

Double Subject Constructions in Korean: A Purely Derivational 3D Merge Approach*

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Im, Chegyong. 2012. Double Subject Constructions in Korean: A Purely Derivational 3D Merge Approach. *Linguistic Research* 29(1), 197-215. In this paper, we try to provide theoretical evidences for the structure of DSCs suggested in Im (2002) and Im (2009), adopting and adapting the derivational approaches including Starke (2001) and Surányi (2006). We argue against the multiple agree approach and movement approach outlining their theoretical and empirical problems. Then, we will show that the Natural Relation suggested in Grohmann (2003) and the purely derivational approach in Surányi (2006) support my argument that NP2 is the subject of the constructions and that the sequence of functional projections (FSeq) suggested in Starke (2001) resolves the concatenation of the constructions. The most advantageous thing is that Merge of NP1 as Topic/Focus can be explained in 3D Merge hypothesis suggested in Boeckx (2008), and Im (2002, 2004, 2005a, 2005b, 2006a, 2006b, 2007, 2008, 2009, 2010, 2011). (Daegu Arts University)

Keywords Double Subject Constructions, 3 Dimension Merge, Natural Relation, functional projections, Topic, Focus

1. Issue and Previous Studies

In Im (2002), the argument that Agr is Nominative Case licenser for Korean (cf. Choe 1988, Han 1989, Kim 1996) is contradicted. It is contended that so-called honorific marker "-si" is not a case licenser that exerts its featural power against arguments.

(1) <u>a</u> pechi-kkese	<u>ton</u> -i	mahne-si-ta
NP1	NP2	
father-NOM(HON)	money-NOM	much-HON-DEC

* Many thanks go to two anonymous reviewers whose suggestions and comments helped me to improve this paper. I am responsible for all the remaining errors, of course.

"Father has a lot of money/Father is rich"

Agr-based approaches maintain that NP1 is the subject because the Case marker and the honorific marker on the predicate show agreement. Some argue that NP2 has an inherent Case marker, and that NP2 and the predicate comprise the primary predication that serves itself a predicate for the subject NP1 for the secondary predication (For more discussion, see Moon (2000)).

These Agr-based approaches, seemingly nicely fit into the checking theory of 1980-90's, are not without problems. First of all, NP1 and the predicate do not show any semantic relation. What is abundant is "money", not "father" in (1). If the predicate "mahn-ta" needs an argument with a Θ -role, the candidate would be "ton", not "apechi" (Nominative Case in VP can be licensed by the predicate[+stative] (Kim 1994)).

Secondly, it is also argued in Im (2002) that the honorific marker "-si" is not a syntactic marker but a pragmatic marker. It has been traditionally asserted that the subject agrees with the predicate or verb in honorification.

- (2) a. apechi-kkese chaek-eul ilke-si-nta
 father-NOM(HON) book-ACC read-HON-DEC
 "Father reads a book/Father is reading a book"
 b. */! apechi-kkese chaek-eul ik-nenta
 c. */! apechi-ka chaek-ul ilke-si-nta

It has been argued that (2b, c) are grammatically wrong (*) because the honorification does not appear both on the subject and the predicate. Our assumption, however, is different from theirs. We believe the honorification in Korean is solely pragmatic, not syntactic phenomena. The sentences of (2b, c) may sound awkward (!) to some participants depending on the relation or social hierarchy among the speaker, the hearer and the denoted person as the subject of the sentence. It is widely accepted among Korean linguists that the honorification in Korean is a system that is oriented on the hearer, i.e., it is decided by the hierarchical status between the hearer and the speaker or between the hearer and the person uttered in the sentence¹.

Thirdly, the social status of the ante-subject NPs is found to affect the

honorification of the predicate.

- (3) a. harapechi-uy saengae-ese-nun samsiptae-ka kachang
 grandfather-GEN life-in-TOP/FOC thirties-NOM most
 haengpokha-si-et-ta
 happy-HON-PAST-DEC
 "Grandfather was happiest in his thirties." Kim (1992: 128)
- b. apenim-uy son-i tteli-si-nta
 father-GEN hand-NOM tremble-HON-DEC
 "Father's hands are trembling." Im (1985/1998: 115)

The psychological subject² is "harapechi", while the syntactic subject is "samsiptae" in (3a). We believe the occurrence of the honorific marker "-si" on the predicate is affected by the ante-subject NP "harapechi". The same thing is found in (3b). What trembles in (3b) is "son", not "apechi". The predicate, however, shows honorification, which must be affected by the ante-subject NP, "apenim"³.

¹ Compare the two utterances:

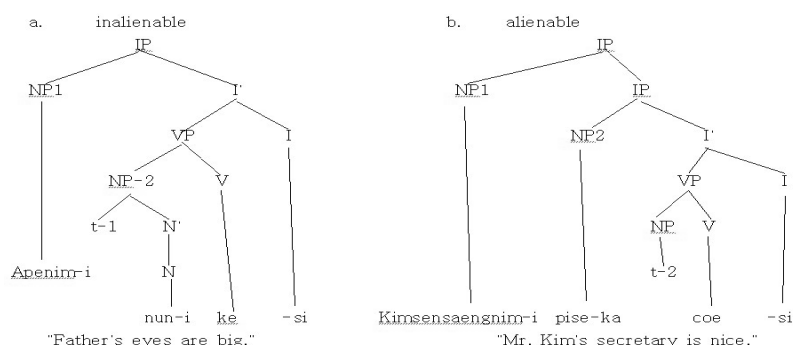
- (i) a. Kim kwachang wa-t-na?
 Kim assistant manager come-PAST-INT
 "Did the assistant manager Kim come?"
- b. Kim kwachang o-si-et-na?
 Kim assistant manager come-HON-PAST-INT

Supposed the promotion in a Korean company is done with the years the employees serve, (ia) is most likely to be uttered by the president asking the manager if the assistant manager came, while (ib) is likely to be uttered by the president or the manager asking the secretary if the assistant manager came. The fact that "-si" is pronounced when the hearer is lower in the social status and/or age than the denoted person occupying the subject position suggests that the honorification is not a syntactic phenomenon but a pragmatic phenomenon. Im (2000) argues that the honorification is the manifestation of the speaker's intention (social interaction) with the participants of the conversation. In other words, the speaker's intention to honor the participants is likely to affect the morphological change in the predicate. (See also Kim and Sells 2007)

- ² Psychological subject or topic (from the Prague school notion of topic-comment) is distinct from the notions of grammatical and logical subject in that the first refers to the [+animate/+human] entity about which the event predicates. For example, in the sentence "To me, it's too boring.", 'me (I)' is the psychological subject and 'it' is the syntactic subject.
- ³ All these observations support our proposal that the honorification in Korean is not a syntactic phenomenon, but a pragmatic phenomenon. They also contradict the idea that the honorific marker, "-si", runs into the checking relation, serving as the Case licenser. It is suggested that "-si" is inserted late in the \mathcal{Q} -sphere based on the assumptions of Multiple Spheres Hypothesis MSH (See

Another pervasive proposal held around 1980s and 1990s is the movement theory that is based on the following derivational structure, for example.

(4)



As criticized in Brody (2000, 2002), there is apparently a lack of solid empirical evidence to support the view that grammar is more powerful by having both representations and derivational operations in syntax as assumed in the Minimalist paradigm. If only representations have interface visibility, any derivations of the representations and any operations involved in the derivations will lack conceptual necessity at the interfaces. Also, multiple derivations for multiple representations will produce redundant outputs which need burdensome constraints at the interfaces.

Movement-based theory also faces some empirical problems. For example, (5a) is naturally derived from (5b). But (6b) is awkward for (6a) interpretation. GEN-NOM alternation is not free.

- (5) a. Cheolsu-ka cip-i keta
 C-NOM house-NOM big "Cheolsu's house is big"
 b. Cheolsu-uy cip-i keta
 C-GEN house-NOM big

Im 2000, 2002, 2004, 2005a, 2005b, 2006a, 2006b, 2007, 2008, 2009, 2010, 2011). As pointed out by an anonymous reviewer, the functional categories of CP develop late in children's language. The phenomenon is observed in Radford (1990) and named as "truncation". We argue that the late development of honorification in children's language can be ascribed as one of the CP truncations.

- (6) a. Cheolsu-ka ton-i manta
 C-NOM money-NOM much "Cheolsu has a lot of money"
 b. ?Cheolsu-uy ton-i manta
 C-GEN money-NOM much

Another empirical problem the theory should resolve is so-called the locative subject construction as the following:

- (7) a. i kongcang-i pul-i natta
 this factory-NOM fire-NOM broke out
 "A fire broke out at this factory."
 b. pul-i i kongcang-ese natta
 fire-NOM this factory-at broke out

If we assume that (7a) is derived from (7b), we have to explain why the NP *i kongcang* gets NOM case marker in this position⁴.

Ko (2009) tries to explain the appearance of the Case markers in both NPs. Based on Pesetsky and Torrego (2007), she suggests the following;

- (8) Agree as feature sharing
 a. An unvalued feature F (a probe) at syntactic location α ($F\alpha$) scans its c-command domain for another instance of F (a goal) at location β ($F\beta$) with which to agree.
 b. Replace $F\alpha$ with $F\beta$, so that the same feature is present in both location.

⁴ In Zulu, a Bantu language, where locative inversion is possible, the inverted locative, agreeing with the verb, assumes the role of the subject in unaccusative constructions as the following. (Buell 2007: 111) But in Korean the inverted locative cannot be the subject because of the same reason suggested at the beginning of this chapter.

- (i) a. Lezi zindlu zi-hlala abantu abadala
 10these 10house 10-live 2people 2old
 "Old people live in these house."
 b. Ipulatifomu i-ma abantu aba-win-ile
 9platform 9-stand 2people REL:2-win-PERF
 "The winners stand on the platform."

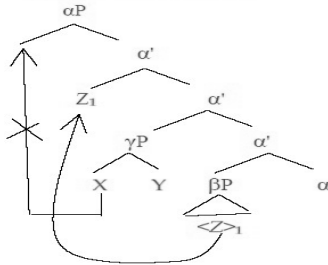
Adopting Pesetsky and Torrego (2007)'s idea that Case is a Tense feature placed on a nominal head D, she suggests that nominative Case marking is understood as T-feature sharing among T, v, and Case-bearing maximal projections in-between, as depicted in (9).

(9) Nominative Case Sharing (Ko 2009: 438, (14))⁵

- ⁵ She has to assume the following generalization (i) described as in (ii) for the underlying structure of Case-bearing elements that undergoes movement to reach the interface.

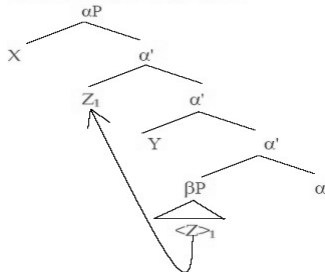
(i) The Edge Generalization: If X and Y are dominated by a specifier (non-complement) γ P of a Spell-out domain α P, X and Y cannot be separated by a α P-internal element Z that is not dominated by γ P.

(ii) $*[X... Z... Y]$: *Edge Effects*



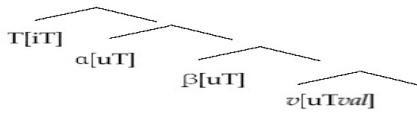
She also has to posit the ordering restriction for the two elements that are merged at the edge as non-constituents; they are separable by their domain-mate Z.

(iii) $[X...Z...Y]$: *Split Edge Effect*



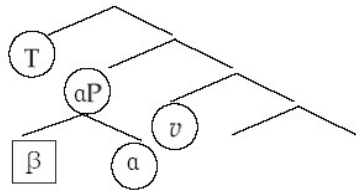
(ii) and (iii) explain why the following two constructions show asymmetry in grammaticality.

- (iv) a. *Haksayngtul-i₁ maykcwu-lul₂ t₁ sey-myeng t₂ masiessta
 Students-NOM beer-ACC 3-CL drank
 "Three students drank beer."
 b. Haksayngtul-i₁ maykcwu-lul₂ t₁ sey-myeng-i t₂ masiessta
 Students-NOM beer-ACC 3-CL-NOM drank
 "Three students drank beer."



Her theory, however, is still based on movement, which is theoretically problematic as we argued above. She also needs a mechanism called Optional Feature (Case) Sharing depicted as (10) for the asymmetry found in the constructions (11).

(10) Optional Feature (Case) Sharing



- (11) a. John -i apeci-ka yenge-lul- cal hasinta
 J-NOM father-NOM English-ACC well do
 "John's father speaks English well."
 b. *John-i₂ yenge-lul₁ t₂ apeci-ka t₁ cal hasinta
 J-NOM English-ACC father-NOM well do

She has to argue for (10) to show that the nominative marked possessor *John-i* and possessee *apeci-ka* are externally merged as a constituent at the base structure. Otherwise, the asymmetry of (11a) and (11b) cannot be explained⁶.

Based on these observations, an alternative structure is suggested in Im (2002) and (2009). The structure, however, is not fully supported by theoretical evidences. The purpose of this study is to provide the theoretical support employing the notions of 3 dimensional Merge suggested in Boeckx (2008) and Im (2002, 2004, 2005a, 2005b, 2006a, 2006b, 2007, 2008, 2009, 2010, 2011) and the Sequence of Functional

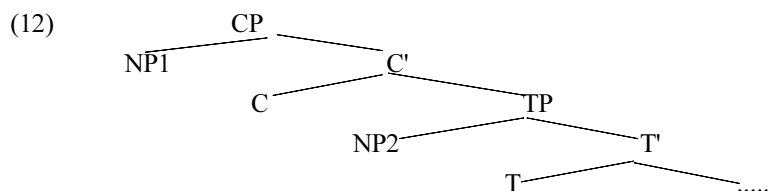
Ko argues that (ivb) shows the obligatory Case-sharing because the nominative subject 'students' and its associate quantifier 'S-CL' do not form a constituent in underlying structure (Split Edge Effects).

⁶ Furthermore, if the structure is not possessor-possessee construction as pointed out by an anonymous reviewer, the two NPs cannot be externally merged as a constituent.

Projections (FSeq) suggested in Starke (2001) and Surányi (2006). The next chapter is the summary of Im (2002) and (2009). The theoretical evidences for Im (2002) and (2009) are provided in chapter 3. Chapter 4 concludes the paper.

2. Im (2002, 2009)

Adopting Grohmann's (2003) Natural Relations⁷, the following is suggested in Im (2002, 2009) as the basic structure of double Nominative constructions in Korean.



It is argued that NP2 gets Nominative Case licensed by T (cf. Kim 1994, Kim 1996, Yang 1999). Merging NP2 with T', the label of the object (T, NP2), should result in licit specifier-head licensing; NP2 is Sister to T', which, in turn, Immediately Contains T, thus T is the Extended Sister of NP2. Specifier-head

⁷ Employing the three primitive relations of Sister, Immediately Contain, and Extended Sister, Grohmann suggests an alternative notion of checking domain and an alternative way of capturing checking configurations in his relational terms as follows (Grohmann 2003: 5);

(i) Checking Condition

An object O in the phrase marker endowed with a feature F can enter into a checking relation with a head H containing matching F if and only if O stands in a Natural Relation to H.

(ii) Natural Relation

Let a Natural Relation be

- i. any of the primitive relations provided by Merging two objects O, O' and
- ii. the single application of composition of these primitive relations.

In sum, the three Natural Relations as of (iii) ((where α merges with β , K is the new label, and L is subsequently merged with K) ensure that the three desired configurations head-head, head-complement, (unique) specifier-head, and only those, are permissible checking configurations.

(iii) a. Sister: (α , β), (β , α)

b. Immediately Contain: (K, α), (K, β)

c. Extended Sister: (L, κ), where $\kappa = \alpha$ or β (head of K)

checking is legitimized by Extended Sister.

It is also suggested in Im (2002, 2009) that NP1 is licensed by adjunction as Grohmann assumes and that the adjunction occurs in the Ω -sphere based on the assumptions of MSH⁸. Under the assumptions of MSH, SOs with discourse features such as [topic], [focus], and [specificity] merge in the Ω -sphere. So NP1 with discourse features merges with the TP already built in Φ -sphere.

(13) a. possessor ascension construction

khokkiri-ka kho-ka kilita
elephant-NOM nose-NOM long
"As for the elephant, its nose is long."

b. whole-part construction

kwail-i sakwa-ka massitta
fruit-NOM apple-NOM good
"As for the fruit, apples are good."

c. locative inversion construction

I kongchang-i pul-i natta
this factory-NOM fire-NOM broke out
"A fire broke out in this factory."

d. quantifier floating construction

haksaeng-i se-myong-i watta
student-NOM three-DL-NOM came
"Three students came."

NP1s in (13a, b, c, d) contain the feature [topic] or [focus] whatever their structural or semantic roles are in each construction. Consider the following context.

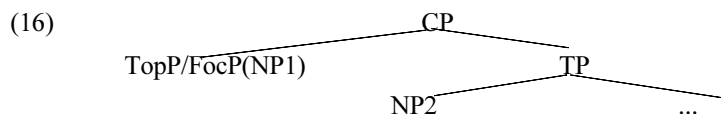
⁸ The most fundamental hypothesis MSH assumes is that the process of derivation is not cyclic, but simultaneous. L contains operations that determine the phonological value as well as the semantic value of each SO by selecting the features from the lexicon that pervasively exists in three spheres: Θ -sphere, Φ -sphere and Ω -sphere. MSH assumes that when syntactic objects α and β come into numeration by Merge, they assume inherent discourse features (of information like topic, focus . . .) as well as inherent syntactic features (Φ -features, for instance). The parametric variation of word order among languages is determined by the features in each sphere. As is well-known, Merge is a set operation that imposes no intrinsic ordering among its members. In order for a Merger set to be linearized into strings of words at PF, we have to wait until all the features of three spheres are specified.

- (14) a. khokkiri-ka mue-ka ki-no
 elephant-NOM what-NOM long-INT
 "What's long in an elephant?/ Which part of an elephant is long?"
 b. mue-ka kho-ka ki-no
 what-NOM nose-NOM long-INT
 "In what is the nose long?/ What has a long nose?"

If (15a) can be the answer for both of the (14a, b) sentences, then *khokkiri* in (15a) can serve as a topic phrase for (14a) and a focus phrase for (14b)⁹. I believe that the same analysis can be applied to all the other constructions in (13). Besides, changing the Case marker as the following would clarify our proposal:

- (15) a. khokkiri-nun kho-ka kilta
 b. khokkiri-ka kho-nun kilta

If "-nun" is a topic or a focus marker as traditionally believed, the sentences in (15) show that discourse features should be considered to explain the building of DSCs in Korean. In sum, revising the force-finiteness system suggested in Rizzi (1997), I propose the following structure for DSCs in Korean.



Now I have to provide the evidence that “-ka/-i” play the role as a pragmatic Focus marker as well as a syntactic Nominative case marker in our paper. Chae (1996), showing the ambiguity of the particles, claims that they should be classified as phrasal affixes when these particles function as Case marker and as clitics when they function as Focus or Contrast marker. Following Chae (1996), I assume there are two functions of “-ka/-i”, one is Nominative marker, the other, Focus marker.

⁹ In Korean, a topic phrase is normally omitted in a conversation. When it is pronounced it can be reintroduced as a resumptive topic. (Dik 1989, Im 2006b, 2008)

- (17) A: Cholsu-nun/ka ki-ka ku-chiyo?
 Cholsu-TOP/NOM height-NOM tall-INT
 ‘Cholsu is tall, isn’t he?’
 B: *Cholsu-nun/Cholsu-ka ki-ka kun-ke anira
 Cholsu-TOP/Cholsu-FOC height-NOM tall-COMP not
 Yonghee-ka (ki-ka) ku-chi.
 Yonghee-FOC (height-NOM) tall-DEC
 ‘Cholsu isn’t tall, but Yonghee is (tall).’

In (17b), “-ka” in “Cholsu-ka” and “Yonghee-ka” functions as Focus marker meaning ‘contrastiveness.’ The fact that “-ka/-i” functions as a pragmatic marker independently of Case can be more validated in the following example.

- (18) a. A: nu-ka kuruten? B: sensaengnim-i-ka (3yr)
 who-NOM said so teacher-FOC-NOM
 ‘who said so?’ ‘teacher did.’
 b. yosem schedule-i mana-se mom-i-ka aju
 recently schedule-NOMa lot-as body-FOC-NOM very
 himtel-eyo
 tired-DEC
 ‘As I have a lot of schedules these days, I feel very tired’
 (a famous Korean singer at an interview who lived in US for
 twenty years since his birth)

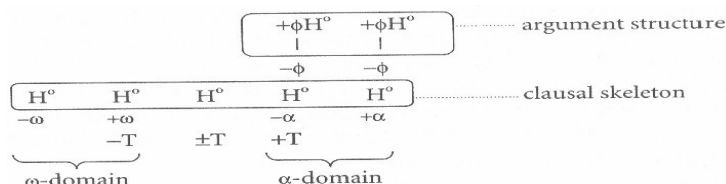
As suggested in Im (2000), I argue that the underlined part in (18a) functions as a Focus marker since “sensaengnim(teacher)” and “mom(body)” are introduced as new information. I also suggest that the underlined part in (18b) is a default Nominative marker assumed in Kang (1986) and Kim (1990, 1992). The double appearance of the markers in the underlined part exemplifies the two separated functions of the same marker.

3. 3-D Merge and FSeq

The proposal for DSCs in Im (2002, 2009) needs more theoretical supports in that it assumes an ad hoc Merge operation for NP1 to occupy the [Spec, CP]. To validate the Merge of NP1, more theoretical assumptions should be provided, among which 3 dimensional Merge suggested in Boeckx (2008) and a purely derivational approach suggested in Surányi (2006) can be considered.

As manifested in Im (2011), we adopt the 3 dimensional Merge suggested in Boeckx (2008) that is hypothetically the same as that of MSH of Im (2002, 2004, 2005a, 2005b, 2006a, 2006b, 2007, 2008, 2009, 2010). Boeckx suggests that the clause skeleton is composed of three distinct domains like ω -domains (CP-domains, the same notion in Grohmann 2003a), T-domains and α -domains (thematic domains), T-domains functioning as a linker, whose shape looks like the following (Boeckx 2008; 152);

(19)

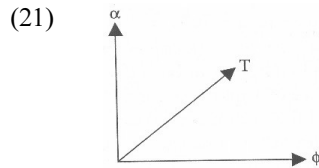


The featural composition for the entire derivation would be the following;

- (20) a. V-DP: ϕ
 b. V- ν : α
 c. ν -DP: ϕ (but $V \neq \nu$, \therefore stage (c) \neq stage (a))
 d. ν -T: T
 e. T-Fin: T (but T is the Goal in (e), and the Probe in (d))
 f. Fin-Force: ω

He further asserts that the presence of ϕ -features and T-features allow an α -element to expand in two directions/dimensions: ϕ -features allow α -elements to connect to DPs (arguments), and T-features ultimately allow the α -domain to be

connected to the ω -domain. He represents the this derivational horizon as in (21).

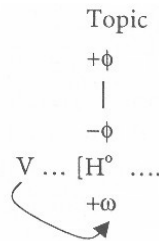


For instance, in some languages like Hebrew topics can intervene linearly in between the force indicator and a selecting verb.

- (22) Sa'alta oti et ha sefer le mi le haxzir
 asked.2sg me ACC the book to whom to return
 'You asked me to whom to return the book'

The presence of a topic in (22) is no longer problematic in his approach since the ϕ -relation of Top (an argument structure in (19) takes place on a distinct plane from the ω -dimension that is selected for).

- (23) Matrix verb selecting for interrogative force (ω):



We suggest that this sort of 3D Merge is the right solution for DSCs in Korean. We argue that the structure of DSCs undergoes the following Merge process.

- (24) khokkiri-ka kho-ka kilta
 NP1 NP2
- (25) a. v + NP2 = Merge in Θ -sphere
 b. T + NP2 = Merge in Φ -sphere
 c. C + NP1 = Merge in ω/Ω -sphere

(ω in Boeckx (2008), Ω in Im (2002, 2004, 2005a, 2005b, 2006a, 2006b, 2007, 2008, 2009, 2010).

(25) shows the free Merge of the two NPs. (25a) describes that NP2 merges with the verb with its feature¹⁰. (25b) shows the Merge of T with NP2 with its Case feature checked. What is important is the Merge operation in (25c). NP1 has no feature to be checked in Θ -sphere or in Φ -sphere because it has no Case. As suggested in chapter 2, NP1 has its Top feature checked in ω/Ω -sphere.

Now the problem is how can we obtain the concatenation of the Merged SIs? What decides the final order at the Spell-out? We have to assume a mechanism to guarantee the right concatenation because the Merges in the spheres are free.

In Surányi (2006), the following problem for labeling is suggested: the need of labeling results is look-ahead once it is recognized that (a) c-selectional phenomena are not narrow syntactic, and (b) Agree should not exist if syntax conforms to minimalist expectations (the checking function of Agree is to be reduced to Merge). Then the underlying problem is: Merger of (functional) head and its complement is not locally triggered. The output of this Merger serves as input to a Merge operation that will ultimately license the checking of some feature of the head, which is a mixed theory based on look-ahead.

Eliminating the Merger of (functional) head and its complement (First Merge in Surányi's term) guarantees eliminating projection and labelling from grammar which results in a pure derivation¹¹.

¹⁰ What would be the feature for the Merge in Θ -sphere does not concern here. If we adopt the recent Minimalist notion (Chomsky 1995, 1998, 1999) that thematic relations are just interpretative features at the interface, we have to resort to the subcategorizational features suggested in Collins (1997) to explain the Merge in Θ -sphere.

¹¹ To illustrate, the derivation of a sentence like *Who loves Mary?* runs roughly as follows (assuming, for concreteness, that AgrPs exist and subject wh-phrases move to CP too):

- (i) a. V + Obj
- b. Agr + Obj
- c. v + Subj
- d. T + Subj
- e. Agr + Subj
- f. C + Subj

Each Merge operation of (a-f) is licensed by Last Resort: (a) turns the verb that is uninterpretable because lacking an (internal) argument into a saturated, hence interpretable predicate; the same

Once we adopt the elimination of projection and labelling, we have to posit a system that guarantees the order of the constituents at the interface. One of the proposals can be found in Starke (2001, 2006).

Starke (2001, 2006), inspired by Rizzi (1997), Cinque (1999), among others, suggests the functional hierarchy which can only be determined in some interface component.

- (26) there exists an 'fseq' - a sequence of functional projections - such that the output of merge must respect fseq

There are basically two options: either the relevant component of grammar interfacing with narrow syntax is the semantic interface that Starke prefers or it is the Lexicon, should there exist aspects of the functional hierarchy that are not reducible to semantic requirements. The hierarchy proceeds from internal argument licensing to external argument licensing, event structure and aspect, through to modality, mood and tense, and then finally to discourse-related properties of focus and topic. Surányia, adopting Starke's idea, assumes that FSeq is regulated by requirements on semantic interpretation, in particular, in the form of the lexical semantic requirements of the elements entering the derivation.

We propose that there exists an 'fseq' for DSCs in Korean. If (16) is the right structure for DSCs, then the following cartographical proposal of Rizzi (1997) best describes the functional domain.

- (27) CP = [ForceP [TopP [FocP [FinitenessP]]]]

The cartography of (27) guarantees the word order of Korean MSCs without any locality problem that might be caused in the movement theory.

4. Concluding Remarks

Based on Grohmann's (2003) Natural Relations, we suggest that there is no

applies to (c), modulo the difference in the identity of the argument and the semantic/theta role played by it; finally, (b), (d), (e) and (f) all involve feature checking.

Double Nominative construction in Korean. We argue that NP2 alone in so-called DNCs of possessor ascension constructions, whole-part construction, locative inversion constructions, and quantifier floating constructions is licensed with the Nominative Case, while NP1 in such constructions merges with TP in Ω -sphere with the pragmatic feature Top/Foc. NP2 merges with v in Θ -sphere for thematic interpretation or subcategorization reason and then merges with T in Φ -sphere for Case.

We assert that Merge is 3-dimensional as suggested in Boeckx (2008) and Im (2002, 2004, 2005a, 2005b, 2006a, 2006b, 2007, 2008, 2009, 2010, 2011). The simultaneous 3D Merge resolves the theoretical problem of mixed theory and the empirical problem of locality. A cartography of Fseq such as Rizzi (1997) works for the concatenation of the constructions.

References

- Boeckx, C. 2008. *Bare Syntax*. Oxford U. Press.
- Boskovic, Z. 2001. A-movement and the EPP. ms., University of Connecticut
- Brody, M. 2000. Mirror Theory: Syntactic representation in Perfect Syntax. *LI* 31: 29-56.
- Brody, M. 2002. On the Status of Derivations and Representations. In S. D. Epstein and T. D. Seeley (Eds.), *Derivation and Explanation in the Minimalist Program*. Oxford: Blackwell. 19-41.
- Buell, L. 2007. Semantic and Formal Locatives: Implications for the Bantu Locative Inversion Typology. *SOAS Working Papers in Linguistics* Vol. 15, 105-120.
- Chae, H-R. 1996. Hankwukeyu myengsalyuwa pempemcu 'sodanwitel'. [Nominal and Cross-categorial 'Particles' in Korean] *Language and Linguistics* 22: 297-315. Language Research Institute, Hankuk Univ. of Foreign Studies.
- Choe, H-S. 1988. *Restructuring parameters and complex predicates*. Ph.D. Dissertation, MIT.
- Choe, H-S. 1995. Focus and Topic Movement in Korean and Licensing. In K. E. Kiss (Ed.), *Discourse Configurational Languages*. Oxford U. Press. 269-334.
- Choi, K-Y. 2009. Licensing of Case: A proposal from Korean. *Proceedings of 2009 joint conference of the Linguistic Association of Korea, the Society of Modern Grammar and the Korean Generative Grammar Circle*, 55-72.
- Chomsky, N. 1993. A Minimalist Program for Linguistic Theory. In K. Hale and S. J. Keyser (Eds.), *The View from Building 20*, 1-52. Cambridge, Mass.: MIT Press.
- Chomsky, N. 1995. *The Minimalist Program*. Cambridge, Mass.: MIT Press.

- Chomsky, N. 1998. Minimalist Inquiries: The Framework. *MITOPL* 15.
- Chomsky, N. 1999. Derivation by Phase. *MITOPL* 18.
- Cinque, G. 1999. *Adverbs and Functional Heads: A cross-linguistic perspective*. Oxford: Oxford U. Press.
- Collins, C. 1997. *Local Economy*. Cambridge, Mass.: MIT Press.
- Dik, S. 1989. *The Theory of Functional Grammar*. Foris Publications. Dordrecht Netherlands.
- Epstein, S. D, and T. D. Seely. 1999. SPEC-ifying the GF "subject"; eliminating A-chains and the EPP within a derivational model. ms., University of Michigan and Eastern Michigan State University.
- Gerds, D. 1987. Surface Case vs. Grammatical Relations in Korean: the Evidence from Quantifier Floating, *Studies in Language* 11(1): 181-197.
- Grohmann, K. 2003. Natural Relations. ms. U. of Cyprus.
- Grohmann, K., J. Drury, and J. C. Castillo. 2000. No more EPP. *Proceedings of West Coast Conferences on Formal Linguistics* 19, 153-166. Somerville, Mass.: Cascadilla Press.
- Halle, M. and A. Marantz. 1993. Distributed Morphology and the pieces of inflection. In Hale & Keyser (Eds.), *The View from Building 20*, MIT Press, 111-176.
- Han, H-S. 1989. Nominative Assignment in Korean. *Language Research* 25(3), Seoul National U., 611-644
- Han, H-S. 1991. The Case of Korean Adjectives and Passive Verb. *Studies in Generative Grammar* 2(1): 219-249.
- Im, C. G. 2000. Licensing of -ka/-i at morphophonemic level, *Studies in Modern Grammar* 20: 47-70.
- Im, C-G. 2002. Kwukecungcwuee taehan cwesocuuuycek cepkeun: Kangdocullon. [A Minimalist approach to Korean Multiple Subjects: A strong derivationist's view]. *Enehak* 10(3): 57-76. The Linguistic Association of Korea.
- Im, C. G. 2004. Derivational economy and Multiple Spheres Hypothesis. *Journal of Linguistic Science* 30: 277-298.
- Im, C. G. 2005a. Defocusing analysis of English cliticization and expletive constructions. *Studies in Modern Grammar* 39: 93-113.
- Im, C. G. 2005b. An alternative approach on TH/EX. *The Linguistic Society of Korea Journal* 13(2): 24-41.
- Im, C. G. 2006a. Interpretation vs. generation of -self. *Studies in Modern Grammar* 44: 91-119.
- Im, C. G. 2006b. Raising to object under Multiple Spheres Hypothesis. *The Linguistic Association of Korea Journal* 14(1): 273-293.
- Im, C. G. 2007. Move is Occur; the first step to eliminate movement. *The Linguistic Association of Korea Journal* 15(4): 197-221.
- Im, C. G. 2008. Split subjects and an alternative analysis for subject raising. *Studies in Modern Grammar* 53: 39-55.

- Im, C. G. 2009. A minimal structure analysis for double Nominative constructions. *Proceedings of The Society of Modern Grammar 2009 Summer Conference*.
- Im, C. G. 2010. Multiple Transfer and Honorification in Korean. *Proceedings of The Society of Modern Grammar 2010 Winter Conference*.
- Im, C. G. 2011. Merge of Topic and Pronominal Apposition Construction in AAVE. *Linguistic Research* Vol.28, No.1, 37-51.
- Im, D-H. 2000. *Hankwuke Emi 'si'uy Munpep*. [A Grammar of the Korean Particle '-si'.] Seoul: Taehaksa.
- Im, H-B. 1985. '-Si'wa kyenghemcu sangcenguy sicem. ['-Si' and the timing of Experiencer assuming]. *Kwukhak* 14:287-336. (1998. *Kwukemunpepuy simceung*. Taehaksa: Seoul.)
- Jung, Y-J. 2001. Multiple Case Marking and Its PF Interpretation. *Korean Journal of Linguistics* 26(2): 239-268.
- Kang, M-Y. 1996. A Minimalist Approach to Double Nominative Constructions. *Korean Linguistics* No. 4. Korean Linguistics Circle. Seoul.
- Kang Y-S. 1986. Korean Syntax and Universal Grammar. Doctoral diss., Harvard University.
- Kim, K-H. 1994. *Kwukeuy Kyekyenkwu*. [A Study on the Case in Korean]. Hankook Publishing Co.
- Kim, J-B. and P. Sells. 2007. Korean honorification; a kind of expressive meaning. *Journal of East Asian Linguist* 16: 303-336.
- Kim, S-D, K-H, Lee. 1999. Keundae kwukeuy kyekyenkwu. [A Study on Case of Modern Korean]. *Kwukeuy Kyekkwa Cosa*. The Society of Korean Linguistics. Wolin: Seoul.
- Kim S-W. 1996. Hankwuke cukyemokcheke yenkwu [A Study on Nominative Object in Korean]. *Ene* 21: 241-261.
- Kim, S-W. 2001. A Study on the EPP in the Minimalist Program: the EPP as a PF Requirement. *Studies in Modern Grammar* 24: 47-66.
- Kim, Y-J. 1990. The Syntax and Semantics of Korean Case: The Interaction between Lexical and Semantic Levels of Representation, Doctoral diss., Harvard University.
- Kim, Y-J. 1992. Nominative case marking in Korean. *Studies in Generative Grammar* 2: 113-148.
- Ko, H-J. 2009. Multiple Case Sharing and Syntactic Structure. *Studies in Generative Grammar* 19(4): 423-451.
- Marantz, A. 1991. Case and Licensing. *ESCOL* 91.
- Miyagawa, S. 2010 *Why Agree? Why Move?* LI Monograph 54. MIT press.
- Moon, G-S. 2000. The Predication Operation and Multiple Subject Constructions in Korean: Focusing on Inalienable Possessive Constructions. *Studies in Generative Grammar* 10: 239-263.
- Platzack, C. 2000. Multiple Interfaces. ms. Lund University.
- Radford, A. 1990. *Syntactic Theory and the Acquisition of English Syntax*. Oxford: Blackwell.

- Rizzi, L. 1997. The Fine Structure of the Left Periphery. In L. Haegeman (Ed.), *Elements of Grammar. Handbook in Generative Syntax*, 281-337.
- Schütze, C. 1996. Korean Case Stacking Isn't: Unifying Noncase Uses of Case Particles. *NELS* 26: 351-365.
- Starke, M. 2001. Move dissolves into merge: a theory of locality. PhD diss., U. of Geneva.
- Starke, M. 2006. On the Inexistence of Specifiers and the Nature of Heads. ms. CASTL
- Stroik, T. 2009. *Locality in Minimalist Syntax*. LI Monograph. Cambridge, Mass.: MIT Press.
- Surányi, B. 2006. Towards a purely derivational approach to syntax. *The Even Yearbook* 7 (2006). Department of English Linguistics, Eötvös Loránd U. Budapest.
- Yang, D-W. 1999. Case features and case particles. In *WCCFL* 18.
- Yoon, J. H-S. 1987. Some Queries Concerning the Syntax of Multiple Subject Constructions in Korean, *Harvard WOKL II*, Hanshin Publishing Co.
- Yoon, J. H-S. 1990. Theta-theory and the grammar of inalienable possession constructions. *Proceedings of NELS* 20: 502-516.
- Yoon, J-M. 1998. A Critical Survey of GB/Minimalist Research on Case and A-Chains in Korean. *Language Research* 34(1): 73-126.
- Youn, C. 1990. A Relational Analysis of Korean Multiple Nominative Construction, diss., SUNY at Buffalo.
- Yu, H-S. 1999. Iungcukyekkwumunuy Nonhangkwucoe kwanhan yenkwu [A Study on Argument Structure of Double Nominative Constructions]. *Kwukeuy Kyekkwu Cosa*. The Society of Korean Linguistics. Wolin: Seoul.

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