Layered Nominal Structures:
Implications for Caseless Nominals*

Pre-final version
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Hee-Don Ahn, Sungeun Cho 2006. Layered nominal structures: implications for caseless nominals. *Korean Journal of Linguistics* 31-2, 165-185. Subject-object asymmetries on unpronounced Case markers are observed in two respects. First, whereas Case markers can be unpronounced in complement positions, those in canonical subject positions must be pronounced. Secondly, object w$h$-phrases without Case markers can have either D-linked or non-D-linked interpretation, while subject w$h$-phrases without them have only D-linked interpretation. In this paper, based on the assumption that Case markers occur in the head position of DP, we propose the following: (i) Bare NPs can occur inside VP since they can be part of a complex predicate, and they are not subject to feature checking; (ii) Without the option of complex predicate formation, the nominals which function as arguments must be projected to DP or $\Phi$P; and (iii) Nominals without Case markers in sentence-initial positions are left-dislocated bare NPs that undergo SubMove (i.e., movement out of DP/$\Phi$P stranding resumptive $\pro$ in $\Phi$). Then, only D-linked reading arises in these constructions parallel to w$h$-resumption or w$h$-clitic doubling constructions found in other languages.

Keywords: unpronounced Cases, D-linking, DP, $\Phi$P, SubMove, $\pro$, left-dislocation, w$h$-resumption

1. Preliminaries

Case in Korean can be morphologically realized by Case markers, which attach to nouns as suffixes.¹

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¹ Nominative Case is morphologically realized as $\kappa a$ following a vowel, and as $i$ following
(1) Mary-ka pap-uld mek-ees-e.
   Mary-Nom rice-Acc eat-Past-Dec
   ‘Mary ate rice.’

It was often held that Case markers in Korean generally are omissible in informal colloquial speech (Kim 1990:204). Interestingly, subject-object asymmetry is observed concerning non-pronunciation of Case markers (Ahn 1988, 1996, Hong 1994, and Kim 1998a, b). It is well-known that the structural Case markers in Korean can be unpronounced when nominals are in complement positions. For example, an accusative Case marker *ul* can be unpronounced when nominals occur in the complement positions, as shown in (2).

(2) a. Mary-ka Sue-*ul* marna-ees-e.
   Mary-Nom Sue-(Acc) meet-Past-Dec
   ‘Mary met Sue.’

   b. na-nun Mary-ka Yenghi-*ul* marna-n sasil-ul molla-ees-ta.
      I-Top Mary-Nom Yenghi-Acc meet-Rel act-Acc not-knew
      ‘I didn’t know the fact that Mary met Yenghi.’

A relatively less well-known fact, however, is that the nominative marker in a ‘canonical’ subject position, cannot be unpronounced (Hong 1994; 2004; 2005b, Ahn 1996; Ahn 1999b, Kim 1998a, b, Ahn & Cho 2005a, b, 2006a, b).  

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a consonant. Accusative Case is realized as *ul* following a vowel, and as *ul* following a consonant.

2 Here we emphasize ‘canonical’ subject positions since in non-canonical subject positions Nom can be apparently unpronounced. Non-canonical positions may include left-edge discourse-related positions such as Spec-Topic or Spec-Force. See section 3 regarding subjects in non-canonical positions.

3 The nominative Case marker *ga* in Japanese also tends to resist ellipsis in some Cases (Cho et al. 2004, K. Lee 2002, D. Lee 2002). The following example is cited from D. Lee (2002:656).

   (i) a. Taroo-*ga* kita.
      Taroo-Nom came ‘Taroo has come.’

   b. Taroo kita?
      Taroo came ‘Has Taroo come?’

   According to D. Lee (2002:656), the non-pronunciation of *ga* is not unacceptable in a normal descriptive expression. If it is a question, the sentence is fully acceptable. Regarding extensive summary of the previous research, see H. Lee (2005).
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   John-Acc Mary-(Nom) see-Past-Dec
   'John, Mary saw.'
   b. Na-nun cip-eyse *Mary*(ka) ttwi-n sasil-ul
      I-Top home-at Mary-Nom run-Rel fact-Acc
      molla-ss-ta
      not-know-Past-Dec
      'I didn't know the fact that Mary ran at home.'

As pointed out by Ahn & Cho (2006a, b), significant asymmetry is observed with unpronounced Case markers on *wh*-phrases.

(4) a. Nwukwu Yenghi-lul manna-ss-ni?
   who Yenghi-Acc meet-Past-Q
   'Who met Yenghi?'
   b. Nwukwu-ka Yenghi-lul manna-ss-ni?
   who-Nom Yenghi-Acc meet-Past-Q
   'Who met Yenghi?'

(5) a. Yenghi-ka nwukwu manna-ss-ni?
   Yenghi-Nom who meet-Past-Q
   'Who did Yenghi meet?'
   b. Yenghi-ka nwukwu-lul manna-ss-ni?
   Yenghi-Nom who-Acc meet-Past-Q
   'Who did Yenghi meet?'

The subject *wh*-phrase nwukwu 'who' in (4a) has only D(iscourse)-linked interpretation in the sense of Pesetsky (1987), whereas the object *wh*-phrase in (5a) can be interpreted either as D-linked or non-D-linked.

This novel asymmetry observed above shows that non-pronunciation of Case markers is a non-trivial issue that demands not only empirical clarification but also theoretical exploration in syntax. Based on the fine

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4 Nwukwu reduces to nwu when it is marked with nominative Case.

5 The well-formedness of (4a) that we judge runs counter to most previous approaches such as Hong (1994, 2004), Kim (1998a, b), and Choi (2005), which consider (4a) ill-formed (Ko (2002, 2004) is a notable exception, however). (4a) becomes more acceptable if the *wh*-phrase is modified by D-link-inducing elements, as in (i).

(i) I cwung-eyse nwukwu Yenghi-lul manna-ss-ni?
   this group-among who Yenghi-Acc meet-Past-Q
   'Which person of this group met Yenghi?'

As a result of domain specification like I cwung-eyse, (i) seems to be more natural than (4a). In both (4a) and (i), *wh*-phrases always have D-linked interpretations.
structure of nominals, we will advance that nominals without Case markers outside VP are uniformly Left Dislocated (LDed) NPs, in a sense, along the similar lines with Kim (1998a, b), Ahn (1999b), and Hong (2004) for LD analysis. We further propose that nominals without Case markers inside VP are a part of complex predicates essentially following the original insight of Hong (1994) for incorporation analysis, but sharply departing from a recent EPP analysis put forward in Ahn and Cho (2006a, b).

This paper is organized as follows: Section 2 discusses the nature of nominal structures in Korean and the operation SubMove. We will show that Korean nominals have a rich layer of functional projections above NP: namely, DP and ΦP. It provides an account of subject/object asymmetries of nominals without Case markers in Korean, based on the new perspectives on the articulated nominal structures. We suggest that ΦP, containing_projection is optionally projected under DP (and above NP), and it triggers SubMove for theta-theoretic reasons. Section 3 deals with _nominals without Case markers, and the property of dislocatedbare _nominals in Korean. Given the analysis of nominal structures advanced in section 2, we propose that the Caseless (_nominals in left-periphery positions are LDed NPs which undergo SubMove. Hence, D-linked interpretation arises with dislocated _nominals without Case endings.

2. Fine Structure of Nominals

2.1. Basic assumptions

The proposal advanced in this paper is based on an articulated structure of nominal projections in Korean. We assume that the extended nominal projection consists of an NP dominated by a ΦP, which in tum is dominated by a DP, as schematized in (6).6

6 Actually, there is another possibility that the structure of nominals is more articulated than we suggest in (6).

(i) \[φ \in [a \text{ NP} \ Φ][D]\]

Crucial in the schema (i) is that the projection that hosts Case is separated from D, the locus of reference, and is `buried inside DP' (contra Bittner & Hale 1996). Ahn (1997, 1999a), for example, show that the occurrence of D, the locus of reference hinges upon Case-licensing of the nominal. Ahn (1997:56) shows the following sentence as evidence.

(ii) [John and Mary], seem to each other, to be honest

In (ii), the trace of John and Mary is bound by each other, which violates Binding Principle C, contrary to fact. He suggests that D does not project unless Case on the nominal is licensed.
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We assume that the NP layer heads the noun, and may host attributive adjectives such as say 'new' and hen' old' and demonstrative adjectives such as i'this', ku'that', and ce' that' (cf. Fukui & Speas 1986); the Φ may host number-classifiers such as han(kay) 'one(piece)', and heads pro when the Φ head is unpronounced, otherwise it heads overt pronouns such as ku [masculine-singular], kunye [feminine-singular]; the DP heads Case markers, which is supported by the fact that the characteristics of Case markers and delimiters in Korean share crucial numbers of properties with determiners in other languages (Ahn 1988 and Jeong 1999; but see Im 1987 for an alternative idea and distribution of elements inside nominals). We further assume that all nominals in A-positions outside VP (i.e. subject positions) must be either DPs or ΦPs, while nominals in complement (or object) positions can be bare NPs (cf. Baker 2003, Hazout 2004, Kallulli 2005a, Longobardi 1994).

The ΦP structure depicted in (6), hosting NP and Φ, is reminiscent of doubling constituents independently advanced by Kayne (2005) for binding relations. Kayne (2005) puts forward a unified analysis of clitic doubling and antecedent-pronoun relation. He proposes that a pronoun forms a constituent with its antecedent, as shown in (8), which patterns with clitic doubling derivations in (7).

(7) a. cela est-il vrai?
   that is-it true

Thus, Caseless Φ doesn't project D, and has no referentiality, so it is not subject to Binding Principle C.

However, the phenomenon we discussed in this paper is not sensitive to the distinction between D and K, as shown in (i). Hence, we assume the simplified nominal structure, (6), throughout this paper (see Watanabe 2006 for discussion on Case-D relation and more articulated nominal structures in Japanese).

In German, for example, the determiner alters its shape according to Case value: e.g. der(Nom)/den(Acc)/dem(Dat)/des(Gen) Tag 'the day'.
b. \([\text{celai} il] \text{ est vrai} \) → verb movement: \(\text{est [celai] il} \text{ vrai} \)
→ movement of the double: \(\text{celai, est [il] il} \text{ vrai} \)

(8) a. thinks [John he] is smart.
   b. John, thinks [i, he] is smart. (← movement of the double)

As shown in (7), clitic and double are merged together underlyingly, and subsequently separated by the movement of the double. Similarly, the pronoun and its antecedent are merged together, as shown in (8a) from the beginning to capture the coreference relation as agreement, and subsequently separated, as shown in (8b). The movement of \(\text{Jafris} \) is motivated for theta role since the theta role of the predicate \(\text{smart} \) is assigned to the larger constituent \(\text{[John he]} \), hence subsequently transferred to the head of doubling structure, \(\text{he} \)\(^8\). Given that the binder and the bindee start off as one constituent and split up in the course of derivation, the antecedent-pronoun relations are naturally captured without positing index convention that is independently barred by Inclusiveness Condition put forward in Chomsky (1995; 2000; 2001).\(^9\)

By the same token, we suggest that NP buried inside \(\text{\(\Phi\)}P \) is forced to move to a landing site which has a discourse related nature. We propose that the Spec-Force is one place where the NP can be interpreted, i.e. assigned a generalized theta-role “aboutness.” Thus, movement of the NP out of \(\text{\(\Phi\)}P \) (call SubMove) is well-motivated, and we will see some desirable consequences of this proposal in later sections.\(^{10}\)

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\(^{8}\) Belletti (2009) has a different view that the theta role associated with the big DP reaches all its internal constituents. She shows that clitic left dislocation (CLD), right dislocation (RD), and floating quantifier (FQ) are all captured under the single big DP analysis and that the two parts in which the original constituent split are a lexical noun phrase and a functional word, either a clitic or a quantifier in all the cases. She argues that the possibility that two parts are both lexical noun phrases is excluded for a theta-theoretic reason.

\(^{9}\) Inclusiveness Condition basically states (Chomsky 2001.2):
Do not introduce new elements (features) in the course of computation: bar-levels, traces, indices and similar descriptive technology.

\(^{10}\) It is not our direct concern here to offer a precise analysis of doubling constituents in (7)/(8) parallel to DP structures in Korean. Here we want to simply indicate the parallelism between the two structures concerning theta-theoretic reasons to trigger movement. The exact nature of doubling structures in (7)/(8) is beyond the scope of this paper.
2.2. Unpronounced Case makers in Korean

Before discussing distribution of unpronounced Case markers, let us look at how Case is licensed in Korean. Under the recent version of the Minimalist Program put forward by Chomsky (2000; 2001), the operation Agree takes the place of feature checking mechanism of Chomsky (1995), and nominals already have unspecified Case feature from the numeration and later Case value on the nominals is assigned as a result of Agree. The type of Case value on the nominal depends on what the Case value is: when the Case value is T, the Case value on the nominal is Nominative; when the Case value is I, the Case value on the nominal is Accusative. \(^{11}\) We further follow the standard assumption that Nom Case in Korean is valued via movement to Spec-T in conjunction with D-/Φ-features Agree. It is, however, immaterial to our analysis whether there exist extra EPP-features in D/Φ that trigger movement. In other words, it would suffice for our purposes if there is any requirement for subject movement to Spec-T; and the triggering features are related to D/Φ; and the movement is sometimes (but not always) reflected by Nom Case.

Now, let us consider unpronounced Case in the object position, as shown in (9).\(^{12}\)

\(^{11}\) Hong (2005a) independently argues that Tense is responsible for Nom Case, based on the following contrast:

   Mary-Nom/Gen John-Acc meet-Past-Nominalizer
   Lit. Mary meeting John

   b. Mary-uy/**ka John-uy manna-m.
   Mary-Gen/Nom John-Gen meet-Nominalizer
   Lit. Mary’s meeting of John

   Genitive Case cannot be licensed due to the presence of T in (i). By contrast, if T is absent, nominative Case cannot be licensed, as in (ii).

\(^{12}\) Non-pronunciation of Case marker on object pronoun seems to be awkward, as in (i) (see also Ahn 1999b).

(i) Yenghi-ka ku*(lul) cahahay.
   Yenghi-Nom he-(Acc) likes ‘Yenghi likes him.’ (Hong 2006:38)

   This phenomenon may be tied to the formality of the pronoun ku because non-pronunciation of Case marker is not allowed in formal context. Since pronouns like na and ne occur freely in informal context, non-pronunciation of Case markers on these pronouns is natural.

(ii) Yenghi-ka na(lul)/ne(lul) cahahay.
   Yenghi-Nom me-(Acc)/you-(Acc) likes ‘Yenghi likes him.’

   In Korean, ku also functions as a demonstrative adjective. In this case, (i) has the following structure.
(9) Mary-ka Sue manna-sse-e.
   Mary-Nom Sue meet-Past-Dec
   'Mary met Sue.'

(9) has the structure like (10) at some point in the derivation.

(10)

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<td>Mary ka &lt;DP₁&gt; T'</td>
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<td>Sue mannassee</td>
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We assume that the bare NP object Sue forms a "syntactic" complex predicate (cf. Hazout 2004) with subcategorizing verb *mannasse*. This option is not available if bare NP occurs outside of VP domain (i.e. if it is not directly selected by V—not via Prepositions and the like).

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(iii) Yenghi-ka [ku [N ∅]] cohahay
(iii) is not well-formed presumably because the demonstrative modifies a null noun.

13 Hong (1994), Kim (1988ab), Ahn (1996; 1999b), and Ahn & Cho (2005a; 2006ab) postulate a null D for the DP head with unpronounced Case markers which must undergo incorporation/movement. Our proposal crucially differs from theirs in that we don’t posit any null D here by Occam’s Razor. Instead, we posit bare NPs in complement positions forming complex predicates with selecting verbs. Our analysis need not stipulate non-occurrence of Case markers as abstract null D. They are simply bare NPs if no Cases are realized; a null hypothesis.

14 As pointed out by Ahn (1988), the dative marker *eykey* and other postpositions such as *eysė* cannot be unpronounced.
Hence, the subjects (and trivially adjuncts, too; see Ahn & Cho 2005a) cannot be a bare NP under our proposal. The subject DP (or DΦ—we will return to this shortly) moves to Spec-T in order to check off the formal feature on T: presumably D-features and Φ-features. The subject

(i) a. Chelswu-ka Yengmi-*(eykey) malyay-ss-ta.
   Chelswu-Nom Yengmi-Dat talk-Past-Dec
   ‘Chelswu talked to Yengmi.’
   b. Chelswu-ka hakyō-*(eye) ttwuy-ss-ta.
   Chelswu-Nom school-Loc run-Past-Dec
   ‘Chelswu run at school.’

However, there seem to be apparent exceptions, as shown in (ii).

    Chelswu-Nom book-Acc Yengmi-Dat/Acc give-Past-Dec
    ‘Chelswu gave a book to Yengmi.’
   b. Ai-ka cip-*(eye/ul) sawi-ss-ta.
      child-Nom house-out-of/Acc get-Past-Dec
      ‘A child left home.’
      grandmother-Nom Seki-Acc son-in-law-(as/Acc) make-Past-Dec
      ‘His) grandmother made Seki her son-in-law.’ (Kim 1998b:273)

Ahn (1998) claims that the example mentioned above cannot be a real exception since accusative Case markers can occur in these contexts. In other words, accusative markers rather than other postpositions are unpronounced in (ii). Note that accusative Case alternation is not possible in (i). Our text analysis also captures non-pronunciation of accusative Case markers shown in (ii) because these NP arguments are the ones that are eligible for forming complex predicates with selecting verbs (indirectly supported by the optional appearance of Acc Case). Note, however, that the condition on complex predicate formation must be sharpened considering the following example, as observed in Kim (1999):

(iii) Chelswu-ka hakyō-*(ey)/”ul isst-ta.
    Chelswu-Nom Seoul-at be-Dec ‘Chelswu is at school’

In (iii), the location hakyō cannot occur with an accusative Case marker. Hence, it seems necessary to explain why the postposition in this context can be unpronounced unlike others. However, we should note the acceptance is not quite general, as seen in (iv).

(iv) Chelswu-ka cip-*(ey)/”ul iss-ta.
    Chelswu-Nom home-at be-Dec ‘Chelswu is at home’

We will not go into further details here. See Ahn et al. (2002) and Choi (2005) for related discussion of this issue.

15 In the double object construction, we assume that both the objects form a single predicate, which accounts for the possible absence of Cases of (in)direct objects in (i).

   Chelswu-NomYenghi book give-Past-Dec
   ‘Chelswu gave Yenghi a book.’
   Chelswu-Nombook Yenghi give-Past-Dec
   ‘Chelswu gave Yenghi a book.’
DP undergoes further movement to Spec-Force (see Ahn & Cho 2005b for further discussion of this issue). Thus FP here is assumed to be ForceP. Force may express the illocutionary force (Rizzi 1997), modality (Whitman 1989) or the clausal type (Ahn & Yoon 1989).

Regarding this derivation, a question arises as to Case valuation of the direct object. We assume that the NP is inserted into narrow syntax without a Case feature and the functional head v is too. Hence, Case valuation issue doesn't arise here. However, this option is not available for English. According to Neeleman & Szendori (2005), languages that are either invariant in form or fusional for Case such as English cannot spell out bare NPs only, whereas languages that are agglutinating for Case, number or some other nominal features such as Korean and Japanese can spell-out bare NPs in isolation. In the same reasoning, we assume that in English, NP alone cannot occur in argument position. Hence, when DP is in an argument position, Case feature in the D must be valued. Hence, the option possible in Korean is not available in English. We further assume that subjects in topic-prominent languages should move to the sites in which discourse information is established (see also related discussion in Miyagawa 2005).

Suppose the bare NP undergoes movement to Spec-T, leaving DP shell in Spec-v. In this case, the nominative Case marker will be stranded, as shown in (11).

\[(11) \left[ TP \{ NP \text{Mary} \}, \left[ T \left[ DP \text{t-ka} \right] \left[ v \ldots \text{Sue manasse} \right] \right] \right] \]

Since Case marker is an affix which should be morphologically supported, (11) violates stray affix filter (Lasnik 1981).\(^{16}\) Thus, the whole DP subject carrying Case marker should move to Spec-T, as in (10).\(^{17}\)

\(^{16}\) Chae (1996) and Chae & No (1998) show that postpositions in Korean differ from prepositions in English in that Korean postpositions cannot be stranded and conjoined. They treat postpositions as "clitics" which they distinguish from "affixes." Here we remain agnostic as to the distinction between the two categories. The term "affixes" in the text simply indicates that they are phonologically dependent elements; that is, they cannot stand alone.

\(^{17}\) As soon will be clarified, bare NPs may not check off the formal features (D or $\emptyset$) of T, so (11) may be independently ruled out regardless of presence or absence of D ka.
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Now, let us turn to non-pronunciation of Case markers on the subject nominals in (2a), repeated here as (12).

(12) John-ul Mary-*(ka) po-ass-e.
John-Acc Mary-(Nom) see-Past-Dec
‘John, Mary saw.’

Suppose (12) has the following structure at some point in the derivation.

(13) \[ [FP [DP John-ul] [TP [NP Mary]] [\theta t_i [\theta t_j ...]] T] F] \]

In (13), both the subject NP and the object DP undergo movement. If this kind of derivation were possible, non-pronunciation of Case on the subject Mary would be ruled in. However, given that movement to Spec-T accompanies formal feature checking of \( \phi/D \)-features, the bare NP cannot occupy Spec-T. Hence (13) is ruled out.

Let us consider an alternative derivation as shown in (14) where \( \Phi P \) moves to Spec-T.

(14) \[ [FP [TP John-ul] [TP [\Phi P Mary]] [\theta t_i [\theta t_j ...]] T] F] \]

Note that \( \Phi P \) is freely generated with/inside or without DP. (14) presents a subject \( \Phi P \) without DP along with a DP object without \( \Phi P \). The theta role from \( v \) is given to the constituent \( \Phi P \), and subsequently the head of \( \Phi P \), \( \propto P \), inherits it (cf. Kayne 2005). If so, the NP Mary in (14) turns out not to get a theta role. Furthermore, movement to Spec-T doesn’t save the non-theta-marked NP since Spec-T is not a theta-position.18 The only legitimate derivation, then, should be like (15).

18 An anonymous reviewer judges the following sentence acceptable.

(i) Yenghi-lul nwukwu manna-ss-ni?
Yenghi-Acc who meet-Past-Dec ‘Who met Yenghi?’

To our ears, (i) is completely out parallel to (12). If \( nwukwu \) is interpreted as an indefinite pronoun ‘someone’, the sentence slightly improves, however, it still is deviant.

By contrast, when the \( wh \) is doubled, the sentence is acceptable, as in (ii).
Unlike ΦP, where a theta-role is absorbed by ΦP head, pro, the theta role given to DP can be transferred to NP. Hence, theta problem doesn’t arise for the subject NP Mary-ka in (15).19 20

Our analysis also correctly predicts that non-pronunciation of a nominative Case maker is possible in complement positions.

(16) Sue-ka Mary-(ka) silh-ess-e.

(ii) Yenghi-ul nwukwu-nwukwu manna-s-ni?
Yenghi-Acc who-who meet-Past-Dec
‘Who met Yenghi?’

Doubled wh-phrases always yield presuppositional interpretations (but can be either D-linked or non-D-linked). In the case of doubled wh-phrases, Case markers seem to be freely unpronounced (Daeho Chung by p.c.), and we don’t understand why. We leave this issue for future research.

19 An anonymous reviewer raises a question about how the following sentence satisfies the generalized theta criterion.

(i) John-ul Mary-ka kunye-ka manna-s-e.
John-Acc Mary-Nom she-Nom meet-Past-Dec
‘John, Mary herself met.’

We assume that kunye-ka in (i) functions as emphatic, appositive pronoun. As shown in the English gloss, it functions as a nominal modifier. Hence, the generalized theta criterion doesn’t seem to be violated in this case. We put aside the exact nature of the emphatic pronouns in this paper. See some related discussion in Ahn & Cho (2006d).

20 Given that movement obeys the phase impermeability condition and if' is a strong phase, DP1 moves to Spec-F through the outer Spec position of if'. We do not specify the movement to outer Spec of if' in (15) since it does not affect our analysis. Thanks to an anonymous reviewer for bringing this issue to our attention.
Sue-Nom Mary-(Nom) dislike-Past-Dec
‘Sue disliked Mary.’

Notice that Mary in (16) is a complement of the predicate *silhessë* so it can give rise to a complex predicate formation with the predicate *silhessë*.

Now, consider a problematic example with a null pronoun subject, as in (17).

(17) pro Mary silh-ess-e.
    Mary dislike-Past-Dec
    ‘(Somebody) disliked Mary.’

(17) has the following structure at some point in the derivation. We suggest that a null pronoun subject pro heads ΦP, and it moves all the way to Spec-Force through Spec-T.21

(18) [TP [ΦP pro] [T [NP [VP [NP Mary] silhessë]]]T]

In (18), pro should undergo movement to Spec-T to license formal features on T (here Φ-features). Hence, additional stipulation is not needed to account for the appearance of pro in relation to formal feature checking under our analysis contra EPP analyses in Landau (2005) and Ahn & Cho (2006a, b).

3. Left Dislocated Nominals

21 Ahn & Cho (2006a, b) analyze the phenomenon on unpronounced Case makers under Landau’s (2005) EPP account. As pointed out by Daeho Chung (p.c.), it will be an issue whether the phonological (p)-selection on T is satisfied in the Case of null subjects. Landau (2005) claims that p-selection can be satisfied through verb movement to T in null subject languages. However, this account cannot extend to Korean since unlike other null subject languages, Korean has relatively poor verbal morphology. An anonymous reviewer suggests the following derivation: after the EPP is satisfied, the pronoun in TP undergoes ellipsis. However, this kind of derivation doesn’t satisfy the phonological EPP requirement Landau (2005) proposes because the EPP requirement is not a derivational requirement but a representational requirement at PF. The analysis advanced here is superior to the earlier one in that it explains distribution of pro in Korean more naturally.
There are apparent examples which show non-pronunciation of Case markers is possible even in subject positions.

\[(19)\] Mary-(ka) ku chayk ilk-ess-ni?
Mary-Nom the book read-Past-Q
"Did Mary read that book?"

Ahn's (1999b) solution to this apparent problem, following Kim (1998b) in part, is to treat Mary in (19) as an LDed nominal. An LDed nominal occurs in a sentence-initial position, while a resumptive pronoun is located in an original subject position. The presence of resumptive pronoun in (20a) gives us evidence for the LD analysis. The subtle difference between (20a) and (20b) results from the fact that the resumptive pronoun is unpronounced as pro in (20b).

\[(20)\] a. Mary ku nye-ka ku chayk ilk-ess-ni?
Mary she-Nom the book read-Past-Q
"Lit. As for Mary, did she read the book?"

b. Mary pro ku chayk ilk-ess-ni?
Mary the book read-Past-Q
"Lit. As for Mary, did she read the book?"

Thus, we can analyze Case-less Mary in (19) as an LDed NP with a null resumptive pronoun in the subject position on a par with (20) (see also Hong 2004 for an extensive discussion on this issue).

This claim is also supported by the fact that non-pronunciation of Case markers in subject positions is not allowed in the following embedded contexts (Ahn 1999b:7).

I-Nom yesterday M.-Nom like-Rel woman-Acc meet-Past-Dec
"Yesterday I met the woman who Mary likes."

b. Na-nun cip-eyse Mary-?*(ka) John-ul ttauly-esski ttaymwuney
I-Top home-at Mary-Nom John-Acc hit-Past because
hwakana-ss-ta.
angry-Past-Dec
"I got angry because Mary hit John at home."
Since LD is generally barred in embedded contexts, impossible non-pronunciation of Case markers in (21) can be naturally explained. Recall that the Caseless subject *wh*-phrase *nwukwu* has only D-linked interpretation, whereas this restriction does not hold on the Caseless object *wh*-phrase. The core paradigm is repeated here as (22).

(22) a. Nwukwu Yenghi-lul manna-ss-ni? Who Yenghi-Acc meet-Past-Q 'Who met Yenghi?'  
   b. Yenghi-ka nwukwu manna-ss-ni? Yenghi-Nom who meet-Past-Q 'Who did Yenghi meet?'

Let us consider how we can derive D-linked property of LDed nominals from the movement theory. Boeckx (2003) and Boeckx & Grohmann (2004) put forward that the peculiar property of LD hinges on the special type of movement. Under their analysis, the LDed antecedent undergoes movement from its resumptive pronoun (RP) associate, as depicted in (23).

(23) NP1<IP<TP<DP<RP<NP2>…

Boeckx & Grohmann (2004:11) dubs this kind of movement SubMove (moving a constituent from a larger functional shell). They further claim that the movement of LDed nominal takes place under Match only, irrespective of Agree. Since the $\Phi$-feature bearing element D is stranded, as shown in (30), the moving element becomes incapable of triggering agreement (Boeckx 2005). In line with this reasoning, we assume that (22a) has the structure like (24).

22 Following Chomsky (2001), we assume that Match determines the kind of category the Probe seeks; Agree establishes the feature checking relation between Probe and Goal (valuing the Goal's formal features); The EPP property triggers Move. Following Boeckx (2003), we further assume that Agree is not taken as a prerequisite for Move; in particular, Move can take place solely under Match in the absence of Agree. See Boeckx (2003; 2004) and Boeckx & Grohmann (2004) for extensive arguments in favor of allowing pure Match-driven Move.

23 The LDed nominal doesn't show reconstruction, as shown in (i).

(i) *?*[Selou-uy, atul], John-kwa Mary-ka, to salangha-yess-ta each other-Gen son John-and Mary-Nom love-Past-Dec
In (24), movement of bare NP to Spec-F satisfies the generalized theta criterion because the NP doesn’t have a theta role in Spec-v. Note that pro and its antecedent are distinct syntactic entities and they form a constituent upon First Merge. The movement of ΦP to Spec-T is triggered by Φ-features on T (Agree). Note further that the LDed NP undergoes SubMove to Spec-Force where it gets theta-role "aboutness," which fulfills Full Interpretation. Consequently, the chain <nwukwu pro> in (24) induces only D-linked reading like wh-resumption or wh-clitic doubling constructions found in many other languages (Boeckx 2003, Boeckx & Grohmann 2004, Grohmann 2005, Hirose 2003, Jaeger 2004, Kallulli 2005b). Given that wh-phrases can occur in complement positions as bare NPs (and subsequently undergo complex predicate

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(i) *Nwukwu ku-ka Yenghi-lul manna-ss-ni?
Who be-Nom Yenghi-Acc meet-Past-Q

"Who is such that he met Mary?"

Thus, the resumption for wh-phrases must be unpronounced as pro in Korean.
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formation), the Caseless object \textit{wh}phrase in (22b) does not necessarily exhibit D-linked interpretation since it is not LDed.

Furthermore, when an object \textit{wh}phrase with an unpronounced Case marker occurs in sentence-initial position, only D-linked reading is induced, as shown in (25).

\begin{quote}
(25) Nwukwu Yenghi-ka manna-ss-ni?
Who Yenghi-Nom meet-Past-Q
\end{quote}

Since the object \textit{wh}phrase \textit{nwukwu} in (25) does not have a pronounced Case marker, our analysis predicts that the object \textit{wh}phrase \textit{nwukwu} is an LDed nominal. Then, (25) has the following structure.

\begin{quote}
(26) \[ [\text{FP} [\text{NP} Nwukwu] [\text{TP} Yenghi-ka [\text{T} [\text{V} \text{P} t \text{[vP} \text{[t pro ...]]}]] T]] F]
\end{quote}

As shown in (26), \textit{nwukwu} undergoes SubMove, leaving \textit{pro} in its base-generated position, and the D-linked property of dislocated object \textit{wh}phrase results.

4. Conclusion

We attempt to give a new analysis of distribution of subject-object asymmetries on unpronounced Case markers in Korean. We have first explored the prolific structure of nominal projections in Korean. Then, we postulate at least two functional projections above NP: \textit{\textphi}P and DP. Through the fine structure of nominals, we account for the following novel facts: subject \textit{wh} and dislocated object \textit{wh} without Case markers must have D-linked interpretation. We claim that bare \textit{wh}phrases in derived positions are LDed nominals which undergo SubMove leaving resumptive \textit{pro} that heads \textit{\textphi}-projection.

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