Exceptional Case Marking As Case-Regulated*

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It is known that syntactic processes are in general subject to locality re-
quirements. This paper argues that a head with a Case feature is one ele-
ment that determines a local or minimal domain for syntactic processes,
the essence of Case Minimality (J.-S. Lee 1990, 1991). The empirical data
come from ECM facts in both Korean and Modern Greek: With verb rais-
ing applied, an embedded verb with a Case feature may not structurally
intervene between the matrix ECM verb and the embedded subject. Under
the ECM analysis of the minimalist theory (Chomsky 1992), i.e., LF rais-
ing of the embedded subject to the matrix SPEC AGRoP, the embedded
subject raises out of a minimal domain if the intervening verb, under Case
Minimality, has a Case feature. The raising out of a minimal domain, if
this is not a shortest move, then results in a violation of economy principle
in the sense of Chomsky (1992). In such a case ECM is impossible, but in
other cases it is possible.

1. Introduction

It is generally acknowledged that the overt infinitive subject, not the fi-
nite subject, receives Case from the higher Case-assigner, usually the ma-
trix verb, in languages such as English. This is known as Exceptional Case
Marking (ECM) (Chomsky 1981). It has been observed, however, that the
finite subject may also be affected by ECM in such languages as Korean
and Modern Greek (Yoon and Yoon 1991, J.-S. Lee 1991, 1992 for Kore-
an; Rivero 1987, 1990, Campos 1989, Schneider-Zioga 1992 for Modern
Greek). According to J.-S. Lee (1991, 1992) and Schneider-Zioga (1992),

an interesting generalization has been made for this common fact: ECM is not possible when the embedded predicate (in an appropriate position) is a Case-assigner but it is possible when the embedded predicate is not a Case-assigner (in Modern Greek clitic-doubled constructions are considered). This paper attempts to account for ECM in both Korean and Modern Greek in a unified Case-theoretic way. The discussion is basically within the recent minimalist theory outlined in Chomsky (1992), in which ECM process is regarded as an LF raising of the embedded subject to the matrix SPEC AGRoP. Under this view of ECM, this paper, applying the idea of Case Minimality proposed in J.-S. Lee (1990) -- a Case-assigner creates a local domain for syntactic processes, suggests that a Case-assigning predicate in an embedded clause creates a local (or minimal) domain in a relevant ECM context. The raising (of the embedded subject) out of this minimal domain is claimed to yield a violation of economy principle. It is then predicted that ECM is sensitive to the Case-assigning ability of the embedded predicate.

2. ECM into Finite Clauses

In English, as a starting point, the embedded subject can be exceptionally Case-marked only when its clause is infinitive (cf. Chomsky 1981). The following illustrates this point.

(1) a. Mary believes [(that) *him/he is smart].
    b. Mary believes [him/*he to be smart].

In (1a) the subject of an embedded finite clause cannot take Accusative Case but Nominative Case. In (1b), on the other hand, the subject of an embedded infinitive clause can take only Accusative Case. This fact shows that ECM affects only the infinitive subject in English.

In some other languages, however, ECM may also affect the finite subject, unlike in English. Korean and Modern Greek provide us with such a case. Consider first the following representative examples from Korean (see K.-H. Lee 1988, Yoon and Yoon 1991, J.-S. Lee 1991, 1992, among others, for this fact and discussion).

(2) a. John-un [Mary-lul/ka   yeppu-ta-ko]   mit-nun-ta.
        -Top   -Acc/Nom pretty-Dec-Comp believes
    'John believes Mary to be pretty.'
    'John believes that Mary is pretty.'
  b. John-un [Mary-lul/ka   kecicmalcangi-i-ess-ta-ko]
        -Top   -Acc/Nom liar-be-Past-Dec-Comp
    mit-nun-ta.
    believes
    'John believes Mary to have been a liar.'
    'John believes that Mary was a liar.'

In (2a) the embedded clause has a present tense (with impoverished
tense marker), and in (2b) a past tense. Despite the presence of tense,
however, ECM to the embedded subject is possible, as the Accusative Case
on the embedded subject shows. It is noted that the embedded subject can
also take Nominative Case, suggesting that ECM is not obligatory. It is also
noted that ECM can take place across the overt complementizer -*ta-ko*. The
ECM in Korean, however, may not always affect the embedded subject:

(3) John-un [Mary-*lul/ka   Tom-ul   manna-ass-ta-ko]
        -Top   -*Acc/Nom   -Acc meet-Past-Dec-Comp
    mit-nun-ta.
    believes
    'John believes that Mary met Tom.'

In (3) the embedded subject cannot take Accusative Case, showing that
ECM is not possible.

Descriptively, the contrast between (2) and (3) with respect to the possi-
bility of ECM to the embedded subject seems to lie in the different property
of the embedded predicates. That is, the embedded predicates in (2) can be
separated from that in (3) in terms of stative vs. non-stative (K.-H. Lee
1988), individual- vs. stage-level (as one reviewer suggests), or non-Case-
assigner vs. Case-assigner distinction (J.-S. Lee 1990, 1991) -- the embed-
ded predicates in (2) are stative, individual-level, or non-Case-bearing
predicates, while the embedded verb in (3) is a non-stative, stage-level, or
Case-bearing predicate. And only the predicate that has a latter property
does not allow ECM.

Each generalization must be put into various range of empirical data to
be chosen. For the purpose of choice, however, if we put such individual-

level stative predicates as *salangha-* 'love,' *al-* 'know,' *talm-* 'resemble' in place of *manna-* 'meet' in the example (3), the embedded subject cannot take Accusative Case, i.e., it cannot be ECMed. This is inconsistent with the generalizations made in terms of stative vs. non-stative and individual- vs. stage-level distinction. On the other hand, the generalization made in terms of Case (simply, Case generalization) can account for the impossibility of ECM, since all these predicates are Case-assigners in Korean.[1] (See also J.-

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[1] One reviewer brought out examples like (ia,b) below containing intansitives to refute the present Case generalization in favor of individual- vs. stage-level generalization (with his judgement before the sentence, and mine / K.-H. Lee 1988 after the sentence). In addition to examples like (ia,b), this reviewer also considered examples like (3) and (2a) in the text ((3) is ?? and (2a) is good to him).

(i) a. ?na-nun [Chelswu-lul   ca-ess-ta-ko]
        I-Top   -Acc sleep-Past-Dec-Comp
        sayngkak-ha-n-ta.   (?/*)
        think-do-Pres-Dec
        'I think Chelswu slept.'
    b. ?na-nun [Chelswu-lul   ttwy-ess-ta-ko]
        I-Top   -Acc run-Past-Dec-Comp
        sayngkak-ha-n-ta.   (?/*)
        think-do-Pres-Dec
        'I think Chelswu ran.'

Putting aside the delicate difference in the degree of unacceptability, if (ia,b) are bad (due to the reviewer and K.-H. Lee's 1988 judgements), it seems that the contrast between (ia,b),(3) and (2a,b) follows from the individual- vs. stage-level generalization, as the reviewer claimed. That is, stage-level predicates somehow grudge allowing ECM, unlike individual-level predicates.

But let us also admit that judgements vary, as indicated above. To me (and many people I consulted), (ia,b) (and (21c) below) are also basically good, if not perfect. If so and if the intransitives in these examples are not Case-assigners, the contrast between (ia,b),(2a,b) and (3) will follow from the Case generalization, but not from the individual- vs. stage-level generalization, these verbs being stage-level. Further, as mentioned right above in the text, the fact that ECM is possible even with certain Case-bearing individual-level predicates is especially damaging to the latter generalization.

If (ia,b) are bad, on the other hand, the Case generalization appears to make the wrong prediction. However, the intransitives in question may be regarded as Case-assigners for those who take (ia,b) to be bad. The verb in (ia) may have an empty cognate object and the verb in (ib) may have an empty locative object, hence they may be taken to be Case-assigners. Then the contrast between (ia,b), (3) and (2a,b) will also follow from the Case generalization.

To be noticed below, in Modern Greek ECM may be possible even with the stage-level embedded predicates as long as they are not Case-assigners, according to Schneider-Zioga (1992). With many more (and fuzzy) examples aside, it seems then that the facts from Modern Greek as well as Korean can possibly make the present Case generalization more general and tenable.

S. Lee 1992, Chap 2 for more in detail on this matter.) So I assume that Case is a relevant property responsible for the ECM in Korean.

This Case generalization, combined with the raising analysis for Korean ECM argued in J.-S. Lee (1991, 1992) and others, provided one motivation for Case Minimality in J.-S. Lee (1990, 1991), roughly stated in (4) for the present purpose:

(4) Case Minimality:
    A Case-assigner projects a local domain for syntactic processes.

In the next section, I will return to the application of this principle to the contrast between (2) and (3).

Interestingly, Modern Greek also exhibits a similar fact with respect to ECM in a ceratin construction. In Modern Greek, Accusative Case is optionally assigned to the preverbal subject of the subjunctive clause embedded under an ECM verb (see Rivero 1987, Campos 1989, Schneider-Zioga 1992, among others), as illustrated in (5). (The Modern Greek examples cited in this paper are largely drawn from Schneider-Zioga 1992, otherwise with references indicated.)

(5) a. I   Giannis theli   [ti   Maria na   exetasi
       the Giannis wants [the Maria-Acc   examines
       tin kori   mu].
       the daughter my-Acc
       'Giannis wants Maria to examine my daughter.'
       (Campos 1989)
   b. O   Yiorghos   perimene   [tin Maria/i Maria
       the George   expected   the Maria-Acc/Nom
       na paraponiete].
       subj.complain
       'George expected Maria to complain.'

But a postverbal embedded subject in the same ECM context takes only Nominative Case, as illustrated in (6):

(6) a. O   Yiorghos perimene   [na paraponiete
       the George   expected   subj.complain
       *tin Maria/i Maria].
       *the Maria-Acc/Nom

'George expected Maria to complain.'

b. O   Yiorgos ithele   [na dhiri ton ghaidharo
   the George wanted subj.beat the donkey-Acc
   i   Maria].
   the Maria-Nom
   'George wanted Maria to beat the donkey.'

Rivero (1987) suggested that the preverbal subject of the embedded sub-junctive clause receives Accusative Case from the matrix ECM verb under long distance government via a process of clausal (CP) transparency which extends the government domain of the matrix verb to the embedded subject (see also Campos 1989). Under this suggestion, the preverbal embedded subject in (5) may receive Accusative Case from the matrix verb across the transparent CP. But the fact that the postverbal subject cannot receive Accusative Case from the same matrix ECM verb as in (6) led Rivero (1987) to assume that the raised intervening verb induces a block-ing effect to long distance government in some way that does not concern us at the moment. This is also confirmed by (7), where the verb is raised over the embedded subject (here, non-postverbal).

(7) O   Yiorgos ithele   [na dhiri   i   Maria
    the George   wanted   subj.beat the Maria-Nom
    ton ghaidaro].
    the donkey-Acc
    'George wanted Maria to beat the donkey.'

Thus, the subject in (6, 7) can only appear in Nominative Case due to the blocking effect of the intervening verb. To simply draw the distinction be-tween (5) and (6, 7), I temporarily take the above approach, taking the role of an intervening verb, to the contrast in question.

   There is another case of ECM in Modern Greek. That is, in a clitic-dou-bled construction, an embedded subject is associated with a co-indexed clitic on the matrix verb, and it can and must be in Accusative Case for both pre- and postverbal subjects:

(8) a. O   Yiorghos tin-perimene   [tin Maria/*i Maria
      the George   cl.Acc-expected   the Maria-Acc/*Nom
      na paraponiete].
      subj.complain

'George expected Maria to complain.'

b. O   Yiorghos tin–perimene   [na paraponiete
the George   cl.Acc–expected subj.complain
tin Maria/*i Maria.
the Maria–Acc/*Nom
'George expected Maria to complain.'

In ECM without a clitic, only the preverbal subject, not the postverbal sub-ject, may be affected by ECM. But in ECM with a clitic, where the clitic and the NP it doubles form a clitic chain (cl, NP$_i$), postverbal as well as preverbal subject can and must be in Accusative Case. The latter fact indi-cates that clitic doubling licenses long distance Case assignment to the postverbal subject by the matrix ECM verb, not available for ECM without a clitic. It thus seems that the clitic chain expands the government domain in order for the matrix ECM verb to assign Accusative Case to the embeddedd subject.[2]

More observation, however, reveals that in a clitic-doubled construction, such expansion of government for long distance Case assignment to the postverbal subject is restricted only to some environment ((9a) is repeated from (8b) for comparison):

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[2] According to Schneider-Zioga (1992), this expansion of governemnt domain is not only for long distance Case assignment but for long distance anaphor binding. Consider the following Modern Greek examples (from Schneider-Zioga 1992) il-lustrating the latter binding fact:

(i) a. *I   Maria, ipe oti [$_{Nom}$ o   eaftos tis]$_i$ misuse   ton Yiorgho.
the   said that   the self hers.Nom hated.3sg   the
'Maria said that herself hated George.'
  b. O Yiorghos$_i$ dhen ton–ithele   na   klapsi [$_{Acc}$ ton eafto tu]$_i$.
the   not cl.Acc–wanted subj cry.3sg   the self his
'George didn't want himself to cry.'
  c. *O Yiorghos$_i$ dhen ithele   na   klapsi [$_{Nom}$ o   eafto tu]i.
the   not wanted subj cry.3sg   the self his
'George didn't want himself to cry.'

The reflexive anaphor in Modern Greek must be bound in the minimal domain containing a governor and a subject. In (ia,c), where the minimal domain for the anaphor containing a governor and a subject is the embedded clause, the anteced-ent cannot bind the anaphor. But in (1b) the clitic chain enables the matrix verb to govern the anaphor, so that the minimal domain for the anaphor can be the whole sentence, where the antecedent can bind the anaphor.

(9) a. O   Yiorghos   tin-perimene   [na paraponiete
       the George   cl.Acc-expected   subj.complain
       tin Maria/*i Maria.
       the Maria-Acc/*Nom
       'George expected Maria to complain.'
    b. *O   Yiorgos   tin-ithele   [na dhiri tin Maria
       the George   cl.Acc-wanted   subj.beat the Maria-Acc
       ton ghaidharo].
       the donkey-Acc
       'George wanted Maria to beat the donkey.'
    c. *?O   Yiorgos   tin-ithele   [na dhiri
        the George   cl.Acc-wanted   subj.beat
        ton ghaidharo   tin Maria].
        the donkey-Acc   the Maria-Acc
        'George wanted Maria to beat the donkey.'

(9a) involves an intransitive verb in the embedded clause, and (9b,c) in-
volve a transitive verb in the embedded clause. It thus appears that this dif-
ference gives rise to the contrast in grammaticality between (9a) and (9b,
c). That is, clitic-doubled postverbal subjects are possible with intransitive
verbs but impossible with transitive verbs in the embedded clause. But this
statement is valid only when the embedded verb structurally intervenes be-
tween the matrix ECM verb and the embedded subject. Otherwise, the ECM
under discussion is possible:

(10) O   Yiorgos tin-ithele   [tin Maria   na dhiri
     the George   cl.Acc-wanted   the Maria-Acc subj.beat
     ton ghaidharo].
     the donkey-Acc
     'George wanted Maria to beat the donkey.'

Taking the intransitive vs. transitive verb distinction to be Case-assigner
vs. non-Case-assigner (see also section 4 pertaining to this), Schneider-
Zioga (1992) offered the following descriptive generalization for the clitic
ECM in Modern Greek -- Case-assigning verbs may not structurally inter-
vene between the matrix ECM verb and the embedded subject. Recall also
that the ECM in Korean is possible with non-Case-assigners, but not with
Case-assigners in the embedded clause. In both Korean and Modern Greek,

thus, ECM crucially hinges on the Case-assigning ability of the embedded predicate (in an appropriate position).

I attempt to account for the ECM in both Korean and Modern Greek in a unified way by applying the idea of Case Minimality (4), i.e., by capitalizing the role of Case-assigning ability of the embedded predicate.

3. Previous Analyses

In this section, I briefly introduce previous analyses for ECM in Korean and Modern Greek. As for the Korean ECM, it has been argued that the embedded subject raises (to a higher position or to SPEC CP) to be ECMed by the matrix ECM verb (see Ahn and Yoon 1989, J.-Y. Yoon 1990, Yoon and Yoon 1991, J.-S. Lee 1991, 1992, among others).[3] Under this raising analysis, J.-S. Lee (1991, 1992) elaborated the idea of Case Minimality (4) to the effect that a Case-assigner in the embedded clause creates a local domain, which serves as a barrier for the raising of the embedded subject to be ECMed, but that a non-Case-assigner does not form this domain.

This analysis distinguishes (2) from (3), repeated below as (11) and (12), with respect to the presence and absence of ECM, respectively.

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[3] One argument for the raising analysis of ECM in Korean is reproduced from J.-S. Lee (1991, 1992). Consider the following idiomatic examples.

(i) hankwuksalam-tul-un   [cakun kochwu-ka/-lul
    Korean-Plural-Top   small   pepper-Nom/Acc
    mayp-ta-ko]   mit-nun-ta
    hot-Dec-Comp   believe
    a. Koreans believe that small peppers are hotter   (lit.)
    b. Koreans believe that small men are stronger   (idom.)

If the embedded subject takes the Nominative Case marker, both literal and idiomatic meaning in (ia,b) are available. But if it takes the Accusative Case marker, only literal meaning (ia) is available. I took ECM in Korean to be a kind of focalization (J.-Y. Yoon 1990) and noted the fact that the idioms, non-referential, cannot be focalized. Based on that, I argued that the loss of idomatic meaning with Accusative embedded subject indicates that the idiom subject cannot be ECMed in its place but must raise (to a higher position) to be ECMed by the matrix verb. See J.-S. Lee (1992, Chap 2) for more arguments for the raising anlaysis for ECM in Korean.

(11) a. John-un [Mary-lul/ka   yeppu-ta-ko]   mit-nun-ta.
          -Top   -Acc/Nom pretty-Dec-Comp   believes
       'John believes Mary to be pretty.'
       'John believes that Mary is pretty.'
     b. John-un [Mary-lul/ka   kecicmalcangi-i-ess-ta-ko]
          -Top   -Acc/Nom liar-be-Past-Dec-Comp
       mit-nun-ta.
       believes
       'John believes Mary to have been a liar.'
       'John believes that Mary was a liar.'

(12) John-un [Mary-*lul/ka   Tom-ul   manna-ass-ta-ko]
       -Top   -*Acc/Nom   -Acc meet-Past-Dec-Comp
     mit-nun-ta.
     believes
     'John believes that Mary met Tom.'

According to Case Minimality (4), the Case-assigners in the embedded clause in (12), i.e., *manna-* 'meet', and INFL, project local or minimal domains. According to J.-S. Lee (1991, 1992), these local domains are VP and IP, respectively (with technical details put aside).[4] Here, the relevant

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[4] In J.-S. Lee (1992, 45), the definition of a minimal domain, called a 'minimal Case domain', is formulated as in (i):

(i)   Minimal Case Domain:
         γ is a minimal Case domain if and only if
   (I) γ is a projection of a Case-assigner
   (II) a. If δ is a functional category, γ can at most be a single bar level,
          b. If δ is a lexical category, γ can be a maximal projection.
   (III) a. If δ has a complement that is a projection of a
              non-Case-assigner, then δ is an immediate projection,
          b. Otherwise, γ is a maximal projection.

And the relevant structures of (11) and (12) are given in (iia) and (iib), respectively.

(ii) a.   IP
                /\
             NP   I'
                  /\
               VP   INFL-ta-ko
              /\   [+Case]
            NP   V
                 [−Case]

     b.   IP
                /\
             NP   I'
                  /\
               VP   INFL-ta-ko
              /\   [+Case]
            NP   V
                 [+Case]

domain is IP, and this IP, taken to function as a barrier, blocks the raising of the embedded subject (to the SPEC CP or to a higher position). This amounts to saying that the subject trace is not properly governed from outside. This yields an ECP violation on the assumption that the subject trace must be properly governed from outside to satisfy the ECP (Lasnik and Saito 1992, Chomsky 1986). (See J.-S. Lee 1992, Chap 2 for related *that*-trace effect in overt syntax in Korean.) Hence, the lack of ECM in examples like (12) containing a Case-assigner in the embedded clause is accounted for. Unlike in (12), the embedded clauses in (11a, b) contain non-Case-assigners, stative verb *yeppu-* 'pretty' and copula *-i-* 'be.' Under Case Minimality, the VPs headed by these verbs do not form minimal domains. For this reason, the embedded IP does not form a minimal domain, but instead I' forms this domain, under Case Minimality developed in J.-S. Lee (1991, 1992) (see note 4). IP then does not constitute a barrier for the raising of the embedded subject. This makes ECM possible in (11).

It was observed in the preceding section that in the clitic ECM contexts in Modern Greek, Case-assigning verbs may not structurally intervene between the matrix verb and the embedded subject. Relevant examples are given below. (13) is repeated from (8b), (14a, b) from (9b, c), and (15) from (10).

(13) O   Yiorghos   tin-perimene   [na paraponiete
     the George   cl.Acc-expected   subj.complain
     tin Maria/*i Maria.
     the Maria-Acc/*Nom
     'George expected Maria to complain.'

(continued)

In (iia) the VP does not form a minimal domain because of V[-Case], and INFL[+Case] projects a minimal domain I', according to (IIIa) in (i). In (iib) the VP forms a minimal domain because of V[+Case], and INFL[+Case] combined with the Comp *-ta-ko* projects a minimal domain IP, according to (IIb, IIIb) in (i) (the complex INFL-*ta-ko* is assumed to have a lexical status for some reasons (see J.-S. Lee 1992, Chap 2)). Thus, in (iia) the subject can raise to be ECMed without crossing a minimal domain, a barrier; but in (iib) it has to cross a minimal domain IP, a barrier. This captures the contrast between (11) and (12) with respect to the possibility of ECM.

(14) a. *O Yiorgos tin-ithele   [na dhiri tin Maria
        the George cl.Acc-wanted subj.beat the Maria-Acc
        ton ghaidharo].
        the donkey-Acc
        'George wanted Maria to beat the donkey.'

    b. *?O   Yiorgos tin-ithele   [na dhiri
        the George cl.Acc-wanted   subj.beat
        ton ghaidharo tin Maria].
        the donkey-Acc the Maria-Acc
        'George wanted Maria to beat the donkey.'

(15) O Yiorgos tin-ithele   [tin Maria   na dhir
      the George cl.Acc-wanted the Maria-Acc subj.beat
      ton ghaidharo].
      the donkey-Acc
      'George wanted Maria to beat the donkey.'

In (13) a non-Case-assigner intervenes between the matrix verb and the embedded subject, hence ECM is possible. In (14) a Case-assigner intervenes, hence no ECM is possible. In (15) nothing intervenes, hence ECM is possible.

Schneider-Zioga (1992) suggested that the 'typical potential governors' in Rizzi's (1990) Relativized Minimality be permitted to also range over Case-assigners. She divided Case-assigners into two types -- lexical category Case-assigners, e.g., V, and functional category Case-assigners, e.g., INFL. Under this suggestion and Relativized Minimality, then, in the clitic ECM contexts ECM verbs can assign long distance Case to the embedded subject across any non-Case-assigner and any functional category like INFL (13, 15), but they cannot do so across any intervening same type of category, i.e., lexical category Case-assigner (14).

It is now noticed that a Case-assigner (in a certain position) in the embedded clause produces a certain minimality effect for ECM in both Korean and Modern Greek, though the theoretical executions are different. In the next section, I combine these analyses in line with the basic idea of Case Minimality, and perform this work under the recent minimalist theory of Chomsky (1992).

4. Proposed Analysis

Chomsky (1992) in his minimalist theory suggests that structural Case licensing and phi-feature agreement are reduced to a SPEC-head relation at the relevant AGR projections. In this theory, all langauges have the strucuture: Comp -- AGRs -- Tns -- AGRo -- V, and NPs are licensed under SPEC-head relation. ECM is also reduced to a SPEC-head mode. Thus, in (1b) the embedded subject *him* raises to the SPEC AGRoP above the matrix VP in order for the Accusative Case on it to be licensed under SPEC-head agreement.[5] (To clarify, in the subsequent discussion the notion 'assignment' of Case is to be understood as 'checking' of a relevant Case feature, and a 'Case-assigner' as a 'Case-checker', within the minimalist framework.)

Let us adopt the above ECM analysis of the minimalist theory. A question then arises as to how the ECM facts in both Korean and Modern Greek can be accommodated within this view. In the preceding section, I briefly introduced one raising analysis for Korean ECM, suggested in J.-S. Lee (1991, 1992). Thus, the basic point of this raising analysis can be carried over to the minimalist approach, which also treat ECM as raising. We then need to constrain this ECM raising to yield the contrast looked at in section 2. We have seen that a Case-assigner in the embedded clause blocks ECM

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[5] See Lasnik (1993) for some arguments for SPEC of AGRo in English, and Y.-W. Park (1993), D.-S. Ryu (1994) in Korean. The following fact, I think, supports the existence of AGRo in Korean.

    (i) a. na-nun Yenghi-lul   manna-/*poy-ess-ta.
           I-Top   -Acc meet/*meet(Hon(orific))-Past-Dec
           'I met Yenghi.'
        b. na-nun apenim-ul   manna-/poy-ess-ta.
           I-Top   father-Acc meet/meet(Hon)-Past-Dec
           'I met father.'

It is noticed that the honorific form of the verb *poy-* 'meet' may occur with only the honorable object *apenim* 'father', not with *Yenghi.* It thus appears that the verb *poy-* 'meet' consists of some abstract AGRo element and the verb *manna-* 'meet,' a complex resulting from raising of V to AGRo. The verb *poy-* may then be regarded as a kind of suppletive form of the complex, AGRo + *manna-*. Now if this complex, formed at AGRo, licenses Accusative Case, the object might as well end up in the SPEC AGRoP for its Case licensing.

in Korean, and that an intervening Case-assigner in the embedded clause
blocks ECM in Modern Greek. This made minimality principles come into
play, i.e., Case Minimality in Korean (J.-S. Lee 1991, 1992), and
Relativized Minimality in Modern Greek (Schneider-Zioga 1992).

It was observed that in Korean, ECM is blocked by an embedded Case-
assigner. If this Case-assigner stays in its place, it apparently does not in-
tervene between the matrix verb and the embedded subject (3=12). But it
seems that in Korean a verb in fact raises and further to Comp, as evi-
denced by the following examples (the capital letters in the glosses in (17)
indicate focus).

(16) a. John-un   chayk-ul   an   sa-ass-ta.
         -Top book-Acc   Neg buy-Past-Dec
      'John did not buy a book.'
    b. John-un   sinmwun-ul   hangsang   ilk-nun-ta.
         -Top newspaper-Acc always   read-Asp-Dec
      'John always reads newspaper.'

(17) a. mek-ess-'ta/eyo, John-i   pap-ul.
         eat-Past-'Dec/Dec   -Nom   meal-Acc
      'John ATE meal.'
    b. pap-ul   mek-ess-ta/eyo, John -i.
       meal-Acc eat-Past-Dec/Dec   -Nom
      'John ATE MEAL.'

In (16) the verb appears after the Neg element and the advervial, indi-
cating that it has raised (cf. Pollock 1989, Chomsky 1991, K.-Y. Choi
1991).[6](See also Otani and Whitman 1991 for verb raising based on VP-el-
lipsis phenomena in Korean (and Japanese).)

In (17a) the complex consisting of a verb, Tns element and Comp ap-
pears in the sentence initial position. Given scant evidence for the
rightward movement in head-final languages (cf. Fukui 1993), the order

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[6] It needs to be mentioned that verb raising here holds only if Neg P exists in
Korean. But there have been pros and cons about its existence. The position of
adverbs in Korean -- whether it is on the right or left periphery of VP -- is also
less clear. Thus, the verb raising analysis based on examples like (16a, b) may
not be so convincing as it appears to be. But see J.-S. Lee (1995) for recent argu-
ment for the existence of Neg P in Korean, and thus, for verb raising as well.

displayed in (17a) seems to indicate that the verb complex, rather than the subject and the object, has been leftward moved, whatever the nature of this operation. In order to form a constituent for this movement, the verb will combine with the Tns element, and then with the Comp, preferably via raising rather than lowering.

In (17b) VP-preposing appears to have been applied. In order for *pap-ul mek-ess-ta/eyo* to move, it must form a constituent. But it is hard to see how these items can form a constituent to be able to move across the subject. It seems implausible to say that the subject first vacuously moves to adjoin to the top node, say CP, and then, the whole CP containing the subject trace and *pap-ul mek-ess-ta/eyo* moves across the adjoined subject to derive the surface order in (17b). The more plausible possibility is to move *mek-ess-ta/eyo* first, with overt verb raising applied up to Comp to form a constituent, and then, to move the object to the initial position, yielding the surface order in (17b). (See also Whitman 1991 for some arguments for string vacuous verb raising to Comp in Korean in parallel with Germanic V -2.)

Now under the verb raising in Korean, the raised verb in Comp structurally intervenes between the matrix verb (or its trace) and the embedded subject (3=12). We then have a desirable generalization for ECM in both Korean and Modern Greek: An overtly raised intervening Case-assigner in the embedded clause blocks ECM. And it seems obvious that this intervening Case-assigner invokes a certain minimality effect, Case Minimality or Relativized Minimality.

Under the minimalist view of ECM as an LF raising (of the embedded subject) to the matrix SPEC AGRoP, however, Relativized Minimality does not seem to be a relevant principle, since the raised verb in the embedded Comp no longer intervenes between the matrix verb (or its trace) and the embedded subject now ended up in the matrix SPEC AGRoP. Notice also that in the course of raising no A-specifier intervenes, indicating that Relativized Minimality is inapplicable. The remaining option is naturally Case Minimality. In other words, under Case Minimality the overtly raised intervening Case-assigner projects a minimal (or local) domain for the LF raising of the embedded subject to the matrix SPEC AGRoP to be ECMed, but a non-Case-assigner does not.

Let us take examples for illustration of this analysis. (12) from Korean

is repeated as (18).

(18) John-un [Mary-*lul/ka   Tom-ul   manna-ass-ta-ko]
         -Top   -*Acc/Nom   -Acc meet-Past-Dec-Comp
      mit-nun-ta.
      believes
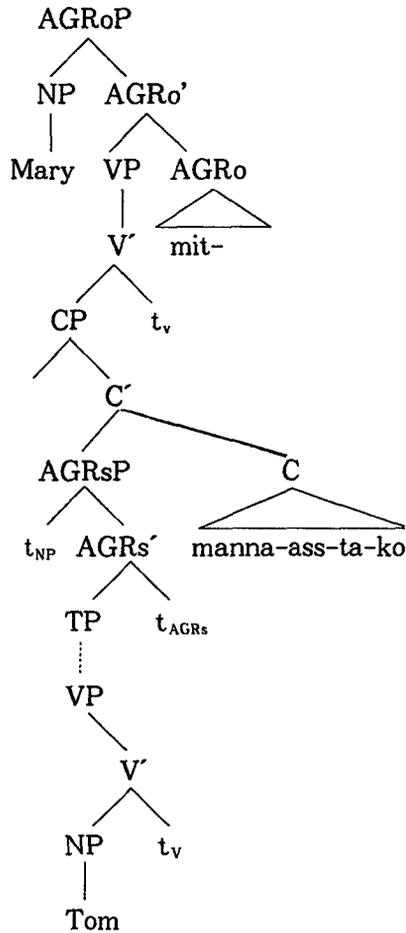   'John believes that Mary met Tom.'

It was shown that in Korean the verb raises to Comp. This raising could follow from the affixal nature of the Tns morpheme and Comp in Korean. Plausibly, it may be assumed that in Korean Comp has a strong V-feature to attract the verb in overt syntax under the minimalist spirit. The relevant portion of the resultant structure after verb raising in (18) is given in (19) below.

Suppose that the raised Case-assigner enables the embedded Comp to project a minimal domain by virtue of its having a Case feature under Case Minimality, say, {[SPEC, CP], [SPEC, AGRsP], ...} or simply CP by taking the highest projection of this domain, in a way similar to formation of a minimal domain in Chomsky (1992), where, e.g., after V raises to AGRo, the resultant verbal chain includes both SPEC AGRoP and SPEC VP in its minimal domain. In (19) *Mary* now has to raise to the matrix SPEC AGRoP across this minimal domain, CP. Then, it becomes highly plausible to attribute the impossibility of ECM in (18) to this reason. Assume further that an A-movement across a minimal domain defined by Case Minimality is not a shortest move (J.-S. Lee (1994)). Then, this movement will violate economy principle in the sense of Chomsky (1992).[7]

Under the present analysis, in short, raising of the embedded subject to the matrix SPEC of AGRoP at LF results in a violation of economy principle if it crosses an overtly raised verb with a Case feature, but not if

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[7] Since A'-movement from SPEC CP to a higher SPEC CP (with possible intermediate steps) is possible, I assume that SPEC CP serves as an escape hatch for this movement, although it is within the minimal domain. But the ECM raising, an A-movement, cannot pass through this SPEC CP, an A'-position. If it does, an improper movement will result. The raising in (19) is thus a direct A-movement to the matrix SPEC AGRoP.

(19)

```
                    AGRoP
                    /    \
                  NP     AGRo'
                  |      /    \
                Mary   VP     AGRo
                       |      /‾‾‾\
                       V'    mit-
                      /  \
                    CP    t_v
                   /  \
                   C'
                  / ‾‾‾‾‾‾‾\
              AGRsP          C
              /   \        /‾‾‾‾‾‾‾‾\
           t_NP  AGRs'   manna-ass-ta-ko
                 /   \
                TP   t_AGRs
                ⋮
               VP
                 \
                 V'
                / \
              NP   t_v
              |
             Tom
```

otherwise. Thus, the contrast between (2) and (3) (=(11) and (12)) in Korean, i.e., presence vs. absence of ECM, follows from the interaction of Case Minimality and economy principle.

Note that in (11, 12) the embedded subject can take Nominative Case. The ECM to the embedded subject would then be blocked by Last Resort. I therefore assume that feature checking is optional (cf. also Watanabe 1993). If Nominative Case feature checking on the embedded subject does not take place at the AGRsP node, ECM process, i.e., Accusative Case feature checking on this subject, can take place at the matrix AGRoP node. The latter is possible in (11), but not in (12) due to Case Minimality.

Next, I turn to Modern Greek examples. (14) is repeated as (20).

(20) a. *O   Yiorgos tin-ithele   [na dhiri
          the George cl.Acc-wanted   subj.beat
          tin Maria   ton ghaidharo].
          the Maria-Acc   the donkey-Acc
          'George wanted Maria to beat the donkey.'
     b. *'O Yiorgos   tin-ithele   [na dhiri
          the George   cl.Acc-wanted subj.beat
          ton ghaidharo   tin Maria].
          the doncky-Acc the Maria-Acc
          'George wanted Maria to beat the donkey.'

(20a, b) are the representative cases that disallow ECM in clitic-doubled constructions. The proposed analyis directly extends to (20a,b). The word order in the embedded clauses seems to indicate that the embedded verb has been raised to Comp (see also Watanabe 1993 for related fact in Balkan languages). If Comp has a strong V-feature, it will attract the verb in overt syntax under the minimalist spirit. But since examples like (10=15) show that the verb does not always raise, it may be that in Modern Greek Comp optionally has a strong V-feature. Since the raised verb is a Case-assigner in (20), it will project a minimal domain under Case Minimality, i. e., {[SPEC, CP], [SPEC, AGRsP], ...} or simply CP, in the same fashion seen in the similar structure (19) (with head-parameter ignored). The LF raising of the embedded subject to the matrix SPEC AGRoP crosses this domain, and thus, it does not constitute a shortest move. The lack of ECM in (20a,b) is then ultimately reduced to a violation of economy principle.

On the other hand, the presence of ECM in examples like (13, 15) is straightforwardly predicted. What intervenes between the matrix verb and the embedded subject is a non-Case-assigner (13) and nothing (15), and thus, no minimal domain is created under Case Minimality. Thus, the LF raising of the embedded subject is permitted, yielding ECM.

The proposed analysis is confirmed by more empirical data in both languages under consideration. The main prediction of this analysis is that ECM is possible if the embedded predicate is not a Case-assigner, whereas it is not possible if the embedded predicate (raised to the Comp position) is a Case-assigner. The following Korean examples (21) and Modern Greek ones (22) illustrate this point.

(21) a. Mary-nun [John-(')ul/i   cap-hi-ess-ta-ko]
           -Top   -(')Acc/Nom was caught-Comp
        mit-ess-ta.
        believed
        'Mary believed John to have been caught.'
        'Mary believed that John was caught.'
     b. John-un   [i   sikye-(')lul/ka
           -Top this watch-(')Acc/Nom
        phal-li-ess-ta-ko]   mit-ess-ta.
        was sold-Comp   believed
        'John believed this watch to have been sold.'
        'John believed that this watch was sold.'
     c. Mary-nun [John-(')ul/i   o-/ka-ass-ta-ko]
           -Top   -(')Acc/Nom come/go-Past-Comp
        mit-ess-ta.
        believed
        'Mary believed John to have come/gone.'
        'Mary believed that John came/went.'

All the embedded predicates in (21) are known as non-Case-assigners,
i.e., passive verbs (21a,b) and intransitive verbs (21c), and ECM is possi-
ble.

(22) a. Tin-perimena   na   silifthi   tin Maria.
        cl.Acc-expected.1st subj.arrest-Pass the Maria-Acc
        'I expected Maria to be arrested.'
     b. Tin-afisa   na fighi   tin Maria   (gnoris).
        cl.Acc-let.1sg   subj.leave the Maria-Acc early
        'I let Maria leave (early).'

In (22a) the embedded predicate is a passive verb, and in (22b) an
unaccusative verb, both being known as non-Case-assigners (Schneider-
Zioga 1992), and ECM is possible in both cases.[8]
   In sum, the descriptive generalization that ECM is sensitive to the Case-
assigning ability of the embedded predicate in both Korean and Modern
Greek receives a plausible explanation under the proposed analysis
adopting the ECM analysis of the minimalist theory of Chomsky (1992), an
LF raising of the embedded subject to the matrix SPEC AGRoP. The role

of the

embedded verb with a Case feature becomes active via verb raising in both languages, thereby intervening between the matrix ECM verb and the embedded subject. Case Minimality serves as a relevant principle in capitalizing the role of this intervening verb. According to this principle, the intervening Case-assigner cretaes a minimal domain for LF raising of the embedded subject for ECM. It is assumed that an A-movement across this domain does not constitute a shortest move, which ultimately leads to a violation of economy principle.[9]

5. More Discussion

Some additional technical elaborations are necessary for the present anal-

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[8] The idea of Case Minimality may extend to the following Modern Greek examples (Campos 1989).

(i) a. I   antrophi$_i$ fenonte   [[t$_i$ na min kserum [yiati
       the   men,   seem-3Pl   t$_i$ not know-3Pl   why
       [i Maria tha   stili   to gramma stin   Ioanna]]]].
       the Maria will send the letter   to the Ioanna
       'The men seem not to know why Maria will send
       the letter to Ioanna.'
    b. *Se pion,   fenotene   i   antrophi$_i$ [t$_j$ [t, na
       to whom, seem   the men,   t$_j$ t$_i$ not
       min kserum [yiati   [i Maria tha stil
       know-3Pl   why   the Maria will send
       to   gramma t$_j$]]]].
       the letter   t,
       'To whom do the men not seem to know why Maria
       will send the letter.'

In (ia) raising is allowed under Case Minimality, since it does not cross any Case-assigner. In (ib), on the other hand, raising crosses the embedded CP containing the trace left by the moved Wh-phrase, where SPEC-head agreement took place between the Wh-phrase (or its trace) and the Wh-head. If this agreeemnt also constitutes a kind of Case agreement, the Wh-head in the embedded CP could be regarded as a Case feature bearer (cf. J.-S. Lee 1992, Chap 7 for relevant discussion). Under Case Minimality, then, it can possibly project a minimal domain to block raising.

[9] See J.-S Lee (1994) for extension of this analysis to the cases of NP-movement in English.

ysis to go through. Under the minimalist theory of Chomsky (1992), by li-
censing Case the Case feature of a head is discharged and disappears. If so,
a question arises as to how the raised verb in Comp could project a minimal
domain under Case Minimality in examples like (20) if it has dischagred its
Case feature for licensing Case on the object, and thus, if it does not retain
a Casé feature.

To maintain the present Case Minimality analysis, it may be suggested
that the relevant Case feature of a head may not disappear even after li-
censing Case, unlike in Chomsky (1992); and that this retained Case fea-
ture does not cause the derivation to crash if it has properly licensed rele-
vant Case, otherwise the derivation crashes. Under this suggestion, then,
the raised verb with a Case feature could project a minimal domain with its
retained Case feature at LF after licensing Case on the object.

Alternatively, still under the minimalist assumption that by licensing
Case the Case feature of a head is discharged and disappears, it may be
suggested that the raised verb retains its Case feature, and that the trace
of the raised verb, a copy of it (cf. Chomsky 1992), takes care of licensing
Case on the object. Then, the raised verb retaining a Case feature could still
project a minimal domain.

It was shown that an overtly raised verb with a Case feature, thereby be-
coming an intervening verb, creates a minimal domain for the LF raising of
the embedded subject to the matrix SPEC AGRoP for ECM. A question
then arises as to, if a verb occupies the same position at LF as in overt
syntax, why a covertly raised verb with a Case feature should not create
such a minimal domain, as seen in examples like (15), repeated below as
(23).

(23) O   Yiorgos tin-ithele   [tin Maria   na dhiri
     the George cl.Acc-wanted the Maria-Acc subj.beat
     ton ghaidharo].
     the donkey-Acc
     'George wanted Maria to beat the donkey.'

The verb raising fact observed in the examples (14=20) and (15=23)
led to a suggestion that the Comp in Modern Greek optionally has a strong
V-feature. The Comp in (14=20) may have a strong V-feature in order to
attract the verb in overt syntax; while that in (15=23) may not have such
one, hence the verb may not raise. On this difference, we can make the rel-

evant distinction between (20) and (23) with respect to ECM in the follow-
ing way -- the Comp containing a strong V-feature enables the raised verb
with a Case feature to form a minimal domain for the LF raising of the em-
bedded subject, hence no ECM is possible in (20); whereas the Comp con-
taining a weak V-feature does not, hence ECM is possible in (23).

Another approach to the question under consideration seems conceivable
if the overtly raised verb retains its Case feature (and its copy licenses
Case on the object), as alternatively suggested above for examples like
(20), whereas the non-raised verb does not retain its Case feature after
discharging its Case feature on the object at LF (23). If so, the covertly
raised verb in Comp in (23) could not project a minimal domain, since it no
longer retains a Case feature.

The discussed analysis so far is limited to the ECM found in the clitic-
doubled constructions, which is different from that found in the non-clitic
constructions in one respect. That is, as seen in examples like (5b, 8a), re-
peated below as (24a, b), the embedded subject cannot take Nominative
Case in the clitic-doubled constructions (24b), but it can take Nominative
as well as Accusative Case in the non-clitic-doubled constructions (24a).

(24) a. O   Yiorghos perimene [tin Maria/i Maria
        the George   expected   the Maria-Acc/Nom
        na   paraponiete].
        subj.complain
        'George expected Maria to complain.'
     b. O   Yiorghos tin-perimene   [tin Maria/*i Maria
        the George   cl.Acc-expected the Maria-Acc/*Nom
        na   paraponiete].
        subj.complain
        'George expected Maria to complain.'

It seems obvious that the contrast between (24a) and (24b) with respect
to the possibility of Nominative Case results from the absence vs. presence
of clitic doubling in (24a) and (24b), respectively. Earlier, I assumed that
Case feature checking is optional, so that the Case alternation between
Nominative and Accusative Case is predicted in (24a). In the clitic-doubled
construction (24b), it seems that the appearance of clitic somehow renders
Nominative Case licensing inactive. Pending further understanding of the
general problem concerning Nominative Case licensing in Modern Greek, I

assume that a clitic, which is associated with the embedded subject by co-indexation, absorbs Nominative Case of the embedded clause. (See also Schneider-Zioga 1992 for related discussion on this matter and references cited there.) Then, the embedded subject in the clitic-doubled construction is to be assigned Accusative Case by the matrix ECM verb

Finally, let us discuss one problematic situation for the present Case Minimality analysis. Consider (6a, 8b), repeated below as (25a,b).

(25) a. O Yiorghos perimene [na paraponiete
       the George expected subj.complain
       *tin Maria/i Maria].
       *the Maria-Acc/Nom
       'George expected Maria to complain.'

    b. O Yiorghos tin-perimene [na paraponiete
       the George cl.Acc-expected subj.complain
       tin Maria/*i Maria.
       the Maria-Acc/*Nom
       'George expected Maria to complain.'

I accounted for the Accusative Case on the postverbal subject in the clitic-doubled construction (25b) by appealing to Case Minimality. Since the intervening verb, an intransitive, is not a Case-assigner, it does not project a minimal domain under Case Minimality. Thus, the embedded subject is allowed to raise to be ECMed at LF. This analysis, however, does not extend to the non-clitic-doubled construction (25a), where ECM is impossible even across a non-Case-assigner.

For this situation, I temporarily suggest the following possibility. Unlike in the clitic-doubled constructions, Nominative Case is available to the embedded subject in the non-clitic-doubled constructions (24a, 25a). It may then be said that this Nominative Case feature in the non-clitic-doubled construction becomes active in projecting a minimal domain (25a), but not in the clitic-doulbled construction (25b) (presumably due to absorption of Nominative Case feature by the clitic). Suppose that this activation of Nominative Case feature results from a special property of the subjunctive Comp *na* in the non-clitic-doubled construction, and further that the subjunctive Comp in (25a), which is assumed to be strong, must have at least one Case feature. The raised verb in (25a) will then carry Nominative Case feature via V to I to C movement, and this Case feature will enable Comp

to project a minimal domain that blocks ECM. This analysis does not apply to (24a), as desired. That the embedded verb does not precede the subject in (24a) indicates that it has not raised and the relevant feature of Comp here is weak, as assumed, hence ECM is possible.

6. Conclusion

It is observed that ECM is sensitive to Case, particularly, to an embedded verb's Case-assigning ability, in both Korean and Modern Greek clitic-doubled constructions. This common fact is described under the following generalization: An overtly raised Case-assigning verb in Comp, thereby intervening between the matrix ECM verb and the embedded subject, blocks ECM; in other cases ECM is allowed.

Under the minimalist view of ECM as an LF raising of the embedded subject to the matrix SPEC AGRoP, I proposed to regulate ECM in both languages by capitalizing the role of Case of the intervening verb under Case Minimality, the idea of which is that a Case-assigner creats a local or minimal domain for syntactic processes. Thus, if the embedded verb with a Case feature intervenes between the matrix ECM verb and the embedded subject, it creates a minimal domain, and the ECM process under the minimalist view crosses this domain; in other cases this situation does not arise. This difference is finally reduced to economy principle. Crucial to this is the assumption that an A-movement across a minimal domain defined by Case Minimality is not a shortest move, leading to a violation of economy principle.

In short, it is shown that a head with a Case feature can possibly determine a local or a minimal domain for syntactic processes.

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