EPP Parameter and No A-Scrambling

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Unlike the GB view, in which an operation, by theory, massively over­generates, the Minimalist view is that an operation in UG is computationally optimally efficient. So something moves only if it has to move. In this vein, scrambling is a computationally efficient system, because it is triggered only if an object is given contrastive focus (cf. Choi, 2003; Lee & Cho, 2003b). This is in accordance with our proposal that scrambling is driven by the syntactic operation of contrastive focus, not by the EPP on T. Under our system, scrambling is not triggered by match with the EPP on T and further cannot be licensed non-configurationally by the head of the clause, T. The aim of this paper is to show that only the D-feature of overt Case of the subject can check the EPP on T, when the [SPEC, T] parameter occurs. We suggest that the EPP on T is syntactic in that it must only be checked by the D-feature of overt Case of the subject and in effect, this reflects the configurationality of the subject-object canonical order. So no object can undergo scrambling to check the EPP on T. Hence no A-scrambling. Under our approach, the EPP and the [SPEC, T] parameters are independent from one another. The EPP parameter dictates that the D-feature of the TP-subject with overt Case checks the EPP on T, whereas the [SPEC, T] parameter induces the syntactic effect that the position [SPEC, T] is created by merging the surface subject by Move (cf. Chomsky, 2001).

Key words: EPP on T, D-feature, scrambling, contrastive focus, case

1. Introduction

In the so-called Minimalist program (Chomsky, 1993, 1995, 2000, 2001a), movement is neither optional nor free, but rather, it must be triggered by a specific feature on a head. This feature dictates when and to where an element may move. A WH-phrase in English, for example, is attracted by the WH-feature on C that carries the question force. The WH-phrase therefore moves to the [SPEC, CP] headed by this C, and nowhere else. On this view, movement is invariably obligatory. Unlike the GB view, in which
an operation, by theory, massively over-generates, the Minimalist view is that an operation in UG is computationally optimally efficient. So something moves only if it has to move. Scrambling is a computationally efficient system, because it is triggered, only if an object is given contrastive focus (Choi, 2003; Lee & Cho, 2003b), for example, under the situation of the answer (2b) to the question (1b). It is argued that scrambling correlates with contrastive focus (cf. Choi, 2003; Dayal, 2003; Lee & Cho, 2003b). (1b) has a slightly different interpretation than (1a). That is, (1b) asks about the thing that John actually bought under the presupposition that there is a set of things John might have bought. Thus, only (1b) can have a contrastive focus answer (2b):

(1) a. Chelswu-ka mwues-ul sa-ss-ni?
   -Nom what-Acc buy-Past-Q
   ‘What did Chelswu buy?’
   b. mwues-ul Chelswu-ka ti sa-ss-ni?

(2) a. Chelswu-ka chayk-ul sa-ss-ta.
   -Nom book-Acc buy-Past-Decl
   ‘John bought a book.’
   b. chayk-ul Chelswu-ka ti sa-ss-ta.

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1) Scrambling is a syntactic operation to check the [+Foc] feature over TP. The object in the position [SPEC, Foc] checks the [+Foc] feature and gets contrastive focus, which is different from focus that the shifted object gets in the outer spec of v. Note that the object in the position [SPEC, Foc] over TP checks the [+Foc] feature and gets contrastive focus, on the other hand, the shifted object in the outer spec of v checks the EPP on v and gets focus. As an anonymous reviewer points out, the object may undergo scrambling to get a topic reading as in (i):

(i) A: Chelswu-lul nwu-ka cohaha-ni?
   -Acc who-Nom like-Q
   ‘Who likes Chelswu?’
B: Chelswu-lul Yenghi-ka cohaha-y.
   -Colloquial Ending
   ‘Yenghi likes Chelswu.’

Choi (2003) suggests that scrambling is informationally motivated. Topic is [+Prom] and [-New], contrastive focus is [+Prom] and [+New], and focus is [-Prom] and [+New] a la Choi (2003). Chelswu-lul in the answer (1B) to the question (1A) gets old information, which is prominent. That is the topic reading. However, in this paper, only movement of the object to SPEC-Foc via OS will be focused on under the situation such as the answer (2b) to the question (1b). Scrambling, local or long-distance, is A'-movement under our system. However, the long-distance scrambling won’t be dealt with.
In this respect, the answer (3B) to the question (3A) is ruled in, unlike (4a):

(3) A: nwukwu-luli Chelswu-ka ti piphanha-yess-ni?
   who-Acc -Nom criticize-Past-Q
   'Who did Chelswu criticize?'
B: caki-luli Chelswu-ka ti piphanha-yess-ta.
   himself-Acc -Nom criticize-Past-Decl
   'Himself, John criticized.'

(4) a. ??caki-luli Chelswu-ka ti piphanha-yess-ta.
   himself-Acc -Nom criticize-Past-Decl
   'Himself, John criticized.'

   b. caki-lulu Chelswu-ka ti piphanha-yess-ta.2) (Yang, 2003)

The contrast between (4a) and (4b) shows that the contrastively focused anaphor can undergo scrambling. The Agree-less Move of a vP-object to SPEC-Foc over TP can undergo the phenomenon called “reconstruction”: a moved phrase behaves as if it were in the position of its trace.3) So this is called a copy theory of traces. The scrambling asymmetry in the above examples relates to contrastive focus. This leads to catch the contrast between (4a) on the one hand and (3B) and (4b) on the other. As soon as the contrastively focused anaphor in (3B) and (4b) reaches SPEC-Foc, it undergoes semantic interpretation where the copy trace functions as an anaphor.4)

Then, can an object undergo A-scrambling to TP? If no, why can't the EPP on T be checked by the D-feature of the object? Is the EPP on T syntactic? If yes, what can check it? If the D-feature of the subject checks it, from what does the D-feature come? If the D-feature of the subject is different from that of the object, why is it so? These questions are mainly addressed in Section 3 and 4, after past researches are reviewed in Section 2.

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2) The bold-faced anaphor in (4b) means that the anaphor gets contrastive focus.
3) Agree Move and Agree-less Move in this paper mean A-movement and A'-movement respectively (Yang, 2003).
4) The reconstructed anaphor in the trace position should be interpreted as coreferential with SUBJ by Condition A.
2. Previous Research


Chomsky (1995) assigns the following option to the EPP, allowing multiple specifiers in languages like Japanese. Consider the following adapted from Chomsky (1995):

(5) EPP has an option of remaining active even after merger.

If the EPP on T exercises this option once, the computational system merges two XPs with TP. Adapting this proposal, Kitahara (2002) suggests that computation can map (6a) to (6b):

(6) a. [TP [vP OBJ-Acc [v’ SUBJ-Nom [v [vp tOBJ V] v]]] T]
   b. [TP OBJ-Acc [SUBJ-Nom [[tP fOB] [tSUBJ [[vp taB] V]]] T]]

Kitahara (2002) supposes that the EPP on T exercises this option (5) once. Computation merges SUBJ and OBJ with TP, yielding multiple specifiers of T as in (6b). Under the probe-goal system, Agree of T and SUBJ selects SUBJ as a candidate for such merger. Thus the merger of SUBJ with TP is permitted. But it seems that there is no means to select OBJ for such merger. Here it is noted that Match of T and OBJ does not induce Agree of T and OBJ, because OBJ is inactive in the position of OS. The EPP alone is not sufficient to induce movement, since the EPP is not a matching feature. So the merger of OBJ with TP, which is scrambling of OBJ to the sentence-initial position, is blocked; (6b) is not generable under this assumption. At this point, however, he assumes that there is a way to proceed. He pursues the possibility that the probe-goal system provides a crucial distinction, which gives computation a way to select OBJ for this type of merger/movement. There is a prerequisite for agreement, namely, matching. Assuming that these two relations (namely, matching and agreement) are available, he characterizes scrambling as follows:

5) In this paper, we do not follow his derivational approach.
(7) Scrambling is an instance of Match-driven movement supplementing Agree, which satisfies only an EPP (Kitahara, 2002, p. 173).

More specifically, Agree of T and SUBJ selects SUBJ for first merger with TP, and Match of T and OBJ selects OBJ for second merger with TP. The precedence of Agree-driven movement, which values uninterpretable features and satisfies the EPP, over Match-driven movement, arguably follows from the supplementary nature of the latter (Kitahara, 2002, p. 173).

Now examine his relevant aspects of the derivation of (8) in (9):

(8) [sero-uy sensayingnim]-uli kutul-i ti piphanha-yess-ta.
   each other-of teacher-Acc they-Nom criticize-Past-Decl
   'They criticized each other's teacher.'

(9) a. [vP [sero-uy sensayingnim]-ulOBJ [kutul-i [vP tOBJ V] v]]
    b. [TP kutul-iSUBJ [vP [sero-uy sensayingnim]-ulOBJ [tSUBJ [vP tOBJ V] v]] T]
    c. [TP [sero-uy sensayingnim]-ulOBJ kutul-iSUBJ [vP tOBJ [tSUBJ [vP tOBJ V] v]] T]

In (9a), Agree of v and OBJ merges OBJ with vP and values Case of OBJ. In (9b), Agree of T and SUBJ merges SUBJ with TP and values Case of SUBJ. At this point of the derivation, Condition A can and does interpret the anaphor as coreferential with SUBJ. The EPP on T remains active even after this merger of SUBJ with TP. Then, Agree of T and SUBJ appeals to its supplementary relation, namely, Match of T and OBJ and merges OBJ with TP, yielding (9c). Under the assumptions, this second merger does not interfere with the already established coreferential interpretation of SUBJ and the anaphor.

However, Kitahara's derivational analysis of binding relations cannot capture the contrast between (8) and (4a), repeated here:

(10) ??caki-lul_i Chelswu-ka ti piphanha-yess-ta.
   himself-Acc -Nom criticize-Past-Decl
   'Himself, John criticized.'

At the point of derivation of caki-lul_i 'himself-Acc' in (10), like in (9b), Condition A can and does interpret the anaphor as coreferential with SUBJ. So the sentence should be OK. Unlike in Kitahara (2002), following
Yang (2003), we assume that in (8) sero-uy sensayngnim-ul ‘each other’s teacher-Acc’ undergoes Agree-less Move to SPEC-Foc from the outer spec of v.

We suggest that only the vP-subject with overt Case can undergo Agree Move from the inner spec of v to SPEC-T. Unlike in Icelandic, in Korean, the vP-subject with overt Case in the inner spec of v must first undergo movement to SPEC-T as in (11c) before the shifted object with phonological content occupies the outer spec of v as in (11d). Otherwise, the shifted object with phonological content in the outer spec of v prevents Match of T and the vP-subject with overt Case in the inner spec of v (Lee, 2004):

   -Nom bread-Acc -Dat give-Past-Decl
   ‘Chelswu gave Yenghi a bread.’

   b. [TP [v C-kasUBJ [v Y-eykey [v [VP ppang-ulOBJ V] v]]] T]

   c. [TP Chelswu-kaSUBJ [v tSUBJ [v Yenghi-eykey [v [VP ppang-ulOBJ V] v]]] T]

   d. [TP [v ppang-ulOBJ [v Chelswu-kaSUBJ [v Yenghi-eykey [v [VP tOBJ V] v]]] T]

   e. [TP Chelswu-kaSUBJ [v ppang-ulOBJ [v tSUBJ [v Yenghi-eykey [v [VP tOBJ V] v]]] T]

Hoji (1985) argues that the goal phrase is higher than the theme phrase in the base structure. Takano (1997) extends this idea to theme-location constructions. He also argues that location phrases are higher than theme phrases in the base structure. We assume that, in Korean, the indirect object-direct object order is a canonical word order and the indirect object is adjoined to VP. So the trace position of the shifted object in (11e) is in the VP-internal position as shown in (11b). So the object preceding the goal or location phrase has already undergone OS as in (11e) (cf. Lee & Cho, 2003a). In (11d), the probe-goal relation between T and SUBJ is not licensed, because the shifted object has phonological content. So movement of a vP-subject to SPEC-T occurs prior to the output effect as shown in (11c).

6) Chomsky (2001a) and Kitahara (2002) suggest that object shift occurs prior to movement of the vP-subject to SPEC-T. However, as shown in (11d), this may induce violation of the so-called probe-goal matching condition, which will be introduced in (27).
and (11e) consecutively, unlike in Kitahara (2002).\(^7\)

2.2. Miyagawa’s (2003) Non-Configurational Scrambling

Hale (1983) proposes that languages separate into two groups, those that are configurational and those that are non-configurational. In a non-configurational language the VP node is missing, so that the entire phrase structure is flat, and the subject and the object, and everything else, are at the same level. Based on his proposal, Miyagawa (2001) suggests two main points:

(12) Point One: both the SOV and the OSV word orders result from a single obligatory movement. This movement is triggered by the Extended Projection Principle (EPP).

Point Two: the option to move the object into [SPEC, TP] (OSV) to meet the EPP requirement is made possible by V raising to T.

After V raises to T, the subject or the object may move to [SPEC, TP] a la (12), because the subject and the object are both equidistant from [SPEC, TP]. Along with these two points, Miyagawa (2003) suggests that the morphological Case marking, may it be nominative on the subject or accusative on the object, or even dative on the indirect object, is licensed by T. That is, each of the morphological Case markings agrees with T. This, in turn, makes it possible for the EPP feature on T to attract either the subject or the object to [SPEC, TP]. The latter is made possible structurally by V-raising to T, which makes the object equally local to T as the subject.

However, Miyagawa’s (2003) suggestion should be reconsidered in Korean and even in Japanese. Let’s look at the movement of the object in the following:

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7) Kitahara (2002) follows Chomsky (2001a), which suggests that object shift occurs prior to movement of the vP-subject to SPEC-T. Of course, so far as Korean is concerned, it is not on the right track as shown in (11c) and (11e) consecutively (see Lee, 2004 for details).
    -Nom bookstore-in book buy-Past-Decl
    ‘Chelswu bought a book in the bookstore.’
b. ??Chelswu-ka chayk secem-eyse sa-ss-ta.
c. ?*Chayk Chelswu-ka secem-eyse sa-ss-ta.

    the book
b. Chelswu-ka ku chayk secem-eyse sa-ss-ta.
c. ku chayk Chelswu-ka secem-eyse sa-ss-ta.

The bare object is acceptable only in the sisterhood position of the verb as in (13). Like the object with *(l)ul, the object with a determiner can be object-shifted or scrambled freely as in (14). So we can say that the bare object chayk is fully extracted out of the verb freely if it occurs with overt Case or a determiner (cf. M.-K. Lee, 2003).9)

The following examples are the Japanese counterpart of (14):

    -Nom bookstore-in the book bought
    ‘Hanako bought the book in the bookstore.’
b. Hanako-ga sono hon honya-de katta.
c. sono hon Hanako-ga honya-de katta.

In Korean and Japanese, adjacency is a crucial notion in the overt Case realization. We see that the accusative Case marker is optionally realized when the object is adjacent to the verb. However, if the same object moves

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8) The object with *(l)ul can also be object-shifted or scrambled freely as follows:
        -Nom bookstore-in book-Acc buy-Past-Decl
        ‘Chelswu bought a book in the bookstore.’

9) As an anonymous reviewer points out, if the Case marker is deleted at PF after its D-feature checks the EPP on T in (14c), Miyagawa’s (2003) system is on the right track. However, as the contrast between (13c) and (14c) shows, the assumption is not valid. That is, the D-feature of the object in (14c) comes from the determiner.

10) The judgment of the examples in (15) is from Tusaku Oteki and Yoshio Otake, who are Japanese linguists.
to a position which is not adjacent to the verb, this Case marking must be realized. Saito (1983) accounts for these facts by assuming that Japanese has an adjacency restriction on the assignment of the structural Case. Examples (14) and (15) also show that a determiner, which helps make an indefinite object carry definiteness including specificity,\textsuperscript{11} plays a role in object shift and scrambling. So if our observation and judgment are on the right track, Miyagawa (2003) cannot account for the grammaticality of (14c) and (15c), because the object without overt Case undergoes to the sentence-initial position. Under his assumptions, the object with a determiner in (14c) and (15c) cannot be licensed non-configurationally by the head of the clause, $T$.

2.3. Other Research

Kim (1993), Yang (2003), and Lee and Cho (2003a) only focus on scrambling of the object with overt Case, so that their suggestions cannot account for the free movement of the object with a determiner.\textsuperscript{12}

The indefinite object with overt Case in (16a) can undergo object shift, whereas the indefinite object without overt Case in (16b) cannot.

\begin{itemize}
\item[(16)] a. Chelswu-ka [sakwa sey kay-lul] na-eykey t₁ cwu-ess-ta.
   \begin{itemize}
   \item[-Nom apple 3-CL-Acc me-Dat give-Past-Decl]
   \end{itemize}
   ‘Chelswu gave the three apples to me.’
\item b. ?*Chelswu-ka [sakwa sey kay] na-eykey t₁ cwu-ess-ta.\textsuperscript{13}
\end{itemize}

The specific object with a determiner, for example, $ku$ $chayk$ in (14a), undergoes object shift and scrambling freely as shown in (14b,c). This is also shown in the following data:

\begin{itemize}
\item[(17)] a. Chelswu-ka na-eykey [$ku$ sakwa sey kay] cwu-ess-ta.
   \begin{itemize}
   \item[-Nom me-to the apple 3-CL give-Past-Dc]
   \end{itemize}
   ‘Chelswu gave the three apples to me.’
\item b. Chelswu-ka [$ku$ sakwa sey kay] na-eykey t₁ cwu-ess-ta.
\item c. [$ku$ sakwa sey kay] Chelswu-ka na-eykey t₁ cwu-ess-ta.
\end{itemize}

\textsuperscript{11} In this paper definiteness is narrowed down to determinateness caused by a determiner (i.e. here, a demonstrative), which causes specificity to an object.

\textsuperscript{12} We suggest that the D-feature of the object may also come from a determiner (i.e. here a demonstrative) unlike in Yang (2003) and Lee and Cho (2003a).

\textsuperscript{13} If the object $sakwa$ $sey$ $kay$ ‘apple-3-CL’ is given contrastive focus, the sentence is OK.
The object with a determiner in (17a), which is definite and thus specific, is within VP, following an indirect object. As shown in (17b,c), *ku sakwa sey kay* undergoes scrambling via object shift.

Kim (1998) suggests that the IP-subject (i.e., the TP-subject, here) and the vP-object necessarily require overt Case, while Case of the vP-subject and the VP-object must be covert. Under the assumption, following Ahn's (1996) observation and judgment, Kim (1998) regards the following as ungrammatical, contrary to fact:

(18) *ku chayk enni-ka ilk-nun-ta.*
    the book sister-Nom read-Prs-Decl
    'My sister reads the book.'

However, the object with a determiner can fully undergo scrambling via object shift as in the following examples (M.-K. Lee, 2003; Hong-Pin Im & Chegyong Im (p.c.)):

    the rice -Nom eat-Past-Decl
    'The rice, Chelswu ate.'
b. *ku chayki Chelswu-ka secem-eyse ti sa-ss-ta.*
    the book -Nom bookstore-in buy-Past-Decl
    'Chelswu bought a book in the bookstore.'

3. EPP and [SPEC, T] Parameter

We have suggested that the EPP on *v* is checked by the D-feature of an object, which only overt Case or a determiner can carry with the object. This is done, when focus (i.e., INT in Chomsky's (2001) term) is given to the object in the outer spec of *v*. We have also suggested that only the object with the D-feature undergoes OS to the outer spec of *v* and thus gets focus. Then how about checking the EPP-feature on *T*? Let's first see the EPP and the [SPEC, T] parameters. Chomsky (2000, 2001a,b) and Lasnik

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14) As for the TP-subject and the vP-subject, Kim's (1998) suggestion is correct, as for the vP-object and the VP-object, isn't, since even the VP-object without overt Case, if made specific by a determiner and given focus, may be the vP-object and an object with overt Case, specific or non-specific, may be in the VP-internal position.
(2001) have rejected feature-based movement in favor of relation of long-distance agreement, Agree. On this conception, the EPP has nothing to do with feature checking in the sense of Chomsky (1995). Rather, in a return to Chomsky's (1981) earlier view, it is the requirement that certain functional heads must have a specifier. That is the syntactic effect (20), (which Lee (2004) calls subject raising):

(20) The position [SPEC, T] is created by merging the surface subject by Move (Chomsky, 2001a, p. 33).

One important extension is to apply the syntactic effect to movement of the vP-subject to SPEC-T in Korean. At this point, a couple of crucial questions arise immediately: Why must the vP-subject raise to SPEC-T in Korean, unlike in Icelandic? Why does the TP-subject necessarily require overt Case? The answers to the two questions are as follows. First of all, configurationality of the subject-object canonical order must be reflected in the syntactic TP-domain.15) So the vP-subject with overt Case must raise to the position [SPEC, T], but the vP-subject without overt Case cannot. Next, the TP-subject with overt Case, not the vP-subject without overt Case, must appear as a surface subject in the position [SPEC, T]. At this stage, overt Case of the subject plays a role of the D-feature to check to the EPP on T in Korean.16) So the EPP and the [SPEC, T] parameters are

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15) We have called the TP-domain a syntactic one in Korean, because the subject-object canonical order should be kept in it. So the surface subject should be in the position [SPEC, T], when object shift occurs (see Lee, 2004 for details).

16) Our suggestion is not radical that the D-feature of the TP-subject comes from overt Case attached to the subject. It amounts to Pesetsky and Torrego's (2001) proposal that there is a close correspondence between the features of finite T and the D-features of nominative Case (i.e., here, overt Case of the subject). Note that T bears features that are uninterpretable on it but would be interpretable were they found on D (Pesetsky & Torrego, 2001, p. 364). Further note that the function of nominative Case (i.e., here, overt Case of the subject in Korean) is to mark certain Ds (Chomsky, 2000). As for the D-feature of the subject, the postposition, the dative Case or even the delimiter seems to play a role of a D-feature. We assume that the expression with it is a TP-subject in the following examples:

(i) a. ku unhayng-eyse taychwl kumlul-lul inha-ha-l yecengi-ta.
   the bank-Post loan interest-Acc lowering-do-will plan-be-Decl
   ‘The bank will lower loan interest.’

b. ne-pwuthe chesin-ul cal ha-yeya ha-n-ta. (Kim, 2000)
   you-Post behavior-Acc well do-must do-Pres-Decl
   ‘You must be of good behavior.’

   -Dat tigar-Nom scared-Decl
both required under our system. They are independent from one another: the [SPEC, T] parameter induces the syntactic effect that the position [SPEC, T] is created by merging the surface subject by Move, whereas the EPP parameter dictates that the D-feature of the TP-subject with overt Case checks the EPP on T. That is, in Korean, the D-feature of the subject, which comes from overt Case, checks the EPP on T, when the vP-subject undergoes the syntactic effect. In Korean, the vP-subject can undergo the syntactic effect, only if its D-feature checks the EPP on T. When the position [SPEC, T] is created, the subject should occupy SPEC-T, which actually originates from the Extended Projection Principle as follows (Chomsky, 1981):

(21) T has a specifier and a clause must have a subject.

At this stage, we need to discriminate the EPP on v from that on T. The head H of phase Ph may be assigned an EPP (Chomsky, 2000). In this vein, it is also proposed that v is permitted to have an optional EPP-feature:

(22) v is assigned an EPP-feature only if that has an effect on outcome (Chomsky, 2001a, p. 35).

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‘Chelswu is scared of a tiger.’

b. Chelswu-eykey sakwa-ka mek-ko-sip-ta. (anonymous reviewer)
   Dat apple-Nom eat-want-Decl
   ‘Chelswu wants to eat an apple.’

c. Chelswu-eykey ton-i philyoha-ta.
   Dat money-Nom need
   ‘Chelswu needs money.’

(iii) Chelswu-man chayk-ul sa-ss-ta.
       Del book-Acc buy-Past-Decl
   ‘Chelswu alone bought a book.’

In the following scrambled sentences of (iv) thru (vii), the surface subject must be in the position [SPEC, T], because the syntactic effect must occur prior to movement of the object:

(iv) a. taychwul kumli-lul ku unhayng-eyse inha-ha-l yeceng-i-ta.
   b. *taychwul kumli-lul ku unhayng inha-ha-l yeceng-i-ta.

(v) a. chesin-ul ne-pwuthe cal ha-yeya ha-n-ta.
   b. *chesin-ul ne cal ha-yeya ha-n-ta.

(vi) a. ton-i Chelswu-eykey philyoha-ta.

(vii) a. chayk-ul Chelswu-man sa-ss-ta.

As the contrast in the above scrambled sentences shows, the postposition, the dative Case or delimiter seems to be able to play a D-feature to check the EPP on T. If this is on the right track, the postposition, the dative Case or the delimiter attached to the subject is an equivalent of overt nominative Case attached to the subject.
The syntactic effect necessarily occurs prior to object shift as shown in (11). For checking the EPP-feature on v and T, when the syntactic effect and the output effect occur, we propose (23) and (24) (Lee, 2003, 2004):

(23) a. The vP-subject undergoes movement to SPEC-T, only if the syntactic effect occurs.
   b. The VP-object undergoes OS, only if the output effect (i.e., focus) occurs.

(24) a. The D-feature of the subject, which comes from overt Case, checks the EPP on T.
   b. The D-feature of the object, which comes from overt Case or a determiner, checks the EPP on v.

There is a difference of the D-feature between the subject with overt Case and the object with overt Case; the former is syntactic, whereas the latter is not. This is paraphrased in the meaning that overt Case of the vP-subject triggers the syntactic effect (i.e., subject raising in Lee's (2004) term), while that of the VP-object may induce the output effect (i.e., focus in Chomsky's (2001a) term), which is what the determinant of the VP-object does as well. That is, only the object with overt Case or a determiner gets a focus reading in the outer spec of v, which, in effect, triggers object shift. At this stage we need to discriminate the subject with overt Case from the subject with a determiner. The determiner pre-modifying a subject in Korean cannot trigger the syntactic effect, because it is not a syntactic element unlike in German. To testify this, let's consider the contrast in (25):

17) Chomsky (2001) hints at this fact in (22), under our assumption that the output effect occurs, only if SPEC-T is created.

18) Here a determiner actually means a demonstrative in Korean. In this paper, however, the former is preferred, because articles, demonstratives, quantifiers, possessives and wh-determiners, which make an object specific in Korean, have been all called determiners cross-linguistically (cf. Enç, 1991; Thomas, 1997).

19) Pesetsky and Torrego's (2001) proposal indicated in fn. 16 plays an important role in the explanation of the contrast between the D-features of the subject and object: nominative Case (i.e., here, overt Case of the subject in Korean) is an uninterpretable T-feature on D (p. 404); accusative Case (i.e., here, overt accusative Case in Korean) is an uninterpretable version of a different feature—perhaps an uninterpretable version of some feature associated with the v of Hale and Keyser (1993) and Chomsky (1995, p. 367). M.-K. Lee (2003) is also based on (24a,b).
In (25a), the object undergoes scrambling via OS. Unlike in (25a), the subject *ku saram* in (25b) is still in the inner spec of *v*, because the EPP on *T* cannot be checked. Thus *ku saram* in (25b) cannot undergo movement to SPEC-*T*. In Korean, the syntactic effect must occur prior to the output effect, as shown in (11). However, this is violated in (25b). So it is ruled out. Here we need to note that the probe-goal relation between a subject­-in-situ and *T* in (25b), like in Icelandic, does not violate the so-called probe-goal matching condition (27), since the subject doesn't undergo any operation outside a phase of *vP* (cf. Chomsky, 2000):

\[\text{(26) In phase } a \text{ with head } H, \text{ the domain of } H \text{ is not accessible to operations outside } a; \text{ only } H \text{ and its edge are accessible to such operations.}\]

\[\text{(27) The first matching } \beta \text{ prevents Match of } a \text{ and } \Gamma \text{ only if } \beta \text{ has phonological content } (a \triangleright \beta \triangleright \Gamma, \text{ where } \triangleright \text{ is c-command, } \beta \text{ and } \Gamma \text{ match the probe } a).\]

Let's consider a subject-object asymmetry with respect to the EPP-feature checking:

\[\text{(28) pap-ul Chelswu-ka mek-ess-ta.}\]
\[\text{rice-Acc -Nom eat-Past-Decl}\]
\[\text{‘Chelswu ate rice.’}\]

\[\text{(29) a. ku pap Chelswu-ka mek-ess-ta.}\]
\[\text{the rice -Nom eat-Past-Decl}\]
\[\text{‘Chelswu ate the rice.’}\]
\[\text{b. ?*pap Chelswu-ka mek-ess-ta.}\]
\[\text{c. *pap-ul ku saram mek-ess-ta. (25b)}\]
\[\text{-Acc the man}\]

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20) Along with PIC (26), the so-called probe-goal matching condition (27) is applied (Chomsky, 2000).
In (29a, c), there arises a subject-object asymmetry with respect to the EPP-feature checking: the EPP-feature on \( v \) is checked by the vP-object with a determiner,\(^{21}\) whereas the EPP-feature on T is not checked by the TP-subject with a determiner, which shows that only an overt Case marker can carry a D-feature with a subject as the contrast between (28) and (29c) shows.\(^{22}\) In (29b), the object cannot undergo scrambling via object shift, because it cannot check the EPP on \( v \).\(^{23}\)

Schütze (1997) proposes that the stacked nominative Case \( ka/i \) and the stacked accusative Case \( (l)ul \) are a focus particle rather than a Case morpheme. Schütze (1997) assumes that a [+focus] feature on I (i.e., here T) triggers movement of the subject marked by \( ka/i \) to the IP-focus position. However, overt nominative Case is always not involved in the focus (i.e., here contrastive focus) movement, which is hinted by Yoon (1989).\(^{24}\) The D-feature, which comes from overt Case of a subject, is not related to the output effect (i.e., Chomsky’s (2001a) INT). However, overt nominative Case may or may not induce the output effect.\(^{25}\) If this is on the right track,

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\(^{21}\) Under our system, overt Case and a determiner can both play a role of the D-feature of the object. Then, there arises a redundant option in the object such as \( ku \ pap-ul \) or \( ku \ saram-ul \), as an anonymous reviewer points out. As for this point, let's refer to the following. Cross-linguistically, overt Case and a determiner tend to be distributed inversely: if a language doesn't use overt Case, it depends on determiners as in English and Chinese; if a language uses overt Case, it tends not to use determiners as in Russian. In German, the determiners such as \( der \) ‘the-Nom’ and \( den \) ‘the-Acc’ are morphologically inflected for a Case feature and the markers such as \( ra \) and \( i \) in Persian and Turkish respectively, have been considered to be overt Case with a secondary function of marking an object as definite. However, in Korean and Japanese, overt Case and the determiner are mixed. In this vein, we can say that as for the D-feature of the object, there arises an option in Korean (see Lee, 2003 for more details).

\(^{22}\) An anonymous reviewer notes that the subject may not check the EPP on T, as the grammaticality of (i) shows:

\begin{itemize}
  \item [(i)] \( ku \ saram \ pap \ mek-ess-ta \).
  \begin{itemize}
    \item the man rice eat-Past-Deci
  \end{itemize}
  \begin{itemize}
    \item 'The man ate rice.'
  \end{itemize}
\end{itemize}

Under our system, the vP-subject without overt Case and the non-specific VP-object can appear at Spell-out without checking the respective EPP (see Lee, 2004 for details). This is the basic phase structure in Korean.

\(^{23}\) Contrary to fact, the sentence (29b) should be ruled in a la Kitahara (2002), because the object can undergo Match-driven movement.

\(^{24}\) Yoon (1989) discusses stacking on objects, but not on subjects.

\(^{25}\) The D-feature of the subject is different from the nominative Case marker in that only the latter can induce contrastive focus to the complement as in the following example:

\begin{itemize}
  \item [(i)] \( chayk-\text{i} \ Chelswu-ka \ t_{i} \ philyoha-ko \ mon-\text{i} \ Yenghi-ka \ t_{i} \ philyoha-ta \).
  \begin{itemize}
    \item book-NOM -NOM need-and money-NOM -NOM need-Deci
  \end{itemize}
  \begin{itemize}
    \item 'Chelswu needs a book and Yenghi needs money.'
  \end{itemize}
\end{itemize}
why does the difference occur? For the sake of clarity, let's see the syntactic effect (20), repeated here:

(30) The position [SPEC, T] is created by merging the surface subject by Move.

As already mentioned above, when the position [SPEC, T] is created, a subject should occupy SPEC-T, which comes from the Extended Projection Principle in (21), repeated here, as follows:

(31) T has a specifier and a clause must have a subject. (21)

(30) and (31) are paraphrased in the meaning that SPEC-T may have a subject, which reflects configurationality of the subject-object canonical order. Note that in Korean, the object can undergo object shift, only if the syntactic effect first occurs, as shown in (31). We suggest that although object shift doesn't occur, the vp-subject with overt Case necessarily moves to SPEC-T. Platzack (1998) suggests that the head 1° (i.e., here, T) where the finiteness feature [+F] is realized must be lexicalized in order to license nominative Case (i.e., here, overt Case of the subject). Platzack's suggestion is fit to point of our proposal that the subject with overt Case must be in the position [SPEC, T] and thus its D-feature checks the EPP on T. In the vein of configurationality based on the subject-object canonical order, the EPP on T, which is checked by the syntactic D-feature, is also syntactic:

(32) The EPP on T is syntactic.

The EPP on T must be only checked by the D-feature of the TP-subject, which comes from overt Case. In this vein, overt Case of the subject is a syntactic morpheme rather than a focus particle.

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Overt Case of the TP-subjects Chelsun and Yenghi functions as D of the TP-subject, whereas the nominative Case marker of the scrambled complements cayk and ton is related to the output effect. When the complements cayk and ton undergo object shift, overt nominative Case attached to them plays a D-feature to check the EPP on v. So overt Case of the subject should be distinguished from overt nominative Case.

26 However, the object with overt Case or a determinant doesn't necessarily undergo object shift. Note that object shift occurs, only if the object gets focus (i.e., an output effect). Note that object shift cannot occur prior to the syntactic effect.
Following Kim (2001), Lee and Cho (2003b) assume that the first NP of the multiple subject constructions (MSCs) in (33) is assigned focus value inherently. If their observation is on the right track, in (33b), movement of the TP-NP₁ to SPEC-Foc arises, after the vP-NP₁ with overt Case moves to SPEC-T. Only the latter case is involved in checking the EPP-feature on T by the D-feature of the TP-subject with overt Case:

(33) a. *Ton-ulì Mary-ka emeni-ka sensayngnim-eykey tì money-Acc -Nom mother-Nom teacher-Dat
give-Past-Decl
'Money, Mary's mother gave the teacher.'
b.  

At this point, what we need to note is that only the TP-subject with overt Case, which checks the EPP on T, can undergo movement to SPEC-Foc. This is also testified by the following contrast examples:
   -Nom mother-Nom teacher-Dat money-Acc give-Past-Decl
   ‘As for Mary, his mother gave the teacher money.’

b. *ku haksayng emeni-ka sensayngnim-eykey ton-ul
   the student
cwu-ess-ta. (MSC)^27

As shown in (33b), the subject *Chelswu-ka in (34a) moves to SPEC-Foc via
SPEC-T from the inner spec of v. The vP-subject with overt Case in the
inner spec of v first undergoes Agree Move to SPEC-T and its syntactic
D-feature checks the EPP-feature on T. Then, the TP-subject undergoes
Agree-less Move to SPEC-Foc in order to check the feature [+Foc]. As
shown in (29c), however, in (34b), the first subject in the MSC *ku haksayng
cannot undergo Agree Move, because it doesn’t have the syntactic D-feature
to check the EPP on T. So it cannot be in SPEC-Foc. As shown in (29)
there arises a subject-object asymmetry with respect to the EPP-feature
checking; the EPP-feature on v may be checked by the vP-object with a
determiner, whereas the EPP-feature on T is not checked by the TP-subject
with a determiner.

Next, let’s see whether the EPP on T is also syntactic in English in that
it is only licensed by the D-feature of a subject. Waller (1997), Lee (1999),
and Ahn (2003) have suggested that Move of expletive *there overtly
applies only to meet the EPP-feature of the relevant functional category
from [SPEC, DP] position to SPEC-T, and so does not undergo the process
of Agree. According to them, the expletive *there raise to SPEC-T to satisfy
the EPP-feature on T,^28 under the assumption that the expletive is
available in the initial lexical subarray as in (35b), yielding the sentence
in (35a)^29

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27) Of course, as an anonymous reviewer points out, if *ku haksayng emeni-ka ‘the student
   mother-NOM’ is a simple subject, which means ‘the student’s mother’, the sentence is OK.

28) As an anonymous reviewer points out that movement of the expletive to SPEC-T may
   violate the head movement constraint. If so, we will leave it open. At this stage, note that
   in the raising expletive sentence, the functional category T allows the expletive *there as its
   specifier in case it has a projection of an unaccusative verb.

29) We take examples of the expletive *there (35) and the inverted PP (37), in order to show
   that the EPP-feature on T is checked by the D-feature of the subject and involved in Move,
   not in Agree, in English.
(35) a. There is a man in the room.
   b. T-is [DP there a man] in the room
      u[\(\Psi\)-set] D-feature \(\Psi\)-set
      [EPP] u[Case]

At this point, the D-feature of there is also deleted simultaneously while the Agree relation between probe and goal occurs. At this stage, the EPP-feature on T is also satisfied and erased. The real agreement occurs in the T-associate relation, which is in accordance with the assumption that the paired element (P or G) must be complete for Agree to delete the features of P or G. If the expletive is not available in the initial lexical subarray, the post-copular NP moves to SPEC-T for the satisfaction of the EPP as in (36b):

(36) a. A man is in the room.
   b. T-is a man in the room
      u[\(\Psi\)-set] D-feature
      [EPP] \(\Psi\)-set
      u[Case]

According to them, a man moves to SPEC-T to satisfy the EPP-feature on T, undergoing agreement. This yields the structure in (36a).³⁰

According to Collins (1997), the inverted PP moves to SPEC-T in order to satisfy the EPP-feature in a locative inversion construction. Collins (1997) points out that in locative inversion the locative PP moves to SPEC-T:

(37) a. Down the hill rolled John.
   b. At the table sat three judges wearing dark robes.

In (37), T agrees with the post-verbal DP, but its EPP-feature is satisfied by the locative PP. Separate syntactic operations of Agree and Move in (37) are what (35b) shows.

If the above suggestions are on the right track that the EPP on T can only be involved in Move, but not in Agree, they are crucial for this

³⁰ As movement of the expletive there in (35b) shows, Waller (1997), Lee (1999) and Ahn (2003) can dispense with the preference of Merge over Move from the analysis of raising of there from [SPEC, DP].
paper. If the analysis of the expletive *there* in Waller (1997), Lee (1999) and Ahn (2003) is also correct, the D-feature of the expletive in (35a) is the same as that of the TP-subject in (38a), which comes from its own exclusive overt Case:

(38) a. Chelswu-ka pap-ul mek-ess-ta.
   -Nom rice-Acc eat-Past-Decl
   'Chelswu ate rice.'

   b. ku saram pap mek-nun-ta.
   the man rice eat-Prs-Decl
   'The man is eating rice.'

The expletive *there* of the D-feature undergoes Move to SPEC-T independent of the real subject in (35b), because it is the so-called free morpheme. In the meantime, overt Case of the D-feature in Korean alone cannot move to SPEC-T to check the EPP on T independent of the subject, because the Case marker is a bound morpheme in Korean. That is, the subject undergoes Move to SPEC-T along with overt Case and thus its D-feature checks the EPP on T. However, in (38b), the vP-subject without overt Case cannot move to SPEC-T, because it doesn't have a D-feature to check the EPP on T.

31) In (38b), T agrees with the vP-subject, which is what a vP-subject in Icelandic shows as in the following counterparts:

(i) a. there painted probably the house some students red.
   b. which house painted probably some students red. (Chomsky, 2001a, p. 29)
(ii) there read it (never) [vP any students tVb tOB!] (Chomsky, 2001a, p. 36)

In Icelandic, with OS and subject-in-situ constructions, the constructions are permitted. Thus, Icelandic has the counterpart of (i) and (ii). If the subject remains in situ, the object must escape vP (e.g., in the passive form) in Icelandic, as Chomsky (2001a, p. 20) suggests. However, as indicated above, in Korean, so far as Agree Move is concerned, if the subject remains in situ, there cannot occur OS. What we want to show at this point is that if the Icelandic vP-subject in the counterparts (i) and (ii) agrees with T, it doesn't undergo Move to SPEC-T. This patterns with the aspect that the vP-subject without overt Case cannot move to SPEC-T, because it doesn't have a D-feature to check an EPP on T, as in the Korean example (38b). The sentence is ruled in, because configurationality of the subject-object canonical order is reflected in the syntactic domain.
4. No A-Scrambling

We have suggested that the EPP on T is syntactic in that it is only checked by the D-feature of the TP-subject, which comes from overt Case. So no object can undergo scrambling to check the EPP-feature on T. Keeping this point in mind, let's see the following scrambling:

(39) A: mwues-ul Chelswu-ka ti sa-ss-ni? (1b)
what-Acc -Nom buy-Past-Q
‘What did Chelswu buy?’
B: chayk-ul Chelswu-ka ti sa-ss-ta. (2b)
book-Acc -Nom buy-Past-Dc
‘Chelswu bought a book.’

(40) A: mwues-ul Chelswu-ka ti sa-ss-ni? (1b)
which book -Nom buy-Past-Q
‘Which book did Chelswu buy?’
B: ku chayk Chelswu-ka ti sa-ss-ta.
the

(41) A: *pap-ul nwukwu mek-ess-ni?
rice-Acc who eat-Past-Q
‘Which man ate rice?’
B: *pap-ul ku saram mek-ess-ta.
-Acc the
‘The man ate rice.’

In (39) and (40) the objects cannot undergo Move to SPEC-T, because the EPP on T is not checked by the D-feature of the objects. As already indicated, they undergo Move to SPEC-Foc via the outer spec of \( v \). The D-feature of each subject, which comes from overt Case, checks the EPP on T.\(^{32}\) The subject in (41A,B) must move to SPEC-T prior to scrambling via OS in order not to violate the so-called probe-goal matching condition (27). However, it cannot do that, since it doesn't have a D-feature, which

\(^{32}\) As for the D-feature of the subject or the object, an anonymous reviewer asks how a non-nominative subject and a nominative object are dealt with under our system. This has already been discussed in fn. 16 and fn. 23.
comes from overt Case. So the sentences are out.

5. Conclusion

Chomsky (2000, 2001a,b) and Lasnik (2001) have rejected feature-based movement in favor of relation of long-distance agreement, Agree. On this conception, the EPP has nothing to do with feature checking in the sense of Chomsky (1995). Rather, in a return to Chomsky's (1981) earlier view, it is the requirement that certain functional heads must have a specifier. That is the syntactic effect (20) (i.e., subject raising in Lee's (2004) term). Based on this recent proposal, we have suggested that the syntactic effect be applied to movement of the vP-subject to SPEC-T in Korean. The EPP and the [SPEC, T] parameters are required under our system. They are independent from each other. The [SPEC, T] parameter induces the syntactic effect that the position [SPEC, T] is created by merging the surface subject by Move, whereas the EPP parameter dictates that the D-feature of the TP-subject with overt Case checks the EPP on T. That is, in Korean, the D-feature of the subject, which comes from overt Case, checks the EPP on T, when the vP-subject undergoes the syntactic effect. We have also suggested that the EPP on T is only licensed by the D-feature of a subject, which comes from overt Case. Along with the syntactic effect, this reflects configurationality in Korean. In this vein it is syntactic, unlike the EPP which is given on v, only if an output effect occurs. In Korean, overt Case is necessarily required to raise the vP-subject to SPEC-T, because the EPP on T can only be licensed by the D-feature of overt Case. That is, when the vP-subject has a Case marker, along with the marker, the subject moves, since the marker is a bound morpheme. So we have argued that the objects cannot undergo Move to SPEC-T, because the EPP on T is not checked by the D-feature of the objects: they undergo Move to SPEC-Foc via the outer spec of v; hence, no A-scrambling.

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