

Getting Rid of ‘Double Relative Clauses’ in Korean*

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1 Introduction

It has been claimed in the literature that Korean allows relativization out of another relative clause, deriving the so called ‘double relative clauses’. The presence of ‘double relative clauses’ has led some researchers to argue that Korean relative clauses do not involve any operator movement, but rather they are formed via some sort of unselective binding mechanism (H.-M. Sohn 1980, Y.-S. Kang 1986), where an operator binds variables in situ. In this paper, we argue that there is no true ‘double relative clause’, thus no real threat to the operator movement analysis for relative clauses in Korean. More specifically, we propose that the so-called ‘double relative clauses’ are derived from double nominative constructions, by relativizing the first nominative NP which originates from an IP-adjoined position. Given our analysis, the so-called ‘double relative clauses’ are not instances of island violations, and the operator movement analysis for relative clause formation in Korean can be maintained.

2 Description of the Data

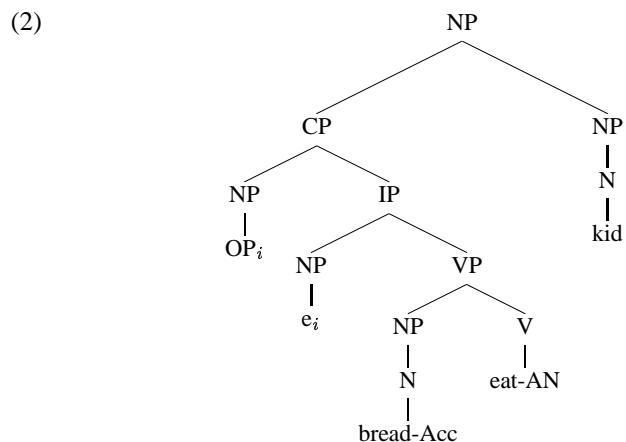
In Korean, a main verb in a relative clause is inflected with an adnominal morpheme *-(n)un* (glossed as *AN*), which indicates that the clause is modifying a noun. Since Korean is a head-final language, the head noun occurs to its right. An example of a relative clause with a subject gap is given in (1).

- (1) [_{NP} [_{IP} e ppang-ul mek-nun] ai]
e bread-Acc eat-AN kid
‘the kid who is eating bread’

Although Korean does not have any overt relative pronoun, it is standardly assumed that there is an empty relative pronoun operator in [Spec, CP] which is syntactically associated with a gap in the relative clause. The relative clause in (1) can be structurally represented as in (2). The syntactic relation between

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the empty operator and the subject gap is instantiated by coindexation. Under the operator movement analysis, the subject gap e_i is a trace of the empty operator OP_i .

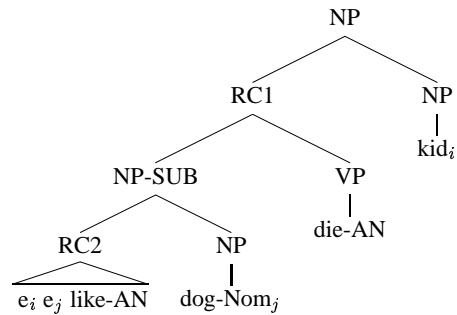


The presence of the so-called ‘double relative clauses’, however, poses a problem for the operator movement analysis because they appear to involve relativization out of another relative clause. For instance, in (3a), the object NP which is associated with *kangaci-ka* (‘dog’) has relativized and then the subject NP which is associated with *ai* (‘kid’) has relativized (*dog* is the subject of *die*). The problem for the operator movement analysis is caused by the subject gap (e_i) because it appears to have relativized out of another relative clause, which is an island violation. This is illustrated in the tree structure in (3b).¹

- (3) a. $[_{RC1} [_{RC2} e_i e_j coaha-nun] kangaci-ka_j cwuk-un] ai_i$
 $e_i e_j like-AN dog-Nom_j die-AN kid_i$
 ‘the kid $[_{RC1} who_i the dog [_{RC2} which_j e_i liked e_j] died]$ ’

¹When representing relative clauses in the rest of the paper, we leave out the empty relative pronoun operator and directly coindex the head noun and the gap in the relative clause for sake of simplicity.

b.



Because of examples such as in (3a), some researchers have suggested that relative clauses in Korean should be analyzed using unselected binding, where the gaps in the relative clause are a pronominal variable and they are bound by the empty operator in situ (H.M. Sohn 1980, Y.S. Kang 1986). According to this approach, there should be no island effects in relative clauses in Korean. However, there are many cases where island effects are clearly observed, as illustrated in (4).

- (4) a. * [John-i [CNP [e_i posek-ul hwumchyessta-nun]
 John-Nom e_i jewel-Acc stole-AN
 sosik-ul] tul-un] kangto_i
 news-Acc hear-AN robber_i
 ‘The robber who_i John heard [CNP the news that e_i stole the
 jewel]’
- b. * [[AC John-i e_i mannasski ttaymwuney] Sue-ka
 John-Nom e_i met because Sue-Nom
 hwakana-n] namca_i
 be-angry-AN man_i
 ‘The man who_i Sue was angry [AC because John met e_i]’

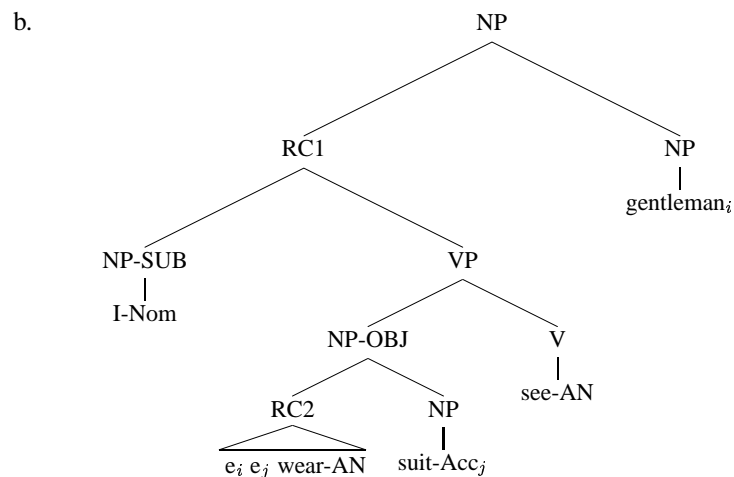
The example (4a) is bad because the subject has relativized out of a complex NP (CNP), and the example (4b) is bad because the object has relativized out of an adjunct clause (AC).

So far we have seen that island effects attested in relative clauses provide strong evidence for the operator movement analysis, but one obvious problem is that it cannot handle ‘double relative clauses’. In section 3, we briefly discuss an analysis for ‘double relative clauses’ proposed by J.-I. Han (1992), who attempts to account for the phenomenon by maintaining the operator movement analysis for relative clauses in general.

3 A Previous Analysis: J.-I. Han (1992)

J.-I. Han (1992) points out a couple of restrictions on ‘double relative clauses’ in Korean. First, the double relative clause formation is possible only when the lower relative clause is in a subject position, as in (3). An example of a bad case where an NP has relativized out of a relative clause in an object position is given in (5a) (with the corresponding tree structure in (5b)).

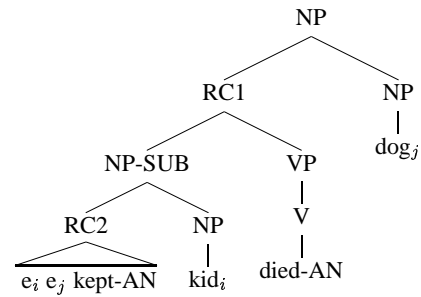
- (5) a. * [RC1 nay-ka [RC2 e_i e_j ip-un] yangpok-ul_j po-n]
 I-Nom e_i e_j wear-AN suit-Acc_j see-AN
 sinsa_i
 gentleman_i
 ‘The gentleman [RC1 who_i I saw the suit [RC2 which_j e_i wore e_j]]’



Second, non-subject NPs cannot relativize out of another relative clause, as illustrated in (6a) (with the corresponding tree structure in (6b)). The example in (6) is bad because an object NP has relativized out of the relative clause RC2, leaving the gap e_j .

- (6) a. ?? [RC1 [RC2 e_i e_j khiwecwu-n] ai-ka_i cwuk-un] kay_j
 e_i e_j kept-AN kid-Nom_i die-AN dog_j
 ‘The dog [RC1 which_i the child [RC2 who_j e_j kept e_i died]]’

b.



J.-I. Han (1992) argues in the spirit of Huang (1989) that in relative clauses in Korean, the subject gap is a base-generated *pro* which is subject to Huang's Generalized Control Theory, whereas the object gap is a variable left by the movement of the empty operator. Accordingly, (5a) is bad because the presence of a closer potential antecedent *nay-ka* ('I-Nom') blocks the subject gap from being coindexed with the head noun. Crucially, the ungrammaticality of the example in (5a) is not caused by an island violation. In contrast, (6a) is bad because the object gap is a variable (trace) left by the movement of the empty operator out of another relative clause, which is an island violation.

However, there are several problems with J.-I. Han's analysis. For instance, we can construct good examples where non-subject NPs do appear to have relativized out of another relative clause. The example in (6a) becomes grammatical, simply by changing the first head noun *ai* ('kid') to *cuwin* ('owner'), as illustrated in (7).

- (7) [_{RC1} [_{RC2} e_i e_j khiwecwu-n] cwuin-i_i cwuk-un] kay_j
 e_i e_j kept-AN owner-Nom_i die-AN dog_j
 'The dog [_{RC1} which_i the owner [_{RC2} who_j e_j kept e_i died]]'

Furthermore, J.-I. Han's proposal wrongly predicts that subject relativization out of a complement clause is bad, since the matrix subject counts as a potentially closer antecedent. For instance, the example in (8) should be bad because the matrix subject *Mary* is a potentially closer antecedent for the gap e_i, blocking co-indexation between e_i and the head noun *ku namca* ('that man'). But clearly, the example in (8) is good.

- (8) [_{RC} [Mary-ka [e_i chencay-lako] malha-nun]] ku namca_i
 Mary-Nom e_i genius-Comp say-AN that man_i
 'The man that Mary said is a genius'

4 Analysis

4.1 Double nominative constructions

We propose an analysis of ‘double relative clauses’ that crucially depends on the availability of double nominative constructions in Korean, as illustrated in (9).

- (9) a. ai-ka kay-ka cwukessta.
kid-Nom dog-Nom died
‘As for the kid, the dog died.’
b. sinsa-ka yangpok-i telepta.
gentleman-Nom suit-Nom dirty
‘As for the gentleman, the suit is dirty.’

Semantically, the first nominative NP is very much like a sentence topic in that it denotes what the sentence is about (in the sense of Reinhart (1981), Gundel (1985), Horn (1986)). Furthermore, it is in a certain semantic relation with the second nominative NP, the exact nature of which is determined by pragmatic implicature. For instance, in (9a), the sentence is about a kid, and it implies that the dog that died belongs to the kid. In (9b), the sentence is about a gentleman, and it implies that the suit that is dirty is worn by the gentleman. Such double nominative constructions can only be formed with stative verbs or adjectives (Y.-J. Kim 1990). They cannot be formed with activity verbs as shown in (10).

- (10) * ai-ka kay-ka cic-ess-ta.
kid-Nom dog-Nom bark-Past-Decl
‘As for the kid, his dog barked.’

Syntactically, we assume that the second nominative NP and the predicate form an IP and the first nominative NP is adjoined onto this IP. A supporting argument for this assumption is that the second nominative NP and the predicate can by themselves form a complete sentence, as shown in (11).

- (11) a. kay-ka cwukessta. b. yangpok-i telepta.
dog-Nom died suit-Nom dirty
‘The dog died.’ ‘The suit is dirty.’

Moreover, the two nominative NPs can be separated by an adverb, as shown in (12). This fact rules out the structure where the first NP is adjoining to the second NP, as a possible structure for double nominative constructions.

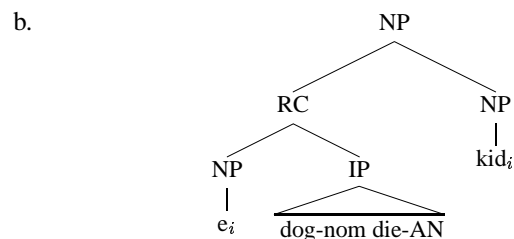
- (12) a. ai-ka sasil kay-ka cwukessta.
 kid-Nom frankly dog-Nom died
 ‘As for the kid, frankly the dog died.’
- b. sinsa-ka onul yangpok-i telepta.
 gentleman-Nom today suit-Nom dirty
 ‘As for the gentleman, (today) the suit is dirty.’

The adverb placement fact indicates that there is a position available for adverbs to adjoin between the two nominative NPs. If we assume that there is an IP composed of the second nominative NP and the predicate, the adverb can adjoin to this IP. The structures we assume for double nominative sentences in (9) are given in (13). For convenience, we will refer to the position for the first nominative NP as the ‘IP-adjoined topic position.’

- (13) a. [_{IP} kid-Nom [_{IP} dog-Nom died]]
 b. [_{IP} [_{IP} gentleman-Nom suit-Nom dirty]]

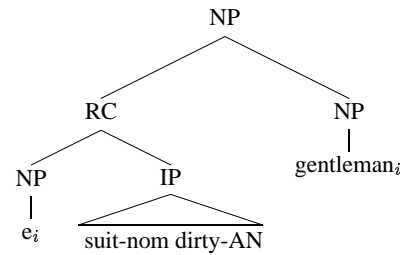
Crucially, the first nominative NP in double nominative constructions can be relativized. Examples and the corresponding tree structures are given in (14) and (15).

- (14) a. [_{RC} e_i [kay-ka cwuk-un]] ai_i
 e_i dog-Nom die-AN kid_i
 ‘The kid whose dog died’



- (15) a. [_{RC} e_i [yangpok-i telew-un]] sinsa_i
 e_i suit-Nom dirty-AN gentleman_i
 ‘The gentleman whose suit is dirty’

b.

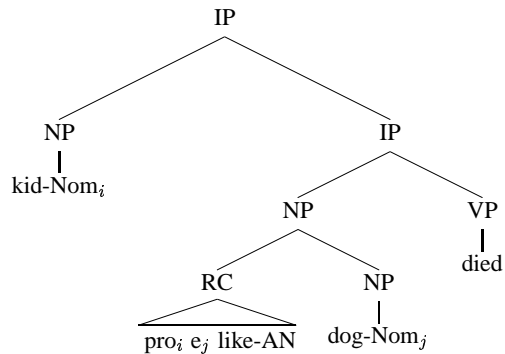


4.2 Proposal

We propose that the source sentences for the so-called ‘double relative clauses’ are double nominative constructions, where the second NP contains another relative clause which has an empty *pro* that is coindexed with the first nominative NP. This is shown in (16a) (with the corresponding tree structure in (16b)).

- (16) a. ai-ka_i [RC pro_i e_j coaha-nun] kangaci-ka_j cwukessta.
 kid-Nom_i pro_i e_j like-AN dog-Nom_j died
 ‘As for the kid, the dog that he liked died.’

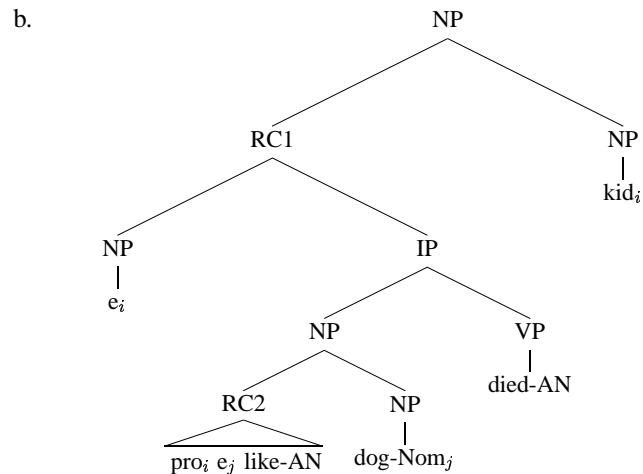
b.



The relative clause in (16a) essentially specifies how the second NP is semantically related to the first NP. In this case, the reference of the second NP (‘the dog’) is something that the reference of the first NP (‘the kid’) likes.

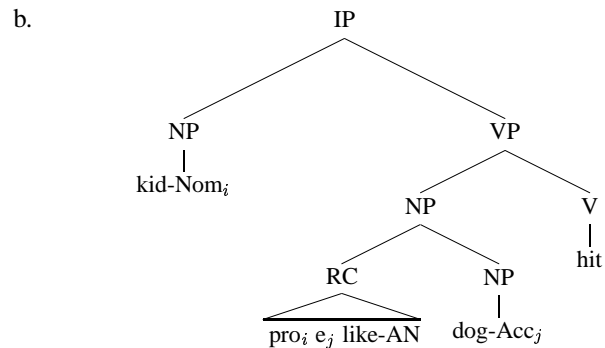
By relativizing the first NP in (16a), the relative clause in (17a) (the tree structure in (17b)) is derived. Under our analysis, the problematic gap in the ‘double relative clause’ originates from the IP-adjoined topic position and not from the subject position of a relative clause. Hence, no island violation is involved.

- (17) a. [RC_1 e_i [RC_2 pro_i e_j *coaha-nun*] *kangaci-ka_j* *cwuk-un*] ai_i
 e_i pro_i e_j like-AN dog-Nom_j died-AN kid_i
 ‘The kid whose dog which he liked died’



At this point, one may wonder why the *pro* in the lower relative clause is co-referential with the IP-adjoined topic NP. That is, in (16b), why should the *pro* subject of *coaha-nun* (‘like-AN’) in the lower relative clause be coreferential with the IP-adjoined topic NP. In Korean, an empty subject pronoun in an embedded clause must be coreferential with the matrix subject, as in (18a).

- (18) a. ai - ka_i [RC pro_i e_j *coaha-nun*] *kangaci-lul_j* *ttaylyessta*.
 kid-Nom pro_i e_j like-AN dog-Acc_j hit
 ‘The kid hit the dog he likes.’

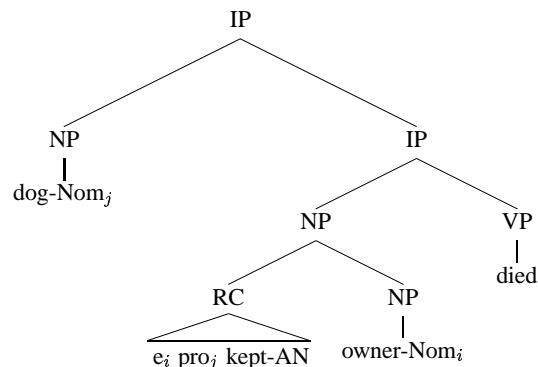


This suggests that the coindexation between the IP-adjoined topic NP and the *pro* in the lower relative clause in a ‘double relative clause’ is an example of a more general co-reference phenomenon already pervasive in Korean.

What about the cases in which object NPs seem to be able to relativize out of another relative clause? Under our analysis, the source sentence for this is a double nominative construction where the second NP contains a relative clause and this relative clause has a *pro* object that is coindexed with the first nominative NP. An example is given in (19a) (with the corresponding tree structure in (19b)).

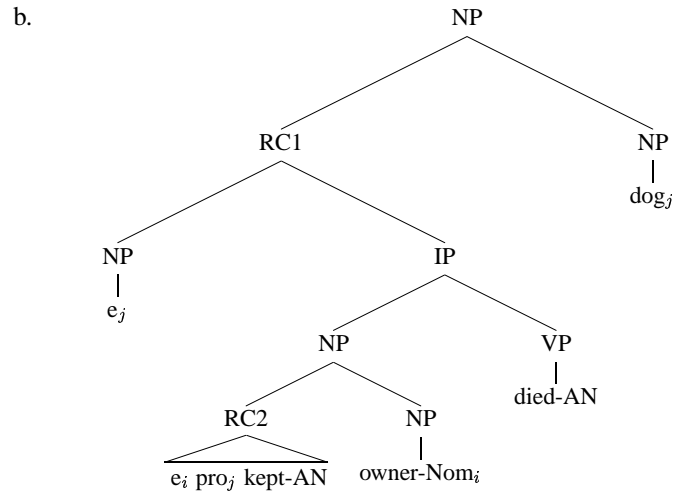
- (19) a. kay-ka_j [_{RC} e_i pro_j khiwecw-n] cwuin-i_i cwuk-ess-ta.
 dog-Nom_j e_i pro_j kept-AN owner-Nom_i died
 ‘As for the dog, his owner who kept him died.’

b.



By relativizing the first NP, the relative clause in (20a) (the tree structure in (20b)) is derived with no island violation.

- (20) a. [_{RC1} e_j [_{RC2} e_i pro_j khiwecwu-n] cwuin-i_i cwuk-un] kay_j
 e_j e_i pro_j kept-AN owner-Nom_i die-AN dog_j
 ‘The dog whose owner who kept him died.’



Under our analysis, (6a) (repeated here as (21)) is degraded, not because of syntax but because of interpretation, since (21) has the same syntax as (20a).

- (21) ?? [_{RC1} e_j [_{RC2} e_i pro_j khiwecwu-n] ai-ka_i cwuk-un] kay_j
 e_j e_i pro_j kept-AN kid-Nom_i died-AN dog_j
 ‘The dog whose child who kept him died’

While it is easy to establish a relation between *a dog* and *his owner* (as in (19a)), it is not so easy to do so between *a dog* and *his child* without any contextual information.

Our analysis predicts that ‘double relative clauses’ are impossible if a relevant double nominative construction cannot be formed as a source. This prediction is borne out through the restriction that the double relative clause formation is possible only when the lower relative clause is in a subject position. In order to form a ‘double relative clause’ when the lower relative clause is in an object position as in (5a), the source double nominative construction would have to be formed with a transitive predicate, as in (22). But double nominative constructions cannot be formed with transitive predicate. Accordingly, ‘double relative clauses’ cannot be formed when the lower relative clause is in an object position.

- (22) * [_{IP} sinsa-ka [_{IP} nay-ka yangpok-ul poassta]].
 gentleman-Nom I-Nom suit-Acc saw
 ‘As for the gentleman, I saw the suit.’

5 Conclusion

In this paper, we have argued that the so-called ‘double relative clause’ in Korean are derived from a double nominative construction by relativizing the first nominative NP which originates in IP-adjoined position. Under our analysis, there is no island violation in the apparent ‘double relative clause’ formation. Therefore, the operator movement analysis for relative clauses in Korean can be maintained. Our analysis predicts that if a language has a double nominative construction of the sort presented here, it should also have apparent ‘double relative clauses’. Verifying this prediction is left for future research.

References

- Gundel, J. (1985) “‘Shared Knowledge’ and Topicality,” *Journal of Pragmatics* 9:1, 83–107.
- Han, J. I. (1992) “The status and reference of empty categories in relative clauses,” in *Proceedings of the 1992 Seoul International Conference on Linguistics*, The Linguistic Society of Korea, Seoul, 529–536.
- Hasegawa, N. (1984) “On the so-called ‘zero pronouns’ in Japanese,” *The Linguistic Review* 4, 280–341.
- Horn, L. (1986) “Presupposition, Theme, and Variations,” in *Papers from the 22nd Regional Meeting, CLS*.
- Huang, J. (1989) “Pro Drop in Chinese: a Generalized Control Theory,” in Jaeggli and Safir, eds., *The Null Subject Parameter*, Kluwer.
- Kang, Y. S. (1986) *Korean syntax and universal grammar*, Doctoral dissertation, Harvard University.
- Kim, Y.-J. (1990) *The Syntax and Semantics of Korean Case: the Interaction between Lexical and Syntactic Levels of Representation*, Doctoral dissertation, Harvard University.
- Reinhart, T. (1981) “Pragmatics and Linguistics: an Analysis of Sentence Topics,” *Philosophica* 27, 53–94.
- Sohn, H. M. (1980) “Theme-prominence in Korean,” *Korean Linguistics: Journal of the International Circle of Korean Linguistics*.

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