

The Structure of Nominal Phrases in Korean and Functional Projections*

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Lee, Jong Kun. 2008. The Structure of Nominal Phrases in Korean and Functional Projections. *The Linguistic Association of Korea Journal*, 16(3), 257-278. The present work concerns the structure of nominal phrases in Korean. Since Abney (1987), there have been various discussions on whether nominal phrases in articleless languages such as Russian, Serbo-Croatian and Korean are DPs or not. In this paper, we argue against postulating DPs in Korean by giving several pieces of evidence against DPs. First of all, Korean does not have definiteness as a grammatical category. So demonstratives such as *i/ku/ce* cannot be Ds in Korean. Second, we have found that postulating DPs in Korean based on word order limitations is not convincing, either. The present study proposes that Korean has multiple functional projections in nominal phrases, i.e., KPs and NumPs, on top of NPs and this makes the structure of nominal phrases more parallel to the structure of clauses. In addition, we can account for a number of facts about nominal phrases in Korean in a simpler way with multiple functional projections.

Key Words: NP, DP, KP, NumP, nominal phrases, noun phrases, determiner phrases, determiner, functional category, functional projection

1. Introduction

Since Abney (1987) proposed the DP Hypothesis, a question has remained as to whether nominal phrases are uniformly DPs across languages (cf. Bowers, 1991; Longobardi, 1994; Progovac, 1998; Pereltsvaig, 2007) or whether some languages lack the functional projections such as DP in the nominal phrases (cf. Chierchia 1998;

* I am grateful to the reviewers of this paper for their helpful comments and suggestions.

Baker 2003; Trenkic 2004; Bošković 2008).¹⁾ In particular, there have been many discussions on whether nominal phrases in articleless languages such as Russian, Serbo-Croatian and Korean are DPs or not. Many Korean linguists (e.g. Kang, 2001; Shim, 1996) argue that Korean demonstratives such as *ce* are Ds (determiners) and Korean nominal phrases are DPs. Some linguists (e.g. Im, 1988) argue against postulating DPs in Korean.

Recently Bošković (2008) pointed out that there are fundamental differences in syntactic behavior between languages with overt articles and languages without overt articles. He argues that languages with overt articles have DPs, but languages without articles lack DPs. According to Bošković (2008), languages without articles have NPs. He claims that this DP/NP analysis allows a natural account of syntactic differences between languages with articles and languages without articles.

The purpose of the present study is to examine claims about the structure of nominal phrases in articleless languages with special reference to Korean and argue that contrary to Bošković (2008), nominal phrases in Korean are neither DPs nor NPs. The present study will show that Korean has different functional categories in its nominal phrases, which are quite different from D.

In the following section, we examine the recent claims made by Bošković (2008) about the structures of nominal phrases in languages with overt articles and without overt articles.

2. Article-based generalizations in syntax and the structures of nominal phrases

Bošković (2008) claims that nominal phrases which we traditionally call noun phrases are not uniformly DPs. According to Bošković (2008), nominal phrases in languages with overt articles are DPs while nominal

1) Since the term 'noun phrase' is not clear as to whether it refers to a DP or NP, we will use the term 'nominal phrase' to refer to traditional noun phrases.

phrases in languages without overt articles are NPs.

Bošković (2008) claims that various article-based generalizations in syntax can be accounted for in a natural way by analyzing nominal phrases under his DP/NP analysis or Parameterized-DP Hypothesis.²⁾ Now we examine some of his article-based generalizations in syntax one by one.

First of all, Bošković (2008) points out that languages differ as to whether they show left-branch extractions or not. He introduces the following article-based generalization in syntax, which was observed by Uriagereka (1988), Corver (1992), and Bošković (2005).

(1) Only languages without articles may allow left-branch extractions.

Bošković (2008, p. 1) gives the following examples:

- (2) *Expensive/That_i he saw [_{t_i} car] (English)
 (3) Skupa/Ta_i je vidio [_{t_i} kola] (Serbo-Croatian)
 expensive/that is seen car

data from Bošković (2008, p. 1)

English is a language with overt articles, so it does not allow left-branch extractions. On the other hand, Serbo-Croatian (=SC) is a language without (overt) articles, and it does allow left-branch extractions.

The correlation with articles in the above generalization is a one-way correlation. So it is not the case that all languages without articles allow left-branch extractions. For example, Korean does not allow left-branch extractions though Korean does not have any articles.

According to Bošković (2008), two Slavic languages with overt articles, Bulgarian and Macedonian, do not allow left-branch extractions. On the other hand, most Slavic languages, which lack overt articles, allow left-branch extractions. Mohawk, Southern Tiwa, and Gunwinyguan languages do not have articles, and they allow left-branch extractions.

2) The term 'Parameterized-DP Hypothesis' was first used by Pereltsvaig (2007).

Second, another article-based generalization concerns adjunct extraction from nominal phrases. Bošković (2008, p. 2) gives the following examples:

- (4) a. *From which city_i did Peter meet [_{NP} girls t_i]
 b. Peter met [_{NP} girls from this city]
 data from Bošković (2008, p. 2)

As we can see in example (4), English does not allow extraction of adjuncts out of nominal phrases. On the other hand, Serbo-Croatian allows extractions of adjuncts out of nominal phrases. Bulgarian, a Slavic language with articles, does not allow extractions of adjuncts out of nominal phrases as we can see below.

- (5) a. Iz kojeg grada_i je Ivan sreo [djevojke t_i] (Serbo-Croatian)
 b. *Ot koj grad_i Ivan [sreštna momičeta t_i]? (Bulgarian)
 'From which city did Ivan meet girls?'
 data from Bošković (2008, p. 3)

As an article-based generalization first observed by Stjepanović (1998), Bošković (2008) introduces the following generalization:

- (6) Only languages without articles may allow adjunct extraction out of TNPs.³⁾

Korean, a language without articles, does not allow extractions of adjuncts out of nominal phrases. This fact is not against the generalization in (6) because the correlation between articles and the availability of extractions of adjuncts out of nominal phrases is a one-way correlation.

- (7) *etten tosi-lopwuthe-uy Ivan-i sonye-tul-ul
 which city-from Ivan-NOM girl-PL-ACC

3) The term TNP in Bošković (2008) stands for traditional noun phrases as in the standard transformational grammar. That is, TNPs can be either DPs or NPs in the current theory.

manna-ss-supnikka?
meet-PAST-Q

Third, another article-based generalization is in regard to scrambling. Bošković (2004) and Bošković (2008, p. 3) establish the following generalization:

(8) Only languages without articles may allow scrambling.

According to him, languages such as Serbo-Croatian, Latin, Japanese, Turkish, Hindi, Chukchi, Chichewa, and Walpiri allow scrambling and all of these languages lack articles. On the other hand, all modern Romance languages do not allow scrambling and they all have articles. Note that Latin allowed scrambling and lacked articles. Korean is well-known for scrambling and it lacks articles.

In addition to these three article-based generalizations, Bošković (2008) gives a list of other article-based generalizations. They are negative raising, superiority and multiple Wh-fronting, clitic doubling, adnominal genitive, superlatives, head-internal relatives and locality, and polysynthetic languages. Bošković (2008, p. 6) claims that

These generalizations indicate that there is a fundamental difference between TNP in English and articleless languages like SC that cannot be reduced to phonology (overt vs. phonologically null articles). (Bošković, 2008, p. 6)

Bošković (2008) tries to provide a uniform account of these article-based generalizations in syntax by his DP/NP analysis. According to Bošković (2008), nominal phrases in languages with overt articles are DPs while nominal phrases in languages without overt articles are NPs. He claims that important generalizations, that is, article-based syntactic generalizations will be missed if we adopt a uniform DP account, where it is usually claimed that languages without overt articles do have Ds but they are phonologically null.

But a question arises as to whether all languages without articles

lack any functional projections in their nominal phrases. Chinese does not have any articles. Cheng and Sybesma (1999), however, argue that functional categories such as numerals and classifiers in Chinese project Numeral Phrases and Classifier Phrases on top of NPs.

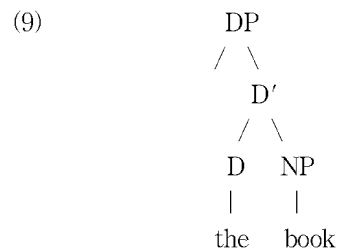
In addition, Progovac (1998) claims that Serbo-Croatian, a language without overt articles, projects DPs on top of NPs at least in argument positions. According to Progovac (1998), evidence for the existence of DPs in Serbo-Croatian comes from noun/pronoun asymmetries. What Progovac means by noun/pronoun asymmetries concerns word order in nominal phrases: In Serbo-Croatian, pronouns precede certain intensifying adjectives while nouns follow them.

So the claim that languages without articles lack DPs is not uncontroversial. If some articleless languages have functional projections such as DP or Classifier Phrase in their nominal phrases, this goes against Bošković's (2008) theory.

In the next section, we will examine some of these claims in more detail and argue that Korean, a language without articles, has functional projections in the phrases traditionally referred to as noun phrases.

3. Languages without articles and functional projections in nominal phrases

It has been argued since Abney (1987) that the head of the nominal phrases such as *the book* is the article, not the noun. The functional projection on top of an NP is dubbed determiner phrase or DP, as we can see in (9) below.



According to Progovac (1998), the reasons for postulating DPs on top of NPs are as follows:

- (a) there is systemic parallelism between sentences and NPs ..., which can best be captured by introducing functional categories into NPs; (b) there is evidence of head-to-head movement within noun phrases which can only be captured if another (c-commanding) head is present (Longobardi 1994); (c) some languages show possessor/possessed agreement in the NP ..., clearly indicating a need for a functional head in the NP. (Progovac, 1998. p. 166)

As an example of systematic parallelism between sentences and NPs, Progovac (1998, p. 166) gives the following sentences:

- (10) (a) [s John builds spaceships]
 (b) [_{NP} John's building a spaceship] upset me.

As an example of possessor/possessed agreement in the nominal phrase, Progovac quotes the following Hungarian data from Szabolcsi (1987):

- (11) (a) az en kalap-om
 the I-NOM hat-1SG
 'my hat'
 (b) a te kalap-od
 the you-NOM hat-2SG
 'your hat'
 (c) a Peter kalap-ja
 the Peter hat-3SG
 'Peter's hat'

Progovac (1998) points out that articles are the category that occupies the head D position uncontroversially.⁴⁾ On the other hand, whether

4) According to Trenkic (2004), evidence for postulating articles in D comes from languages with affixal articles such as Bulgarian. "The amalgamation of a noun and an

demonstratives and possessives occupy the head D position is controversial. Guisti (1992, 1995) claims that demonstratives and possessives occupy specifier positions of DP, not head positions of DP. Guiste's claim is based on the observation that in many unrelated languages demonstratives such as *this* and possessives such as *my* can co-occur with articles. Some linguists (e.g. Trenkic, 2004) argue that demonstratives and possessives act like adjectives. We will consider this issue in more detail later in this section.

One important question in the present study is whether languages without articles project a DP or not. Progovac (1998) argues that in spite of the lack of articles in Serbo-Croatian, there is evidence for the existence of a DP on top of an NP in this language.

According to Progovac (1998), a piece of evidence that Serbo-Croatian has DPs comes from noun/pronoun asymmetries in this language. Though adjectives do not usually modify pronouns, those adjectives that can co-occur with pronouns in SC must follow the pronouns whereas those adjectives must precede nouns. Consider the following examples:

- (12) ??Ni **Marija sama** u to ne veruje
 neither Mary alone in that not believes
 'Not even Mary believes that.'
- (13) Ni **sama Marija** u to ne veruje.
- (14) Ni **ja sama / ona sama** u to ne veruje(m)
 neither I alone she alone in that not believe(1SG)
 'Not even I/she believe(s) that.'
- (15) Ni ?* **sama ja / ??sama ona** u to ne veruje(m)

data from Progovac (1998, p. 168)

As we can see in the examples above, pronouns precede adjectives and nouns follow adjectives in SC. Progovac (1998) argues that these

article of the type *momče-to* (Bulgarian 'boy-the') implies Head Movement, which is only possible if both D and N are heads, and if the article is in D." (Trenkic, 2004, p. 1410)

noun/pronoun asymmetries can be accounted for if pronouns are placed in D positions and nouns in N positions.⁵⁾

If Progovac (1998) is on the right track, the DP Hypothesis can capture noun/pronoun asymmetries without resting on a number of separate stipulations. So differences in word order in nominal phrases in languages without overt articles can be captured under the DP Hypothesis.

Now we return to our question as to whether Korean, another language without articles, has DPs. It is well known that Korean does not have articles. So if there is evidence for postulating DPs on top of NPs in Korean, it will come from demonstratives/possessives or word order in nominal phrases.

Kang (2001) and Shim (1996) argue that Korean has DPs on top of NPs. Shim argues for the existence of DPs in Korean based on the demonstratives in Korean. According to him, the Korean demonstratives *i/ku/ce* are Ds, and they are the heads of DPs.

Shim (1996) claims that there are similarities in lexical, referential, and functional meaning between the French demonstrative *ce* and the Korean demonstrative *ku*. Assuming that the French demonstrative *ce* is a D, Shim argues that the Korean demonstrative *ku* occupies the head D position of a DP.

Trenkic (2004), however, argues against postulating DPs simply based on demonstratives or possessives. According to him, though definiteness as a category of meaning exists in all languages, definiteness is not grammaticalized in every language as a syntactic category. She claims that it is not grammaticalized in Serbian/Croatian/Bosnian.⁶⁾

5) Longobardi (1994) discusses similar name/pronoun asymmetries in Italian, and gives a similar conclusion that pronouns in Italian occupy the D position underlyingly while nouns are generated in N positions.

6) According to Trenkic (2004), the official name of the language spoken in the area of Serbia, Montenegro, Croatia and Bosnia was Serbo-Croatian. This language split into three different languages, Serbian, Croatian, and Bosnian during the 1990s.

It is argued that while demonstratives may encode pragmatic definiteness as part of their lexico-semantic content, they are not necessarily exponents of the grammatical category of definiteness. (Trenkic, 2004, p. 1402)

According to Trenkic, the reason why Serbian/Croatian/Bosnian do not have definiteness as a syntactic category is related to word order restrictions within the nominal phrases. Consider the following S/C/B examples:

- (16) lepe ove misli
 nice these thoughts
- (17) moje ove misli
 my these thoughts
- (18) misli ove
 thoughts these data from Trenkic (2004, p. 1412)

Based on data such as these, Trenkic (2004) states as follows:

While the word order of the above phrases is heavily stylistically marked, it is not ungrammatical or outright unacceptable, as for example, the English, or Spanish counter-examples would be. The sheer possibility of permuting demonstratives with other elements of the nominal phrase seems to suggest that they do not behave like proper exponents of the DP category in S/C/B, but more like ordinary adjectives, raising doubts as to whether they need be associated with the determiner phrase at all. (Trenkic, 2004, p. 1412)

This means that S/C/B do not have definiteness as a syntactic category. On the other hand, as Lyons (1999) argues, Romanian and Spanish, languages with overt articles, have definiteness as a syntactic category as exemplified below.

- (19) Romanian: a. omul acesta
 man-the this

- b. *acest om*
 this man
- (20) Spanish: a. *la casa esta*
 the house this
- b. *esta casa*
 this house data from Trenkic (2004, p. 1423)

Trenkic (2004) notes that in languages that grammaticalize definiteness, a definite article must appear to project a DP as in (19a) and (20a) or if it does not, a demonstrative or some other determiner must rise to the SpecDP position, which is related to definiteness. Importantly, Trenkic emphasizes that "it is not the lexico-semantic content of the demonstrative, but the filling of this position (SpecDP or D) that renders the nominal phrase grammatically definite."

In addition, Trenkic (2004) provides additional evidence from a second language acquisition study that DP is not projected on top of NPs in Serbian/Croatian/Bosnian. If DP is universal, it is assumed that when learning a second language with articles, learners of any first language, whether it has overt articles or not, will not make more article omission errors. But the results of a few experiments with Serbian speakers showed that this assumption was wrong. This indicates that Serbian speakers are not equipped with a D position, and Serbian does not project DPs on top of NPs.

Returning to Korean, does Korean have definiteness as a syntactic category? The following examples suggest that Korean does not have definiteness as a syntactic category.

- (21) *cohun i sayngkak*
 nice these thoughts
- (22) *nay i sayngkak*
 my these thoughts

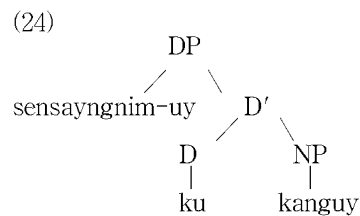
Though Korean has definiteness as a semantic/pragmatic category, there is no evidence for the existence of definiteness as a

syntactic category, contrary to Shim's (1996) findings.

Kang (2001) claims that Korean has DPs based on word order restrictions in nominal phrases. Some examples are given below.

- (23) *sensayngnim-uy* *ku* *kanguy*
 teacher-GEN that/the lecture
 'that lecture (given) by (my/the) teacher'

Kang (2001) claims that the surface structure of the above phrase is as follows:



According to Kang (2001), the head of a nominal phrase in Korean is D, and so Korean has DPs on top of NPs. He argues for postulating DPs in Korean based on the following data:

- (25) **ku* *sensayngnim-uy* *kanguy*
 that/the teacher-GEN lecture
 'that/the lecture (given) by (my) teacher'
- (26) **ku* *sensayngnim* *kanguy*
 that/the teacher lecture
 'that lecture (given) by (my) teacher'

According to Kang (2001), phrases (25) and (26) are not acceptable because the DP *sensayngnim* '(my/the) teacher' cannot receive Case without moving to the SpecDP position, whereas the DP *sensayngnim* '(my/the) teacher' can receive Case if it moves to the SpecDP position as in (23), where the head D assigns Genitive Case to the DP

sensayngnim '(my/the) teacher' as in (23). He assumes that the demonstratives *i/ku/ce* in Korean are Ds, occupying the head position of Korean nominal phrases, and they can assign Genitive Case to DPs in the SpecDP position.

So the nominal phrases (25) and (26) are ruled out, while the nominal phrase (23) is acceptable, according to Kang (2001). Some speakers of Korean, however, find the nominal phrases (25) and (26) quite acceptable when they are pronounced with a pause between *ku* 'that/the' and *sensayngnim* 'teacher'.

(27)	ku		sensayngnim-uy	kanguy-ka
	that/the		teacher-GEN	lecture-NOM
(28)	ku		sensayngnim	kanguy-ka
	that/the		teacher	lecture-NOM

The nominal phrases (25) and (26) become more acceptable when case markers are attached to the word *kanguy* 'lecture'. So Kang's (2001) argument based on word order limitations within the nominal phrases is not very convincing.

In addition, the DP Hypothesis supported by Kang (2001) and Shim (1996) has another problem in Korean. It is well known that Korean is a head-final language. If there is a functional category such as D in Korean, it is expected to occur at the end of the nominal phrases. However, the demonstratives *i/ku/ce* in Korean, which they assume to be Ds, occur not after the noun, but before the noun.⁷⁾

In addition, second language acquisition data also gives a piece of evidence that Korean does not have Ds. As we mentioned earlier, Trenkic (2004) provides evidence from a second language acquisition study that DP is not projected on top of NPs in Serbian/Croatian/Bosnian. If the Universal DP Hypothesis is correct, it is assumed that when learning a second language with articles, learners

7) Kang (2001) argues that since some languages such as German choose a head-final parameter for IPs while choosing a head-initial parameter for CPs, it is not a serious problem.

of any first language, whether it has overt articles or not, will not make more article-related errors.

Ko, Perovic, Ionin, and Wexler (2007) find that Korean learners of English sometimes overuse 'the' with indefinites and overuse 'a' with definites. This suggests that unlike English, Korean does not have definiteness (D) as a syntactic category.

Some Korean linguists (e.g. Bak, 1992; Hong, 1994) argue for DPs for quite different reasons. They claim that the case markers in Korean are Ds. Their assumption is that Korean case markers indicate definiteness or specificity, so they are some kind of determiners. What they mean by definiteness or specificity is very similar to specificity indicated by Turkish case (cf. Enç, 1991). Even if Korean case markers indicate definiteness or specificity, they cannot project DPs when we adopt Lyons's (1999) criteria for postulating DPs, that is, D can be postulated in languages only if they have definiteness as a grammatical category. It turns out that some Korean case markers have no correlation with specificity or definiteness, as we can see below.

- (29) na-nun Chelswu-ka coh-ta.
 I-TOP Chelswu-NOM like-DEC.
 'I like Chelswu.'

The nominative case marker *-ka* on the proper noun *Chelswu-ka* has nothing to do with specificity or definiteness.⁸⁾ Whether the case marker is attached to the proper noun or not, the meaning is the same. So Bak's (1992) and Hong's (1994) claim that Korean case markers are Ds is not convincing, either.

Then, does Korean have any functional categories in the nominal phrases? In the next section, we propose that Korean does in fact have functional projections in nominal phrases, and although they are not DPs, they are some other functional projections.

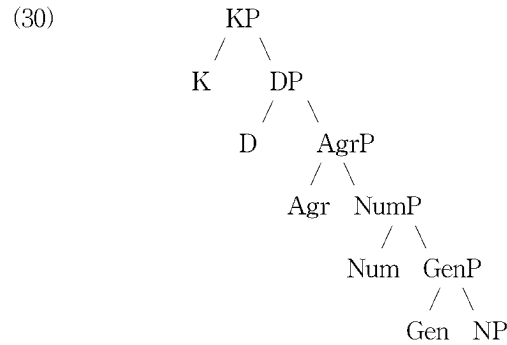
8) There is a clear distinction between specificity and definiteness. Please refer to Trenkic (2004) for details.

4. Nominal Phrases in Korean and Multiple Functional Projections

If Korean does not have DPs, what kinds of functional projections does it have? Answers to this question will be more convincing if we take the following into account. First of all, Korean is a head-final language. Second, as Bošković (2008) claims, there are differences in syntactic structure between languages with articles and those without overt articles. Third, as Lyons (1999) and Trenkic (2004) argue, languages do not have DPs without having definiteness as a syntactic category. Fourth, as Trenkic (2004, p. 1414) argues, functional heads must be motivated in a language, that is, they are assumed only if they are manifested. Fifth, possible answers should be compatible with second language acquisition data.

Trenkic (2004) notes that the theory of phrase structure becomes more general if the nominal phrase is closely parallel in its structure to the clause. Progovac (1998, p. 166) also notes that one of the reasons for postulating DPs on top of NPs is that "there is systemic parallelism between sentences and NPs ..., which can best be captured by introducing functional categories into NPs."

In addition, since the Split INFL Hypothesis (Pollock, 1989), many functional projections have been postulated on top of VPs. Just as the Split INFL Hypothesis for IPs, Lyons (1999) postulates a number of functional projections on top of NPs for nominal phrases. He claims that some languages project KPs (Case phrase) on top of DPs, and some languages project GenP(=Gender phrase) on top of NPs. In addition, some languages project NumP(=Number phrase) on top of NPs, and some other languages project AgrP on top of NPs. So Lyons (1999, p. 295) gives the following schema:

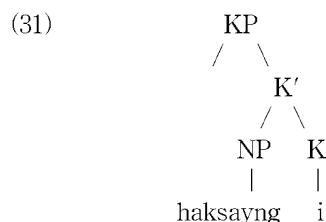


He notes that languages usually do not adopt all of these functional projections. So some languages may adopt KPs without DPs. Many languages do not adopt GenPs or AgrPs.

Travis and Lamontagne (1992) argue for the functional category *K* that corresponds to case, showing that it has properties in common with *C* in a clause. Laughren (1989) also analyzes the noun phrase in Walpiri as KP, in which its case morpheme is the head.

If we analyze the nominal phrase in Korean as KP without postulating DPs, and case markers such as *-ka* and *-ul* as *Ks*, we can account for a number of facts about nominal phrases in Korean. First, as we pointed out above, it is compatible with the widely accepted assumption that Korean is a head-final language. Case markers in Korean occur after nouns. Second, as Bošković (2008) claims, differences in syntactic structure between languages with articles and those without overt articles can be captured in a natural way. A way of accounting for the syntactic differences between languages with articles and languages without articles is that languages with articles have DPs, and adjunct extraction out of nominal phrases and left-branch extractions are not allowed in those languages because *D'* acts as a minimality barrier. Third, Trenkic (2004, p. 1414) argues that functional heads must be motivated in a language, and in fact, *K* can be assumed because it is morphologically manifested.

So the structure of the Korean nominal phrase *haksayng-i* 'student-NOM' is postulated as follows:



In fact, some Korean linguists (e.g. Jo, 2000) have already argued for postulating KPs in Korean. In her analysis of nominal phrases in Korean, Jo (2000) postulated KPs on top of NPs. Jo (2000) analyzed K as a sub-type of D. Following Szabolsci (1987, 1994), she assumes that D in English has two functions, the quantifier/demonstrative (=deictic) function and the subordinator function. Szabolsci (1987, 1994) claims that only DPs can function as arguments of a predicate. According to her, NPs are predicates or propositions, not arguments, and so NPs can become arguments when they are merged with Ds. What they mean by the subordinator function is that Ds are similar to a complementizer which subordinates a clause as an argument of a verb. So they use the term subordinator. According to Longobardi (1994), D picks out a single instance of whatever is referred to by an NP. This is the function of a quantifier/demonstrative.

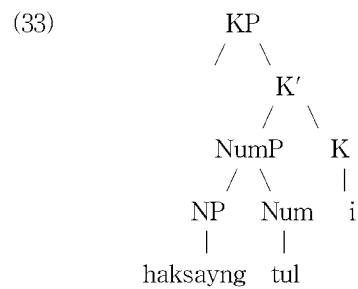
Jo (2000) argues that case markers in Korean have the function of subordinators, and they project KPs in Korean. The present study also argues for the existence of KPs in Korean, but we depart from her study on this point, following the spirit of Lyons (1999), we postulate more than one functional projection in Korean nominal phrases.

The present work proposes that Korean has more than one functional projection in nominal phrases; in addition to KPs, Korean has number phrases (=NumP). Consider the following data:

- (32) haksayng-tul-i
 student-Plural-NOM 'students'

In Korean, the plural morpheme is attached to the noun as an affix.

Ritter (1991, 1992) proposed Num and NumP for Hebrew, and this proposal has been adopted for other languages by several linguists. Lyons (1995) argues for the existence of NumP in English, and he claims that the plural morpheme such as *-s* is the Num head. If we adopt Lyons' and Ritter's spirit of postulating NumPs for their languages, we can analyze the structure of the nominal phrase in (32) as follows:



As mentioned above, Trenkic (2004, p. 1414) argues that functional heads must be motivated in a language, and in fact, Num can be assumed because it is morphologically manifested in Korean.

Postulating multiple functional categories in nominal phrases in Korean can also account for the relative ordering of case morphemes and the plural morpheme without any stipulation. In languages in which both case markers and plural morphemes occur, Ks occur in a higher position than Num, and Korean is not an exception. The functional projections proposed in the present study can account for this fact in a straightforward way.

So we propose that Korean has multiple functional projections in nominal phrases, and this makes the structure of nominal phrases more parallel to the structure of clauses in that clauses have multiple functional projections in Korean and other languages.

5. Conclusion

In this paper, we have argued against postulating DPs in Korean by giving several pieces of evidence against DPs. First of all, Korean

does not have definiteness as a grammatical category. So demonstratives such as *i/ku/ce* cannot be Ds in Korean. Second, we have found that postulating DPs in Korean based on word order limitations is not convincing, either.

The present study has proposed that Korean has multiple functional projections in nominal phrases, i.e., KPs and NumPs, on top of NPs and this makes the structure of nominal phrases more parallel to the structure of clauses. In addition, we can account for a number of facts about nominal phrases in Korean, including relative ordering of case and plural morphemes, in a simpler way with the multiple functional projections.

Finally, we have found that the syntactic differences between languages with articles and languages without articles can be accounted for even with multiple functional projections, which can account for different empirical phenomena in a variety of languages. The present work, however, has shown that it is not the case that all languages have either DPs or NPs as Bošković (2008) assumes in his DP/NP analysis.

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Received: 30 June, 2008

Revised: 30 August, 2008

Accepted: 10 September, 2008