to Object construction (RTO) in Korean. The embedded clause of an RTO constructions can contain a tense morpheme, and the overt complementizer *-ko* as in (1), indicating that the embedded clause is a finite CP.

- (1) John-i [Mary-ka/lul yeyppu-ess-ta-ko] mit-nun-ta.
 J-NOM M-NOM/ACC pretty-PAST-DECL-COMP believe-PRES-DECL
 ‘John believes that Mary was pretty.’

Given that the subject of a finite CP can be valued as Nominative case (NOM), becoming inactivated for further agreement operations (Chomsky 2006), and assuming that the Phase Impenetrability Condition (Chomsky 2001) is correct, the fact that *Mary* in (1) can agree with *v** of the matrix clause and be marked with the Accusative case (ACC) marker is surprising. Three major analyses have been proposed to solve this mystery, based on distinct base-generated positions of the ACC marked subject (ACC-sub): the base-generation approach (Takano 2003, Hoji 1991), the hybrid approach (Yoon 2007), and the raising approach (Hong 2005).

The base-generation approach argues that the ACC-sub is base-generated in the matrix clause and co-indexed with *pro* in the embedded clause. This approach would predict that no NPI complement subject is licensed when its licenser is in the embedded clause, yet this is unattested as in (2).

- (2) John-i amwuto_i eriseke ttokttokh.ci anh-Ø-ta-ko sayngkakha-n-ta.
 J-NOM anyone foolishly smart.ci-Neg-PRES-DECL-COMP think-PRES-DECL
 ‘John foolishly thinks no one is smart.’

Given that only ACC-marked subject can precede an adverb modifying the matrix predicate, *amwuto* ‘anyone’ in (2) is ACC-marked and located in the matrix clause, while its licenser *anh* ‘not’ is in the embedded clause. In concert with the clause-mate condition on NPI licensing in Korean (Sells 2006), (2) suggests that *amwuto* is base-generated in the embedded clause and licensed as an NPI, and subsequently moves to the matrix clause.

The hybrid approach argues that the ACC-sub is base-generated in the spec of the embedded CP and co-indexed with a *pro* located where it gets a theta role. Given that the first subject of Multiple Nominative Constructions can be raised to form a RTO construction (Yoon 2007), under the hybrid approach, we would expect that the ACC-sub would not show subject island effect as noted by Yoon (2007). However, there is a grammaticality discrepancy between sentences with ACC-sub and NOM-sub as in (3), while the hybrid approach predicts that (3a) and (3b) have the same extent of grammaticality.

- (3) a. Tom-i [Mary-ka apeci-ka ha-si-nun saep]-i mangha-ess-ta-ko
 T-NOM M-NOM father-Nom do-Hon-ADNOM business-NOM go.bankrupt-PAST-DECL-Comp
 sayngkakha-n-ta.
 think-PRES-DECL
 b. ??Tom-i Mary-lul_i [t_i apeci-ka ha-si-nun saep]-i mangha-ess-ta-ko
 T-NOM M-ACC father-Nom do-Hon-ADNOM business-NOM go.bankrupt-PAST-DECL-Comp
 sayngkakha-n-ta.
 think-PRES-DECL

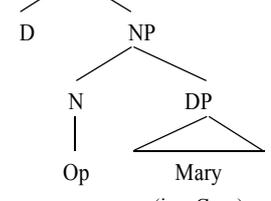
The grammaticality of (3b) can be predicted if the ACC-sub *Mary* is base-generated where it gets the theta role, a position lower than spec, CP, and moves out of the subject island to the matrix clause.

The Raising approach assumes that the ACC-sub is base-generated where it gets its theta role; hence it does not involve the problems arising in the previous analyses. However, under this approach, the ACC-sub could be checked with NOM before raising as in (1).

Given that the ACC-sub does undergo Agree with an embedded predicate, the raising approach should stipulate that Agree does not necessarily lead to Case feature valuation, as argued in Hong (2005). However, under the Agree system which assumes that feature valuation can be achieved by c-command relations, it is unclear why overt movement should accompany Agree. In response to this question, following Bobaljik and Wurmbrand (2003), Hong (2005) argues that the ACC-sub is forced to move to the matrix clause in order to be in the same Agree domain as its probe *v*. However, at a derivational stage where the ACC-sub can value its Case feature in the embedded clause before raising, moving it to a

higher clause to be in the same domain as another probe v appears unreasonable.

The smuggling approach: Adopting Collins (2005) and Hicks (2009)'s smuggling approach, I propose that the RTO constructions involve smuggling, consisting of A'-movement out of a complex null operator that has already undergone A'-movement. Then, in (1), ACC-sub *Mary* is embedded in a complex operator as in (4) and undergoes derivations as schematized in (5). The entire DP moves to spec of the embedded TP and values its [*uCase*], and subsequently moves to Spec, CP to value [*uwh*]. At this point, *Mary* is still active for further movement due to its unvalued [*uCase*]. The inner DP *Mary* continues moving out of the A'-moved complex operator phrase to the matrix clause to value its [*uCase*].

- (4)
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- (5) [John-i [_{VP} [_{DP} Mary_j] [_{CP} [_D φ_i] [_{NP} t_j] [_N Op]]]] [_{TP} t_i [_{AP} t_i yeypu]-ess]-ta-ko] mit]-nun-ta]
'John believes that Mary was pretty.'

Support for this proposal comes from two sources: 1) An intervention effect that has not been observed in the existing other literature, and 2) an asymmetrical scope relation that has been problematic for the raising approach. Regarding 1), Haegeman and Ürögdi (2010) argue that a *wh*-operator that moves to CP blocks topic movement, because the operator movement and topic movement target the same position, spec, CP. In a RTO construction, a moved topic preceding ACC-sub cannot occur while the movement is available with NOM-sub, as the contrast in (6) shows.

- (6) a. John-i [_{CP} meri-nun_i] [_{CP} Mary-ka t_i coh-ta-ko]] sayngkakha-n-ta.
J-Nom head-Top M-Nom good-Decl-Comp think-Pres-Decl
'As for smartness, John thinks that Mary is the best.'
b. *John-i meri-nun_i [_{VP} Mary-lul [_{CP} t_j] [_{CP} t_j t_i coh-ta-ko]]] sayngkakha-n-ta.
J-Nom head-Top M-Acc good-Decl-Comp think-Pres-Decl
Int. 'As for smartness, John thinks that Mary is the best.'

This contrast can be captured if Acc-sub is embedded in a complex null operator of which [*uwh*] triggers A'-movement to spec, CP of the embedded clause. From this position, the Acc-subject undergoes A'-movement to the matrix clause to value its [*uCase*]. The spec, CP of the embedded clause is taken by a null operator, which would block the topic movement of *meri-nun* 'head-Top'.

Regarding 2), RTO constructions in Korean involve asymmetrical scope behavior as in (7).

- (7) Mary-ka haksayng se myeong-ul motun sensayngnin-eke soke-toieci-eyaha
M-NOM students three CI-ACC every teacher-DAT introduce-PASS-should
-n-ta-ko sayngkakha-n-ta.
PRES-DECL-COMP think- PRES-DECL
'Mary thinks that three students should be introduced to every teacher' (three > every;
*every>three)

The ACC-sub *three students* in (7) does not show reconstruction effects, while that with NOM has both the surface reading and the inverse scope reading. Given that A'-movement exhibits reconstruction effects (May 1977), (7) is puzzling under the raising approach. However, under the smuggling approach, this surprising fact can be accounted for. Chomsky (2015) argues that an NP embedded in a DP which has undergone A'-movement may optionally reconstruct, whereas the D head does not, because the D head determines scope relations, e.g., *wh*-operator. Extending this idea, I argue that all functional projections that have undergone A'-movement do not reconstruct. Therefore, in (7), the numeral quantifier *three* in a NumP does not induce reconstruction effect, by virtue of involving A'-movement.

The smuggling operation was first proposed by Collins (2005a,b) to account for raising and passive constructions. Hicks (2009) extended this approach to tough-constructions. In this paper, I propose that RTOs in Korean may involve the smuggling movement configuration. This use of smuggling may suggest that it is a real feature of the language faculty languages rather than a technical invention.