

A Study on Case Realization within DP

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1. Introduction

From a cross-linguistic perspective, Korean and Japanese share many significant syntactic properties. One of them is the Case system and the extensive uses of Case particles. What is particularly interesting is that there are many accounts dealing with a Japanese syntactic phenomenon called Case Alternation within DP. To be more specific, some interesting Case alternations (or conversions) within DP in a language like Japanese have been reported and explored in depth for years. Saito (1983), Miyagawa (1993), and Ochi (in preparation) are among many more.

For example, in Japanese, the Japanese expression *John-ga/no tabeta pizza* 'pizza that John-Nom/Gen ate' shows that either a Nominative Case particle or a genitive Case particle occurs with the subject DP/NP. Likewise, many Korean linguists such as S.-K. Kim (1992), K.-H. Kim (1984), J.-S. Seo (1992), H.-K. Kim (1965), and H.-B. Choi (1961) have investigated a similar phenomenon in Korean. Although the Nominative/Genitive Case alternation in contemporary Korean does not seem to be as productive as Japanese or Middle Korean, we still can find an expression like *na-ka/uy salten kohyang* 'the hometown that I/my had lived'. Why is it that certain instances of Nominative/Genitive Case alternation are much more acceptable than some others? In this paper, we compare and examine some accounts of the Case conversion phenomena within DP.

In our intuition, this kind of construction is to be considered at best marginal. This intuition is shared by many linguists, such as Whitman (1998), J.-H. Yoon (personal communication, 1998), Sohn (1997), Jang (1995), and many other native speakers of Korean. Then, the question is, why *na-ka/uy salten kohyang* is commonly found and judged acceptable by even those who reject the Case particle alternation possibility. This renders us to wonder why and how Case conversion is ever possible at all.

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The overall organization of this paper is as follows: in Section 2, we discuss the already existing analyses; movement approaches and a base-generated approach to genitive subject NP in Korean. Then, we sketch Whitman (1998)'s Restructuring analysis and Yu (1995)'s Exceptional Case Marking approach, and Sohn (1997)'s Generalization about the phenomenon.

In Section 3, we sketch Harley and Noyer (1997)'s analysis of Gerunds/Mixed Nominalization in English. Basically following their proposal about English Gerund being Small Clause, we differentiate two expressions; the Nominative marked NP/DP is a regular NP/DP and the Genitive marked NP/DP is a type of Gerund and thus is treated as an instance of Small Clause. We argue that the Genitive Case marked DP/NP is in the Spec of Small Clause. The Section 4 is closed with a brief remark at the end.

2. Previous Analyses of Case Particle Alternation

2.1 Movement Analyses

The Case particle alternation phenomenon in Japanese and/or Korean has received a great deal of attention in the field of syntax; one well-known approach to the issue is a movement approach, in which the genitive NP under investigation is derived by some kind of movement. One of such accounts is Saito (1983)'s. He argues that the genitive NP *John* in the examples below moves from [Spec, IP] to [Spec, DP] at overt syntax so that it receives its Genitive Case *-no*.

- (1) John-no [t ... tabeta] pizza
 John-Gen [t ... ate] pizza
 'pizza that John ate'

One of the advantages of his analysis is that any maximal projection in Japanese may bear *-no* as the following example indicates.

- (2) [Mary-no nihon-de-no suugaku-no benkyoo]
 Mary-Gen Japan-in-Gen math-Gen studying
 'Mary's studying of math in Japan'

As a matter of fact, attaching *-no* to the end of NP in Japanese seems very productive. Thus, Saito's analysis has its advantage, but some scope facts are pointed out later.¹

Miyagawa (1993), on the other hand, proposes a somewhat different movement account. That is, this Case particle *ga/no* conversion is the result of an LF movement. His argument is as follows:

First, he points out that a lexical element like *kinoo* 'yesterday' can appear to the left of the genitive marked DP/NP as (3) shows.

- (3) a. [[kinoo Hanako-no katta] hon]
 [[yesterday Hanako-Gen bought] book]
 'a book that Hanako bought yesterday'

1. Unlike Japanese, in contemporary Korean, *-uy* is not productive at all. Yoon (1991), however, illustrates many Korean examples with *-uy*, which seem quite productive. See Yoon (1991). Like Sohn (1997) and Whitman (1998), we take many occurrences of *-uy* after NPs to be at best marginal. It is interesting to note that many Korean grammarians within the tradition of prescriptive grammar or diachronic approach report many occurrences of *-uy*, though. This diachronic perspective over the phenomena is given in Whitman (1998), where he explores *seppo sangcel*.

- b. [kinoo-no patii] ‘yesterday’s party’
 yesterday-Gen party
- c. *[kinoo patii] ‘yesterday party’
 yesterday party

When *kinoo* is inside the complement clause, there must be accompanied by *no* as (3b) and (3c) show. Note that (3a) which contains *kinoo* without *no* appears to the left of the genitive marked DP/NP. Thus, *kinoo* in (3a) can be said to be inside the complement clause in overt syntax, now that the example is grammatical. Consider the following.

- (4) [[Taroo-ga itta] riyu]
 [[Taroo-Nom went] reason]
 ‘The reason why Taro went’
- (5) [[(kinoo) [John-ka Mary]-ga kita] riyu]-o osiete
 [[(yesterday) [John-or Mary]-Nom came] reason]-acc tell me
 ‘Tell me the reason why John or Mary came’
- (6) [[(kinoo) [John-ka Mary]-no kita] riyu]-o osiete
 [[(yesterday) [John-or Mary]-Gen came] reason]-acc tell me
 ‘Tell me the reason why John or Mary came’

Both (5) and (6) are legitimate Japanese sentences, but they are different in their meanings: the interpretation of (5) is that there is one reason for either John or Mary’s coming. This is so because *riyu* (=reason) takes wider scope over the Nominative subject QP *John or Mary*. In (6), however, the genitive subject QP *John or Mary* has wider scope over *riyu* ‘reason’. Therefore, the sentence is ambiguous in that there can be two reasons such as John’s reason of coming and Mary’s reason of coming. If one assumes that the scope fact is related to LF operation, Miyagawa’s argument holds. The ambiguity of (6) is now correctly accounted for if the genitive marked QP moved at LF to take a wider scope over the head noun, *riyu*.

Miyagawa argues that a lexical item like *kinoo* can appear to the left of the genitive marked DP/NP, and that the genitive marked NP/DP displays scope fact. Thus, he concludes that at overt syntax, the DP/NP is inside the complement clause which is a relative clause. Then at LF, it raises out of the sentential complement clause to the SPEC of DP/NP, the head noun.

If *Hanako-no* is already moved at overt syntax, then there is no way to explain the existence of the IP adverbial, *kinoo* ‘yesterday’ without *no*. His point is clearly demonstrated in the following examples.

- (7) [[kinoo-no Hanako-ga itta] patii]
 [[yesterday-Gen Hanako-Nom went] party]
 ‘party that Hanako attended yesterday’

In the above example, the sentential adverbial *kinoo* ‘yesterday’ associated with the higher DP has *no*.

- (8) [Hanako-no [kinoo t katta] hon]
 [Hanako-Gen [yesterday t bought] book]
 ‘a book that Hanako bought t yesterday’

Note that one of the problems with Miyagawa's analysis is conceptual or theory-internal. Recently, it is demonstrated that only overt movement affects scope and binding relations. cf. Lasnik (1995). If this is the case, then Miyagawa's LF movement approach faces a conceptual problem, because LF operations are not supposed to affect scope, and yet his arguments depends on the scope difference between the genitive marked DP/NP and the nominative marked DP/NP..

Another problem that Miyagawa's analysis confronts is pointed out by Ochi (in preparation). He raises a question about the nature of the movement, if the case conversion is an instance of LF movement. Is it A movement or is it A-bar movement? Miyagawa himself proposes that Spec of DP may be either A or A-bar position. It seems highly ad hoc to say that some instances of the genitive NP are in A position and others are in A-bar position.² Furthermore, as Whitman (1998) points out, any type of movement analysis, either overt or covert, would suffer from the semantic connection between the genitive subject and its head noun.

2.2 A Base-Generated Approach

Let us now turn to a base-generation approach to the case conversion phenomena. Kim (1965) raises a thought-provoking question as to the grammatical status of *uy* in Korean expressions like *kwukmin-uy hal pa* 'what Korean people should do'. Kim's question is whether *kwukmin-uy* is the subject of the predicate *hal* 'to do'. His question has triggered heated debates over time since the interpretation of the genitive marked NP *kwukmin-uy* 'Korean people's' is "felt" to be the subject of the embedded verb *hal* 'should do'. What he is not aware of is that an empty pronominal can function as the subject of the predicate *hal*; thus, his main concern is whether *kwukmin* is the subject of the predicate *hal* or the true possessive NP.

Let us first have a closer look at the internal structure of the DP. Although he did not give the internal structure of the DP in a modern version, we translate his assumptions into the following:

(9) a. *kwukmin-uy hal pa*³

b. [DP *kwukmin-uy* [RC *e ha-l*] *pa* DP]
 people-Gen e do-asp thing(or duty)
 'people's thing(duty) to do'

2. Ochi (in preparation), in fact, argues that what happens in Japanese *ga/no* conversion involves what happens in English ECM constructions. English ECM construction, under Lasnik (1995, 1998) involves an optional overt movement.

3. This lexical item, *pa* has a peculiar status. Under Korean traditional grammar, this item is considered to be an incomplete nominal. It is certain that this item has nominal properties in that it takes a Nominative/Accusative Case particle as in the following.

a. *kukes-un kwukmin-uy ha-l pa-ka anita*
 that-Top people-Gen do-Asp pa-Nom not-se
 'That is not what people should do'

b. *ne-nun ha-l pa-lul ta hala*
 you-Top do-asp pa-Acc all do-Imp.
 'Do the things you should do'

pa is a bound morpheme and hence it can not stand alone. It must have an adnominal or prenominal clause in front of it. Here in this example, it functions like a head noun of an adnominal clause.

- c. kwukmin-i ha-l pa
 people-Nom do-asp thing(or duty)
 ‘people’s thing(duty) to do’

The availability of (9c) with the Nominative Case particle is very reminiscent of what we have found in the Nominative/Genitive Case alternation both in Japanese and in Korean “frozen” expression like *na-uy sal-te-n kohyang*. Kim argues that *kwukmin-uy* is the determiner of the predicate *hal pa*, based on the recursive productivity of the position within DP. Kim gives the following relevant examples.⁴

- (10) a. na-uy/*ka yeys chinkwu
 I-Gen/*Nom old friend
 ‘an old friend of mine’
- b. na-uy/ka salangha-nun chinkwu
 I-Gen/Nom love friend
 ‘a friend that I love’
- c. kwukmin-uy/i mattanghi hayeya-hal il
 people-Gen/Nom obligatorily do-should work
 ‘the work that people should obligatorily do’

(10a) involves a true adjectival modifier between the Possessive NP and the head NP. This is so because we do not find the Genitive/Nominative Case alternation in that example. Unlike (10a), (10b) and (10c) allow the Case alternation. Kim distinguishes a phrasal DP from a clausal DP. In his terminology, a phrasal DP is the one with the Genitive Case particle, and the clausal DP is the one with the Nominative Case particle.

His account, however, leaves many things unspecified.; no explanation about why the subject of the relative clause is missing and what the missing subject is in nature is given. To translate his account into a more updated form, we can say that the genitive DP/NP is a true determiner and is base-generated in the Spec of the larger DP/NP, and that the DP/NP in the inner clause must be an empty pronominal, something like pro.

2.3 ECM Approaches

On the other hand, Yu (1995) makes an interesting proposal. He argues that Korean genitive Case is an instance of structural Case, based on his data given in (11).

- (11) a. [NP[CP na-uy sal-te-n] kohyang]
 I-Gen live-Asp-Adn hometown
 ‘the hometown where I used to live’
- b. [NP[CP na-ka sal-te-n] kohyang]
 I-Nom live-Asp-Adn hometown
 ‘the hometown where I used to live’

He notices that these examples do not contain Tense in the adnominal clauses, just like English Exceptional Case Marking constructions do not. Thus, under his proposal, the Nominative/Genitive Case alternation is a consequence of Exceptional Case Marking.

4. Kim’s example contains an adjective *yeys* (=old). This particular lexical item is not very common in its use. For example, *yeys na-uy chinkwu* (=old my friend) is not acceptable, and its ungrammaticality is due to the idiosyncrasy of the word, *yeys*. For an example, *mesissnun na-uy chinkwu* (=handsome my friend) is a fine sequence of Korean NP/DP.

The English Genitive Case has been argued to be an instance of inherent Case, under Chomsky (1995). However, T. Yu (1995: 89-91) argues that the Korean Genitive Case must be an instance of structural Case just like the Nominative Case or Accusative Case. To account for two different potential Case particles shown in (11a) and (11b), he argues that a noun, a lexical category, N^0 assigns a Genitive Case in Korean. Thus, the Genitive Case particle *-uy* is a realization of the structural Case assigned by the head noun *kohyang* 'hometown'. He obviously assumes the lexical category N^0 to be a structural Case assigner in Korean.⁵

He argues that his ECM account of *ka/uy* conversion or alternation is empirically supported by the following examples where the Case conversion is disallowed in Tens-ed or Agr-ed clauses. This is so because ECM is typically allowed only in infinitival IP.

- (12) a. [[halmenim-uy ip-usi-n] os] -i kkaykkusha-ta
 [grandmother-Gen wear-Hon-Adn] clothes -Nom clean-se
 'The clothes that the grandmother wears are clean'
- b. *?[[halmenim-uy ip-usi-ess-ten os] -i kkaykkusha-ta
 grandmother-Gen wear-Hon-Tns(pst)-Adn] clothes -Nom clean-se
 'The clothes that the grandmother wears are clean'
- c. *?[[John-uy ecey Mary-eykey cwu-n] chayk]
 John-Gen yesterday Mary-to give-Adn book
 'a book that John gave to Mary'

The above examples show that when the inner relative clause is tensed or shows honorific agreement, then the NP with genitive Case particle is unacceptable.⁶ Of course, if (12b) and (12c) contain *John-i*, then they become grammatical. Therefore, Yu's ECM account to the Case conversion phenomena is at least consistent with the empirical facts considered so far.

However, there is some evidence that suggest that Yu's ECM account of the Case conversion is not without problems. In Hong (1985), the following set of data is presented to argue for the Exceptional Case Marking in Korean. We notice that the subject of the embedded clause may take an accusative Case particle.

- (13) a. John-i Mary-ka ttokttokhata-ko mitnunta
 John-Nom Mary-Nom be smart-Comp believe-pre
 'John believes that Mary is smart'

5. Unlike Korean, English N^0 is not a structural Case assigner. For a nominal complement to a head noun, a preposition like *of* has to appear to satisfy Case Filter.

6. An anonymous reviewer points out to us that the following examples are fine in his/her intuition. These examples contradict Yu's judgement since they contain both Tns and Agr.

- (i) a. emenim-uy cohaha-si-ten mosep
 mother-Gen like-Hon-Comp appearance
 'the appearance that shows mother's happiness'
- b. na-uy salangha-ess-ten chinkwu
 I-Gen love-pst-Comp friend
 'the friend that I loved'

These examples, however, can be problematic to our analysis since, if the clauses with genitive marked DP/NP are Small Clauses. Note that even the good one in Yu's intuition, there is an Honorific *si*. We can say that Honorific does not have any syntactic influence. The past Tns morpheme is more problematic if it is inside the Small Clause. We have no answer to this example yet. It will be left open for further research.

- b. John-i Mary-lul ttokttokhata-ko mitnun-ta
 John-Nom Mary-Acc be smart-pre-Comp believe-pre
 ‘John believes Mary to be smart’
- c. John-i Mary-lul ttokttokha-essta-ko mitnun-ta
 John-Nom Mary-Acc be smart-pst-Comp believe-pre
 ‘John believes Mary to be smart’
- (14) a. Younghi-ka sensayngnim-kkeyse hwullyungha-si-ta-ko mitessta
 Younghi-Nom teacher-Hon Nom respectable-pre-Hon-Comp believe-pst
 ‘Younghe believed that (her) teacher is respectable’
- b. Younghi-ka sensayngnim-ul hwullyungha-si-ta-ko mitessta
 Younghi-Nom teacher-Acc respectable-pre-Hon-Comp believe-pst
 ‘Younghe believed that (her) teacher to be respectable’

Interestingly, in (13c) the embedded clause is tensed, and in (14b) the embedded predicate contains an Honorific agreement *si*, even when the embedded subject is accompanied by an Accusative Case particle.

The descriptive differences between the Korean ECM and English ECM constructions include the following; the English ECM construction is obligatory and is Case-driven. There is no Case assigner for the subject in the embedded clause and the clause is Tenseless and without complementizer. On the other hand, the Korean ECM constructions may (or may not) contain Tns and/or Agr and the complementizer must be present.

Now we have two contradicting facts on this matter; one set of data in (12b, 12c) shows that the Case alternation is disallowed when there is Tns or Agr involved. Another set of data in (13, 14) shows that the Case alternation is allowed even when there is Tns or Agr. However we account for the Nominative/Genitive Case alternation and Nominative /Accusative Case alternation phenomena, a unified account seems to be untenable, because it would have to deal with two obviously contradicting sets of data.

In this paper, we reject Yu’s ECM account of the Nominative/Genitive Case alternation based on the following reasons: first we do not have any further justification for N^0 to be a structural Case assigner in Korean. Second, if the Nominative/Genitive Case alternation is a consequence of ECM, then why is it different from more typical ECM constructions of Korean illustrated in (13-14)? Third, from a cross-linguistic point of view, it will be difficult to explain why there is no Nominative/Genitive ECM constructions in English in which there is a Nominative/Accusative ECM construction.

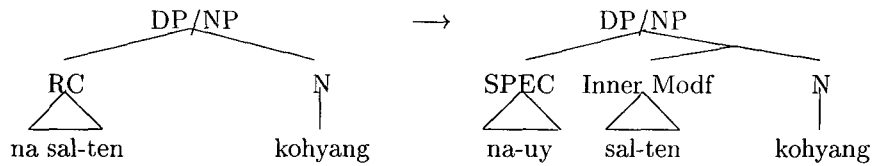
A further problem that Whitman (1998) points out regarding Yu’s account is that this account explains the restrictions imposed on the semantic relationship or “closeness” between the genitive marked NP and the head noun.

2.4 A Restructuring Approach

Now let us turn to the Restructuring approach that Whitman (1998) advocates. Based on Middle Korean and Tokyo Japanese, Whitman gives the following grammatical process for the adnominal clauses with the Nominative/Genitive Case alternation.⁷

- (15) Restructuring Process

7. *Adnominal* in *adnominal clause* is meant to refer to a relative clause that modifies a head noun. Thus, the entire construction is DP/NP itself that contains a relative clause inside it.



However, what exactly are the properties of Restructuring? Is Restructuring constrained by any mechanism?⁸ It is simply stated that Restructuring is some kind of reduction process in Japanese and Korean. Over time, Middle Korean has gone through this change, yielding the adnominal clause to be less than a full projection (CP). Whitman's general observation does not extend to account for the fact. It is obvious, however, that no matter what process Restructuring is, it is only a speculation and is difficult to define within the current framework of syntax.

Furthermore, his Restructuring approach, too, says little about why there has to be the semantic "closeness" of the head noun and the adnominal clause. However, his spirit of the adnominal clause being less than a full CP is soon to be accommodated into our analysis in Section 3.

2.5 No conversion at all?

Sohn (1997) presents a quite radical view on the phenomenon. He argues that the Nominative/Genitive conversion (or alternation) does not exist in Korean. He reasons that some of the examples seem acceptable because they have a superficial similarity to the structure of the normal NP [NP-Gen AP N].

- (16) John-uy alumtawun sinpu
 John-Gen beautiful bride
 'John's beautiful bride'

Therefore, unlike *kwukmin-uy hal pa* discussed in 2.2 and *na-uy sal-ten kohyang* discussed in 2.3, the following seemingly identical examples are not acceptable at least in Contemporary Korean.

- (17) a. na-ka/*uy mek-ten pap
 I-Gen eat RO rice
 'the rice that I was eating'
- b. chelswu-ka/*uy po-ten chayk
 Chelswu-Nom/Gen read-RO book
 'the book that I was reading/my reading the book'

8. Admitting that Restructuring is hard to accommodate under any current syntactic framework, Whitman quotes the following properties of Restructuring from the Romance complex predicate, originally described in Rizzi (1990).

- (i) a. Restructuring gives immediate constituent status in the projection of the first head that dominates them.
- b. Restructuring reduces the structural status of the projection immediately dominating the restructured specifier
- c. Restructuring requires adjacency between the restructured clauses and the site to which it is repositioned.
- d. Restructuring requires adjacency between the specifier and the site to which it is repositioned.
- e. Restructuring does not apply to tensed clauses.

We, along with Whitman (1998), Yoon (1991), Sohn (1997), and Jang (1995), agree that examples like (17a, 17b) with the genitive Case particle are not acceptable. Even so, we have to answer why some other instances of genitive subject sequence seem a lot more acceptable than some others. To be short, Sohn's view does not provide any explanations about some of the acceptable Nominative/Genitive alternation constructions. In what follows, we discuss some acceptable ones, arguing that the Genitive subject is actually the subject of Gerund.

3. The Internal Structure of DP

3.1 Deriving a Small Clause Account of Genitive Subject

So far, we have discussed and compared several proposals dealing with the sequence [NP-Nom/Gen [XP] HN]. In this section, we discuss the distribution of some Adverbs with respect to this sequence. We propose that some instances of the Korean genitive subject are best understood as Small Clause containing \sqrt{P} (Root Projection) that is adopted in Harley and Noyer (hereafter, H & N, 1997). They analyze Verb-Particle constructions in English, arguing that these constructions are pure nominalizations, which do not contain any functional category to which the object moves. Consider the following contrast.

- (18) a. Chris wrote up the paper
 b. Chris wrote the paper up
 c. Chris's writing up of the paper
 d. * Chris's writing of the paper up

H & N accounts for the ungrammaticality of (18d), based on the structural difference between (18a, 18b) and (18c, 18d). They argue that (18c, 18d) are the examples of the Verb-Particle constructions and that they involve true nominalizations, and therefore do not have any functional head that allows the movement of *of the paper*.

As the departing point of their discussion, the following contrastive sentences of English are presented.

- (19) a. The barbarian army's suddenly destroying the city upset Caesar.
 b. The barbarian army's sudden destruction of the city upset Caesar.
 c. Belushi's mixing of drugs and alcohol proved fatal.

H & N distinguish all three apparently similar constructions; (19a) is an instance of Gerund, which has DP('s) V-ing DP; (19b) an instance of Derived Nominalization which has DP's V-Nom of DP; and (19c) an instance of Mixed Nominalizations with DP's V-ing of DP. Basically following Koizumi (1993), H & N propose that English Gerunds can be analysed as Small Clause, and thus, (19a) has the following structure.

- (20) a. [_{SC} The barbarian army('s)_k suddenly [_{vP} destroying_j [_{FP} the city]_i [_{\sqrt{P}} t_j t_i]]]_i⁹
-

9. For Harley & Noyer, FP is some kind of Functional Projection. For Koizumi, it is AgroP. In Koizumi (1993), he argues for the Split VP, and there is another functional Projection called AgroP.

- b. [The barbarian's [\sqrt{P} destruction of the city]]¹⁰
 c. [Belushi's [\sqrt{P} mixing of drugs and alcohol]]

More examples of this kind are found in Quirk et al. (1972: 133-134). (21a) contains the Gerund in the subject position, and (22b) contains a gerund in the object position of the sentence.

- (21) a. Brown('s) deftly painting his daughter is a delight to watch.
 b. Brown's deft painting of his daughter is a delight to watch.
- (22) a. I dislike Brown's painting his daughter
 b. I dislike Brown painting his daughter

It is noted in Quirk, et al. that (21a) and (21b) have some slight meaning difference. (21a) can be ambiguous in that "I dislike either the fact" or "the way Brown does it." On the other hand (21b) has only one potential meaning, which is "I dislike the fact."¹¹

H & N argue that (19b) and (19c) have \sqrt{P} under a functional category D. That makes them instances of Nominalizations, which means that both *destruction of the city* and *mixing of drugs and alcohol* are NPs. (19a), on the other hand, has \sqrt{P} under a functional category v, which makes the category verbal in nature and it takes an adverbial modifier.

Under their analysis, \sqrt{P} under D is determined to be an NP, and \sqrt{P} under v is to be determined to be a VP. In other words, Nouns and Verbs are not primitives, but are relationally-defined categories, just like subject and objects are not grammatical primitives. They are defined as [NP, IP], [NP, VP] respectively.

We basically agree with H & N's account. for the following reasons. First of all, the semantics of the two expressions is identical. That is, the thematic role of the subject of English gerund is the same as that of Korean genitive marked subject in adnominal clauses is the same. Secondly, their morphological case is realized as genitive, -'s and -uy, and the rest of the expression takes different forms. Therefore, all we need is to say that Korean Gerunds take -(n)un as its Spell-Out realization, just like English Gerunds take -ing Spell-Out.

3.2 Toward a solution

In what follows, we argue that the genitive subject in Korean has a different internal structure from a Nominative subject. (23a) is a regular NP with the inner relative clause and (23b, 23c) is a Gerund and we consider the Gerund. Their structures are illustrated in (24a) and (24b), respectively.

10. *of* is inserted as the last-resort Case marker.

11. In connection with these examples, the following examples tell us something about Case.

- (i) a. *I dislike he painting my daughter.
 b. I dislike his painting my daughter.
 c. I dislike him painting my daughter

From the ungrammaticality of (a) on the one hand, and the grammaticality of (b) and (c) on the other hand, we know that the position that *his* or *him* occupies receives some kind of Case from the verb, *dislike*. The above examples are the typical gerundive constructions, when there is a genitive subject as in (b) then the sentence refers to "the way he paints..." If the example involves an accusative Case as in (c), then it refers only to the fact that he did. The difference is not central to our discussion.

- (23) a. na-ka salangha-nun tongsayng
 I-Nom love-RO younger sibling
 ‘the younger brother or sister that I love’
- b. na-uy salangha-nun tongsayng
 I-Nom/Gen love-Gerundive younger sibling
 ‘the younger brother or sister that I love’
- c. John-uy conkyenghanun sensayngnim
 John-Gen respect teacher
 ‘John’s respectable teacher/the teacher that John respects’
- (24) a. [NP [CP [IP na-Nom t_i salangha] nun RO_i] tongsayng]
 [Rel. Op. Movement ↑]
- b. [SC na-Gen [VP salangha_i-nun [FP[VP tongsayng-Acc t_i]]]
 [(Overt Verb Movement)]

Once we allow two different structures, we now can look for more empirical evidence that supports our analysis. By having two distinct structures for the apparently similar expressions in (23a, 23b-c), we now can account for the distribution of adverbs in the following examples:

- (25) a. hwaksilhakey na-ka conkyengha-nun sensayngnim
 surely/certainly I-Nom respect teacher
 ‘the teacher that surely I respect’
- b. na-ka hwaksilhakey conkyengha-nun sensayngnim
 I-Nom surely/certainly respect teacher
 ‘the teacher that I certainly respect’
- c. *hwaksilhakey na-uy conkyengha-nun sensayngnim
 surely/certainly I-Gen respect teacher
 ‘my surely respectable teacher’
- d. *na-uy hwaksilhakey conkyengha-nun sensayngnim
 I-Gen surely/certainly respect teacher
 ‘my teacher that I surely respect’

The data given in (25) shows that the distribution of the Adverb is related to the internal structure of the entire expression. Our proposal is that the NP with the genitive subject is basically a Gerund and it will be analyzed as Small Clause. The NP with a Nominative subject is an NP that contains a full Relative clause. The ungrammaticality of (25c) and (25d) can be explained if we assume the following derivation:

- (26) a. [NP[CP[IP na-ka [I, hwaksilhakey [VP t_i conkyengha]]] nun] sensayngnim]]
 I-Nom surely t_i respect RO_i teacher
 ‘the teacher that I surely respect’

- b. [SC na-uy [(*hwaksilhakey) [_{VP} conkyengha_i-nun [_{FP}[_{VP} sensayngnim t_i]]]]]
 I-Gen surely respect-Gerundive teacher t_i
 ‘my respectable teacher’
- ↑
 (Overt Verb Movement)

We propose that the internal structure of the Korean Genitive subject construction is an instance of Small Clause which contains at least one functional projection, vP and that the Korean verb overtly moves to this functional category, vP. (25c) and (25d) are not grammatical because IP Adverb like *hwaksilhakey* ‘certainly’ has no place to stay within Small Clause. Suppose that we place an VP-adverb that can modify the Gerundive form of the verb, *salangha*, the acceptability of the example improves, as shown in (27).¹²

- (27) a. ?wuli-uy maywu conkyengha-ten sensayngnim-kkeyse tolaka-si-essta
 We-Gen very respect-Gerundive teacher-Hon Nom pass-away-Ho-past
 ‘Our very respectable teacher passed away’
- b. ?John-uy nul coaha-ten sensayngnim-kkeyse tolaka-si-esta
 John-Gen always like-Gerundive teacher-Hon Nom pass-away-Hon-pst
 ‘John’s always likable teacher passed away’

(27a) and (27b) may not sound perfect to some speakers of Korean, but the contrast is clear. Therefore, the genitive subject can take at least a VP-adverbs, but can not take IP-adverbs.¹³

Further empirical support for our analysis comes from a Negative Polarity Item. An adverb *kutaci/pyello* ‘not so much/reluctantly’ in Korean has to be licensed within the same clause.

- (28) a. chelswu-ka kutaci/pyello conkyenghaci ahn-nun sensayngnim
 cheolsu-Nom so much respect not teacher
 ‘the teacher that Cheolsu does not respect so much’
- b. kutaci/pyello chelswu-ka conkyenghaci ahn-nun sensayngnim
 so much cheolsu-Nom respect not teacher
 ‘the teacher that Cheolsu does not respect so much’

12. Many Korean scholars report that the examples like this sort are just fine in their intuition. See H.-K. Kim (1965), K.-H. Kim (1984), and Seo (1992).

13. One might raise a question about the nature of Adverbs. In other words, what makes *hwaksilhakey* an IP-Adverb, and *maywu* a VP-Adverb? Consider the following:

- (i) a. na-ka sensayngnim-ul conkyengha-nun kes-i hwaksilhata
 I-Nom teacher-Acc respect-Comp it-Nom certain
 ‘It is certain that I respect (my) teacher’
- b. *na-ka sensayngnim-ul conkyengha-nun kes-i maywuhata/ita
 I-Nom teacher-Acc respect-Comp it-Nom so/very much
 ‘It is so much that I respect (my) teacher’

(ia) and (ib) are different with respect to their grammatical standing. An adverb like *hwaksilhakey* ‘certainly’ can be used to modify the entire clause as (ia) is acceptable. On the other hand, *maywu* ‘very much’ can not be used to modify IP as (ib) is not grammatical. Therefore, we can distinguish IP-Adverb from VP-Adverbs; if an adverb can be used to modify the entire IP, then we consider it IP-adverb.

- c. *kutaci/pyello chelswu-uy conkyenghaci ahn-nun sensayngnim
 so much cheolsu-Gen respect not teacher
 ‘the teacher that Cheolsu does not respect so much’
- d. *?chelswu-uy kutaci/pyello conkyenghaci ahn-nun sensayngnim
 cheolsu-Gen so much respect not teacher
 ‘the teacher that Cheolsu does not respect so much’

In the above examples, *kutaci/pyello* may occur inside the inner relative clause headed by the head noun, *sensayngnim* ‘teacher’. Assuming that these adverbs need to be licensed within the clausal domain, we now can explain why (28c) and (28d) are not grammatical. The Small Clause has no room to accommodate the NPIs.

On the other hand, (28a) and (28b), being a full CP within the projection of head noun, have the right domain for these NPIs to be licensed. Therefore, the Nominative/Genitive Case alternation can be attributed to the different internal structure. The one with the genitive Case is a type of gerunds and is an instance of Small Clause. Those with the Nominative Case is a normal NP containing a relative CP.

Thus far, we have argued that Verb Movement is allowed in Korean Gerund constructions. Furthermore, by analyzing Gerunds as Small Clauses that contain a functional projection, vP, we now can account for the distribution of some Adverbs in these examples. Therefore, examples from the previous sections can again be analyzed as follows.

- (29) a. na-uy/ka salangha-nun chinkwu
 I-Gen/Nom love friend
 ‘a friend that I love’
- b. kwukmin-uy/i mattanghi hayya ha-l toli
 people-Gen/Nom obligatorily do-should duty
 ‘people’s obligatory duty to do’ or ‘the duty that people should obligatorily do’

In Cases like (29), the Nominative/Genitive alternation seems most natural. The following examples are the unacceptable ones.

- (30) (repeated from 22)¹⁴
- a. na-ka/*uy mek-ten pap
 I-Gen eat RO rice
 ‘the rice that I was eating’
- b. chelswu-ka/*uy po-ten chayk
 Chelswu-Nom/Gen read-RO book
 ‘the book that I was reading’

The Genitive marked DP/NPs that are unacceptable include verbs that denotes some actions, whereas the acceptable ones include so called stative verbs/predicates. It is not so clear why some action verbs/predicates do not have any Gerundive counterpart, while the stative verbs/predicates allow the Gerund constructions.¹⁵

14. The Japanese counterparts of these examples are reported grammatical in the literature. We suggest that this cross-linguistic variation is attributed to the Morphology of the two languages.
 15. An anonymous reviewer raises a question about the justification of introducing the notion of Small Clauses into Korean. One conceivable speculation is to generalize that an adnominal clause in

4. Conclusion

In this paper, we have discussed several previous accounts dealing with the syntactic phenomenon in which two Cases seem to freely alternate within DP. We have proposed that a Korean Genitive Subject within DP is the subject of Gerund, and it is always realized as *-uy* and it is analyzed as a Small Clause which contains at least one Functional Category that allows VP-Adverbs. The subject of a Small Clause occupies [Spec, DP] as X-bar theory dictates.

We have assigned two different internal structures to the expressions like *na-ka sal-ten kokyang* and *na-uy sal-ten kokyang*. The expression with the Nominative Case is a normal NP with an inner Relative clause, and the other one is a Gerund in the form of Small Clause that contains a vP into which a verb *salta* overtly moves. Therefore, the Nominative/Genitive Case alternation is not an actual Case conversion, per se. It is the morphological mechanism to realize Gerunds.

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Korean which takes a morphological form of *-nun* is an instance of Small Clause that contain a functional category, vP. Furthermore, if we have a Small Clause in a clausal complement, then there is no a priori reason not to have a Small Clause within DP. This point has to be expanded via further research.

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