ABSTRACT

LIGHT VERBS, VP-MOVEMENT, NEGATION
AND
CLAUSAL ARCHITECTURE
IN
KOREAN AND ENGLISH

by

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This dissertation is a study of the principles concerning the verbal
projections in Korean and English.

In the first chapter, a theory of light verbs is presented, in which the
systematic distinction of "light" verbs and "heavy" verbs is explored. It is
proposed that the light verb is inherently distinguished from the heavy verb
in the capacity of assigning theta-roles and Case—namely, the former lacks
theta-index and S-case to assign. Further, the light verb construction is
claimed to have bi-clausal structure at D-/S-structure, and become mono-
clause at LF by LF-restructuring.

The second chapter deals with the nature of VP-movements in
Korean and English. It is pointed out that seeming VP-movement in
Korean is an instance of V'-movement, while that in English is an instance
of AspP-movement. In conjunction with this premise, it is suggested that
(i) the NP-traces must obey the Empty Category Principle, (ii) the Proper
Binding Condition must be subsumed under the ECP, and (iii) the ECP is
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Chapter 1

LIGHT VERBS

1.0. Introduction

In this chapter, I will consider some properties of Light Verb Constructions (hereafter LVCs) in Korean, Japanese, and English. My aim in this chapter is to explore the nature of constructions that are undoubtedly LVCs and elaborate on the theoretical machinery for explaining them.

Section 1 discusses the differences between LVCs and Heavy (regular) Verb Constructions (henceforth HVCs) in English. I will show that these two classes of verb constructions each have their own distinct behavior. In section 2, I demonstrate the different uses of the verb ha in Korean, of which I believe there are at least three. In particular, I will show how the light verb ha can be distinguished from the heavy verb ha. Section 3 concerns the structure of LVCs in Korean. I suggest that the LVCs have a bi-clausal
structure and offer some supporting empirical grounds and implications. Section 4 illustrates three types of LVCs evidenced in Korean. In order to account for their distinct behavior, I propose that the first two types involve a "Verbal Noun (Martin (1975)) + light verb ha complex" which is one word—one formed in the lexicon, and the other derived by restructuring at S-structure, in the sense of Rizzi (1978)—while in the third type, the so-called Verbal Noun and the light verb ha can form a single word neither in Syntax nor in Lexicon, but clearly behave as two separate items. Section 5 discusses why the third type requires LF-restructuring based on the distribution of negative polarity items in Korean. Section 6 offers some further consequences of the proposed structure of LVCs. Also I provide an account for the behavior of the unaccusative LVCs and VP-focus constructions in Korean. In Section 7, I turn to examine unaccusative LVCs in Korean and argue that there exist two types of accusative Case markers in Korean, one being a "strong" Case marker, and the other a "weak" Case marker. I will further justify the existence of these two Case markers in Japanese by discussing the nature of the so-called Double-o-Constraint on accusative Case in section 8. In Section 9, I highlight the fact that our heavy/light distinction for the verb ha in Korean is reminiscent of two types of be in English, as proposed by Safir (1985). I will show that "predicational" use of be in English is essentially akin to the behavior of light ha in Korean, whereas "identificational" be behaves on a par with heavy ha. I further extend my analysis of LVCs in Korean to there-constructions in English in section 10. A brief summary will be given in the last section.

1.1 Light Verb Constructions in English

The term "light verb" refers to a verbal category that has an incomplete (if not null) theta-grid. Light verbs often combine with the theta-assigning Verbal Nouns (henceforth VNs) which results in the complex becoming a full-fledged theta-assigning verb. In English some verbs are used as either thematically "heavy" (theta-assigning) or "light." Consider the verb give in the following English sentences:

(1) a. John gave Mary a book
    b. John gave a book to Mary

When the verb give is thematically "heavy," three thematic (semantic) roles are assigned to its arguments: John-Source, Mary-Goal and a book-Theme. The following sentence, however, illustrates the use of the "light" give contrasting with the "heavy" give in (1):

(2) a. John gave Mary a kiss
    b. John kissed Mary

In (2a), parallel to its paraphrase given in (2b), the theta-roles for John and Mary are Agent and Patient, respectively. Thus, unlike (1a), (2a) does not permit the following alternation, if the preposition to here is understood as a Goal marker:¹

¹ In contrast with (3b), (3a) is not totally out for some native speakers. In particular, if the Patient NP is heavy enough, the apparent dative alternation becomes fully acceptable:
(3)  a. * John gave a kiss to Mary  
    b. * John kissed to Mary  

(3b) is ungrammatical since the verb kiss does not take PP arguments. By the 
same token, (3a) is predicted to be ill-formed if Mary is thematically selected 
by a noun a kiss but not by a verb give. Thus, we can understand that the verb 
give is thematically light and its selectional (thematic) properties are 
inherited from the VN a kiss in (2a). Observe the following sentences which 
further support the existence of the light give:

(4)  a. John gave a laugh loudly  
    b. John laughed loudly  

It is clear that give in (4a) is not ditransitive — i.e. takes two internal 
arguments — contrary to the heavy give. Parallel to (4b), where no internal 
arguments are licensed because of the thematic nature of the verb laugh, if 
the number of arguments is determined by the VN a laugh in (4a), the 
following examples are predicted to be ill-formed:

(5)  a. * John gave us a laugh loudly  
    b. * John gave a laugh to us loudly  

In (5), the additional arguments are not allowed by the Theta-Criterion (or 
the Principle of Full Interpretation in Chomsky (1986a)) since the extra 
argument (as or to us) cannot be assigned a theta-role. One might think 
that the verb give in (4) can be still heavy since the following sentences seem 
to involve transitive give.

(6)  a. Cows give milk.  
    b. This lamp gives good light  

Yet, (6) cannot be regarded as a pure transitive construction since the Goal 
theta-role seems to be suppressed as a hidden argument but not completely 
nonexistent. Therefore the Goal can be optionally realized for some dialects 
of English, as seen in the following:

(7)  a. ? Cows give us milk.  
    b. ? This lamp gives us good light  

In sum, the discussion so far clearly shows that there are two types of 
give. Following Cattell (1984), I suggest that give in (2) and (4) is light, i.e. 
thematically empty, and that the verb plus nominal phrases such as give+a 
kiss and give +a laugh constitute the full-fledged verbs, the argument 
structures of which are roughly equivalent to the verbs kiss and laugh.
respectively. Thus, the selection of arguments (subject, object) seems to be entirely governed by the VNs a kiss and a laugh but not by the predicate give in (2) and (4).

1.2 The verb ha

The verb ha in Korean is one of the most productive and extensively used verbs in the language. Among its various meanings, I illustrate some of its core uses in the following examples: (cf. Choe (1965), Suh (1975))

(8) a. Yenghi-ka Kuil-ul ha-yess-ta
   -N that thing-A HA-Pst-Decl
   (Younghee did that thing.)
   b. Yenghi-ka yenge-lul kongpwu-ha-yess-ta
   -N English-A study-HA-Pst-Decl
   (Younghee studied English.)
   c. Yenghi-ka tampay-ul phi-ki-cocha ha-yess-ta
   -N cigarette-A smoke-?-even HA-Pst-Decl
   (Younghee did even smoke cigarettes.)
   d. Yenghi-ka cip-ey ka-ci ani ha-yess-ta
   -N home-to go?-not HA-Pst-Decl
   (Younghee didn't go home.)
   e. Yenghi-ka chinkwu-ul cip-ey ka-key ha-yess-ta
      -N friend-A home-to go? HA-Pst-Decl
      (Younghee made (her) friend go home.)
   f. Yenghi-ka chinkwu-ul coh-a ha-yess-ta
      -N friend-A like-A HA-Pst-Decl
      (Younghee liked (her) friend.)
   g. Yenghi-ka cip-ey ka-yaman ha-yess-ta
      -N home-to go?-Pst HA-Pst-Decl
      (Younghee must go home.)

As soon will be clarified, the verb ha in (8b-d) is different from ha in (8a) and (8e-g) with respect to "stativity." That is, the former is unspecified for the stativity—either [+stative] or [-stative]—while the latter is always [-stative].

Verbs in Korean can be classified into two groups: one group is the so-called "stative" verb group, which are often referred to as "Adjectives" in traditional grammars of Korean (Choe (1928)). Syntactic statives (see fn.2

2 In fact, it is not implausible to say that this group of verbs are not categorically "Verb" but "Adjectives." In English, stative/nonstative distinction of verbs is more heavily based upon semantics, whereas in Korean this distinction is grammaticalized. Put more specifically, not all semantically stative verbs belong to a homogeneous class in regard to the interaction with certain grammatical processes. Rather, only a selected class of statives behaves uniformly. I will refer to the grammaticalized statives as "syntactic" statives in order to distinguish them from the general use of "semantic" stativity. Some of the diagnostics for syntactic (grammaticalized) stativity are demonstrated below. (The most well-known test, with m marker, is given in the text.) First, syntactic statives assign Nominative ka marking instead of unmarked accusative lal marking to their complements (cf. Kuno (1973) for Japanese). This is shown by the following examples:
   (i) a. Yenghi-ka Chelswu-ka coh-ass-ta
       -N like-Pst-Decl
      (Younghee liked Chulsoo.)
   b. Yenghi-ka Chelswu-lul itayi-ess-ta
      -A hit-Pst-Decl
      (Younghee hit Chulsoo.)

Second, syntactic statives do not have imperative or propositive forms, as shown in the following:
   (ii) a. * Yenghi-ka coh-ala

[Imperative]
below for this term) cannot occur with the imperfect aspect marker n in
Korean, as shown in the following examples: (See Kang (1988, 26) for
discussion concerning why n is imperfective.)

(9) a. * Enchak-i elyep-n-ta
   linguistics-N difficult-Asp-Decl
   (Linguistics is difficult.)

b. * peynhe-ka caymiss-n-ta
   Ben Hur-N interesting-Asp-Decl
   (Ben Hur is interesting.)

On the other hand, syntactic non-statives, including all semantic non-
statives and some semantic statives, are compatible with imperfective n,
which roughly denotes the present tense or progressive aspect. Some
examples are given as follows:

(10) a. Yenghi-ka cip-ey ka-n-ta
    -N home-to go-Asp-Decl
    (Younghee goes home.)

b. Yenghi-ka ku sasil-ul al-n-ta
    [semantic stative]

- N like-Imp
   (Intended reading. Like Younghee.)

b. * Yenghi-ka coh-ca
    -N like-Prop
   (Intended reading. Let's like Younghee.)

Third, syntactic statives cannot occur with progressive aspectual expression, -ko iss:

(11) a. * Yenghi-ka phikon-ha-n-ta
    -N tired-HA-Asp-Decl
    (cf. 8b)

b. * Yenghi-ka yeppu-ki-cocha ha-n-ta
    -N pretty?-even HA-Asp-Decl
    (Intended reading. Younghee is even PRETTY.)

c. * Yenghi-ka yeppu-ci ani ha-n-ta
    -N pretty?-not HA-Asp-Decl
    (Intended reading. Younghee is not pretty.)

The sentences in (11) are all ungrammatical due to the fact that the preceding
predicates phikon and yeppu are all syntactic statives. If the preceding
predicates are syntactic non-statives, then the verb ha and the aspect n can
occur, as seen in the following:

-N that fact-A know-Asp-Decl
   (Younghee knows that fact.)

c. Yenghi-ka umak-ul salangha-n-ta
   -N music-A know-Asp-Decl
   (Younghee loves music.)

Returning to the nature of ha in (8), ha in (8a) and (8e-g) seems to be
inherently non-stative, while ha in (8b-d) is unspecified for stativity. First,
observe the following:

-N like-Imp
   (Intended reading. Like Younghee.)

b. * Yenghi-ka coh-ca
    -N like-Prop
   (Intended reading. Let's like Younghee.)

It is generally true that most "semantic" statives do not allow imperatives/propositives
and progressives in other languages, either; however, for example in English, there are
some exceptions (cf. Tenny (1987)). For syntactic statives in Korean, however, note that
there is no exception. Thus, we may conclude that the distinction of stativity is clearly
"grammaticalized" in Korean unlike, for example, in English.
(12) a. Yenghi-ka ku sasil-ul  kieck-ha-n-ta
-N that fact remember-HA-Asp-Decl
(Youngehee remembers that fact.)
b. Yenghi-ka ttwuy-ki-cocha ha-n-ta
-N run-?-even HA-Asp-Decl
(Youngehee even RUNS.)
c. Yenghi-ka cip-ey ka-ci ani ha-n-ta
-N home-to go-? not HA-Asp-Decl
(Youngehee does not go home.)

Thus, it is clear that ha in (11), (12) and (8b-c) is unspecified for the feature [-stative], and it inherits the stativity feature from the preceding predicates such as  kieck ‘to remember’, ttwuy ‘to run’, and ka ‘to go’ in (12), for example. For this reason, ha is often treated as a dummy verb—a verb with no inherent features (Kang (1988), for example). S. Ahn (1990) uniformly treats this ha (and the other ha in (8)) as a light verb. As will be soon clarified, both of these approaches miss significant differences between ha in (8b-c) and ha in (8d) despite their apparent similarity. Following the insight in Kang (1988), I tentatively propose that the common property of ha in (11)-(12) comes from the mono-clausal nature of these examples. In §3.3.3, I will suggest that the so called long-form negation structure like (8d), (11c) and (12c) is not bi-clausal (contra Song (1988)) but is best regarded as mono-clausal (also see §1.6, fn. 12). For (8b-c), (11a-b) and (12a-b), I will argue, in section 5, that the whole sentence becomes a single clause at LF. Thus, in (11) for instance, there is only one main verb—the verb ha—which carries the information of Tense/Aspect. Essentially, the verb ha inherits Aspect feature such as stativity from the preceding content predicate. Therefore, the verb ha and the preceding predicate (verb/adjective) in (11), for example, necessarily share the same features of tense/aspect.

The verb ha in (8a) and (8e-g) reveals a sharp contrast concerning the co-occurrence with the imperfective marker n. Consider the following sentences:

(13) a. Yenghi-ka Kuil-ul ha-n-ta
-N that thing-A HA-Asp-Decl
(Youngehee does that thing.)
b. Yenghi-ka casin-ul yeppu-key ha-n-ta
-N self-A pretty-? HA-Asp-Decl
(Youngehee makes herself pretty.)
c. Yenghi-ka kay-lul yeppu-e ha-n-ta
-N dog-A pretty-? HA-Asp-Decl
(Youngehee cherishes dogs.)
d. Yenghi-ka yeppu-eyaman ha-n-ta
-N pretty-? HA-Asp-Decl
(Youngehee has to be pretty.)

The verb ha used in (13) is obviously not affected by the preceding predicates (if any)—here, [-stative]—contrary to ha in (11). This fact suggests that the verb ha in (13) is inherently [-stative], whether the constructions in (13) are mono-clausal or not.
In the remainder of this section, I will limit the discussion mainly to
the behavior of ha in (8a-d) and attempt to provide a three way distinction for
the role of ha. Essentially, I will argue that ha in (8a) is a heavy verb, ha in
(8b-c) is a light verb, and ha in (8d) is an auxiliary verb.

First, let us compare (8a) and (8b). Ha in (8a) is said to be a transitive
verb like tlayli 'hit' and mek 'eat' in the sense that this verb takes a volitional
Agent subject with a Patient object, in general. Therefore, the following
sentence which includes a non-volitional subject, is not acceptable.
(# indicates that the sentence is semantically incongruous.)

(14)  # mwues-i kukes-ul ha-yess-ni
       what-N that thing-A HA-Pst-Q
       (# What did that thing?)

For (14) to be a well-formed question, the subject must be replaced by a
volitional wh-pronoun nwukwu 'who'.

(15)  nwukwu-ka kukes-ul ha-yess-ni
       who-N that thing-A HA-Pst-Q
       (Who did that thing?)

This amounts to the claim that ha in (15)/(8a) is used as a heavy verb which
bears its own thematic grid. Ha in (8b), however, doesn't seem to influence
the selection of arguments. Rather, it is kongpuw 'study' which governs the
argument arrays in (8b).

The existence of thematically light ha is further confirmed by the
following examples:

(16)  a. Yenghi-ka ecey samang-ha-yess-ta
       -N yesterday die-HA-Pst-Decl
       (Younghhee died yesterday.)

b. kicha-ka onul pwusan-ey tochak-ha-yess-ta
       train-N today Pusan-at arrive-HA-Pst-Decl
       (The train arrived at Pusan today.)

In (16) the subjects are not Agentive—they thematically lack volitional or
protagonistic property—hence, a volitional adverb cannot be used in the
following examples:

(17)  a. # Yenghi-ka ecey kouylo samang-ha-yess-ta
       -N yesterday intentionally die-HA-Pst-Decl
       (Younghhee died intentionally yesterday.)

b. # kicha-ka onul kouylo pwusan-ey tochak-ha-yess-ta
       train-N today intentionally Pusan-at arrive-HA-Pst-Decl
       (The train arrived intentionally at Pusan today.)

Therefore, ha in (16) cannot be heavy. However, if ha is light, then by

3 If (17b) is meant to denote the train-driver's intention, then this sentence is possible. Thus
(17b) is deviant only with the reading of the intention of the subject—the train.
Note also that heavy ha can naturally occur with the volitionally adverb kouylo
'intentionally', as seen below:
(i) Yenghi-ka kouylo kukes-ul ha-yess-ta
       -N intentionally that thing-A do-Pst-Decl
       (Younghhee did that thing intentionally.)
assumption it has an empty or skeletal argument structure. Hence it imposes no restrictions on the external theta-role, unlike the heavy ha which is intrinsically Agentive, as we have seen in (14)-(15). Thus, ha in (16) is plausibly a light verb.

Now consider (8c) coupled with further constructions akin to this type as follows:

(18) a. Yenghi-ka tampay-ul phi-ki-cocha ha-yess-ta
    -N cigarette-A smoke?-even HA-Pst-Decl
    (Younghee did even smoke cigarettes.)

b. Yenghi-ka ecey cwuk-ki-nun ha-yess-ciman ...
    -N yesterday die?-Contra HA-Pst-although
    (Although Younghee did die yesterday ...)

c. Pi-ka acimpwute o-ki-nun ha-yess-ta
    -N in the morning come?-Contra HA-Pst-Decl
    (It did rain in the morning.)

Like (16), the subjects are non-Agentive in (18b-c). Notice that, parallel to (17), a volitional adverb cannot be inserted in (18b-c) as shown below.

(19) b. # Yenghi-ka ecey kouylo cwuk-ki-nun ha-yess-ciman ...
    -N yesterday intentionally die?-Contra HA-Pst-although
    (Although Younghee did die yesterday ...)

c. # Pi-ka achimpwute kouylo o-ki-nun ha-yess-ta
    -N in the morning intentionally come?-Contra HA-Pst-Decl
    (It did rain in the morning.)

Thus, it is likely that the verb ha in (19) is a light verb based on the fact that heavy ha always takes an Agentive subject.

So far, we have seen two distinct patterns regarding the behavior of the verb ha in Korean, which I claim to result from its double existence of either a light or heavy verb.

In what follows, I will show that there is a third use of the verb ha which is neither heavy nor light. Consider ha in the negation construction in (8d), repeated here.

(8) d. Yenghi-ka cip-ey ka-ci ani ha-yess-ta
    -N home-to go?- not HA-Pst-Decl
    (Younghee didn't go home.)

At first glance, ha in (8d) seems to be non-distinct from the light verb ha since this verb does not denote any independent meaning. In the subsequent discussions based on contraction facts, I will show that heavy ha and light ha form one group—the non-Auxiliary verb class, whereas ha appearing in negation forms another group—part of the Auxiliary verb class. Consider the following contrast:
(20)  a. Yenghi-ka aikiko Kuil-ul an hayss-ta [ha+yess => hayss]
    -N yet that thing-A not HA-Pst-Decl
    (Younghee didn't do that thing yet.)

    b. Yenghi-ka aikiko samang(ul) an hayss-ta [ha+yess => hayss]
    -N yet die-(A) not HA-Pst-Decl
    (Younghee didn't die yesterday yet.)

    c. ?*Yenghi-ka aikiko cip-ey ka-ci an hayss-ta [*ha+yess => hayss]
    -N yet home-to-go? not HA-Pst-Decl
    (Younghee didn't go home yet.)

Assuming that *hayss is a phonologically reduced form of h plus the past tense morpheme yess, ha in (20a-b) (to be argued as non-Auxiliary) can be freely contracted with past tense morpheme yess, whereas ha in (21c0 to be argued as Auxiliary) resists contraction with yess.

Further, observe another contrast in contraction as follows:

(21)  a. *Yenghi-ka aikiko ku il-ul anh-ass-ta [an + ha => anh]
    -N yet that thing-A not HA-Pst-Decl
    (Younghee didn't do that thing yet.)

    b. *Yenghi-ka aikiko samang(ul) anh-ass-ta [an + ha => anh]
    -N yet die-(A) not HA-Pst-Decl
    (Younghee didn't die yesterday yet.)

    c. Yenghi-ka aikiko cip-ey ka-ci anh-ass-ta [an + ha => anh]
    -N yet home-to-go? not HA-Pst-Decl
    (Younghee didn't go home yet.)

Based on the assumption that anh is a reduced form of the negator an and the verb ha, only Auxiliary ha in (21c) can undergo contraction with an, while non-Auxiliary ha in (21a-b) cannot.4

The two contraction facts thus far show that ha used in negation constructions crucially differs from heavy/light ha. I suggest that this difference is due to [±Aux] feature of the verbs. That is, I claim that heavy/light ha is [-Aux] while ha in negation is [+Aux], and this minimal difference is responsible for the contrasts in phonological contraction as we have observed. Although it is not clear, at this stage, why phonological contraction contrasts arise with respect to the [±Aux] distinction of verbs, I wish to merely note this fact, here, to distinguish [+Aux] ha in the negation construction from [-Aux] ha in the heavy/light verb constructions (see also §3.3.3.2).

Up to this juncture, three uses of the verb ha can be detected in Korean: [+Aux] ha in (8d) and [-Aux] in the others. [-Aux] ha can further be divided into heavy usage in (8a) and light usage in (8b-c). The [±Aux] distinction is evidenced by phonological contraction facts (recall (20)/(21)),

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4 There seem to be a few exceptions for this generalization. In some (southern) dialects, (20c) for example, is marginally acceptable. Also, some people (21a) is slightly better than (21b). Particularly in colloquial speech, many people allow reduction of heavy ha and the negator an in subordination. Some examples are given below:

(i)  a. ne aikko ku il-ul anh-ko mwe-ha-ni you yet that thing-A and what-do-Q
    (What are you doing?... (You should do it.))

    b. ku salam-i il-un yelsimhi anh-ko nolki-man ha-n-ta
    that person-N work-Contra hard and play-only HA-Asp-Decl
    (That person doesn't work hard, instead, he is idling away only.)

    However, as seen in the following, the contraction of light ha with an in subordination is much worse than that of heavy ha:

(ii) ? kusalam-i aikko samang-anh-ko sal-a iss-ta-me
    that person-N yet die- and live-Asp-Decl-Q
    (That person is not dead but alive, is he?)

    I will not explore an account of these apparent exceptions here.
and the "weight" of ha varies depending on the Agenthood of the subject (recall (14-19)) — heavy ha always takes volitional Agent, while light ha need not.

Besides the Agenthood test, let us consider some other diagnostics which enable us to differentiate the heavy/light distinction involving ha-constructions. Consider the following pair of sentences:

(22) a. Yenghi-ka chomski-eytayhayen yenkwu-ha-yess-ta
-N Chomsky-about(Adv) research-HA-Pst-Decl
(Younghee researched about Chomsky.)

b. Yenghi-ka chomski-eytayhayen yenkwu-lul ha-yess-ta
-N Chomsky-about(Adv) research-A HA-Pst-Decl
(Younghee researched about Chomsky.)

(22a) and (22b) can be seen as possible thematic paraphrases. There is, however, a significant underlying difference between the two. Essentially, I claim that ha in (22a) is light, whereas ha in (22b) can be either heavy or light. Thus, (22a) is necessarily a LVC, while (22b) is not necessarily so.

The crucial factor in (22) yielding this contrast is the appearance of the Accusative (Acc) particle lul. When the Verbal Noun (VN) yenkwu appears with an Acc marker, it can be modified by adjectival phrases.

However, a bare VN does not allow adjectival modification. This is shown in the following:

(23) a. *Yenghi-ka chomski-eytayhan yenkwu-ha-yess-ta
-N Chomsky-about(Adj) research-HA-Pst-Decl
(Younghee researched about Chomsky.)

b. Yenghi-ka chomski-eytayhan yenkwu-lul ha-yess-ta
-N Chomsky-about(Adj) research-A HA-Pst-Decl
(Younghee researched about Chomsky.)

If yenkwu-lul in (23b) is an NP, then adjectival modification is predicted to be possible. Whereas, ungrammaticality in (23a) requires an explanation.

Most previous researchers, to my knowledge, implicitly or explicitly assume that the form like yenkwu+ha in Japanese is incorporated as one word (verb), either in Lexicon (Miyagawa (1987, 1989), G&M (1988)) or in Syntax (Kageyama (1977, 1982)). If some version of an Incorporation account is correct, we naturally expect that VN in (23a) resists adjectival modification due to the Lexical Integrity Hypothesis (Lapointe (1980)) which roughly states that no operation can look into the part of a word. This line of reasoning, as we will witness, however, is not likely to be maintained. In sections 3, 4 and 5, a number of facts will be adduced to show that all instances of this type—yenkwu+ha—can neither be lexically nor syntactically incorporated, but are composed of two independent words—yenkwu and ha—until LF. In section 3, I will further argue that yenkwu in (23a) is neither a "noun" nor an NP, but in fact a "verb," following Lee (1990). Then, the facts witnessed above follow

---

5 The Acc marker lul is frequently omitted in the colloquial speech. Thus, (22a) can be confused with the following. (# represents a pause.)

(i) Yenghi-ka chomski-eytayhayen yenkwu # ha-yess-ta
-N Chomsky-about research HA-Pst-Decl
(Younghee researched about Chomsky.)

The crucial difference between (i) and (22a) is that only (i) has a noticeable pause between VN and ha. Hereafter, I ignore the constructions where Acc markers are dropped.
from this supposition. That is, since "verbs" cannot be modified by
adjectives, the deviance in (23a) can be easily accounted for. However, the
eamples in (24) show that VN's in these constructions can be modified by
adverbials—a desirable result.

(24) Yenghi-ka chomski-ey tayhay man hi yenkwu-ha-yess-ta
        -N Chomsky-about(Adv) a lot(Adv) research-HA-Pst-Decl
        (Youngehee researched about Chomsky a lot.)

Up to this point, I have argued for two sufficient conditions for
discriminating LVCs from HVCs:
(i) when the subject bears non-Agent theta-role (recall (17), (19)) or
(ii) when VN's appear without Acc marker (recall (22), (23)).

However, these two cannot be "necessary" (but only "sufficient") conditions
for determining LVCs in Korean. In other words, there exist LVCs in
Korean where the subjects can be Agent, and/or the VN's appear with Acc
Case markers. Consider the following sentence:

(25) Yenghi-ka yenge-lul kongpwu(-lul) ha-yess-ta
        -N English-A study(-A) HA-Pst-Decl
        (Youngehee studied English.)

Although the subject is clearly Agentive, (25) should be unambiguously

regarded as a LVC, regardless of the overt Acc marker, since the VN kongpwu
does not allow adjectival modification, as shown by (26a).

(26) a. * Yenghi-ka yenge-lul elyewun kongpwu(-lul) ha-yess-ta
        -N English-A difficult study(-A) HA-Pst-Decl
        (Intended reading: Younghee studied English difficultly.)
b. Yenghi-ka yenge-lul elyepkey kongpwu(-lul) ha-yess-ta
        -N English-A difficulty study(-A) HA-Pst-Decl
        (Youngehee studied English difficulty.)

(26b) shows that kongpwu allows only adverbial modification. (See section 3
for more evidence to show that (25) is unambiguously a LVC.) Further, note
the following sentence:

(27) Yenghi-ka kapaksulepkey samang-ul ha-yess-ta
        -N suddenly die-A HA-Pst-Decl
        (Youngehee died suddenly.)

(27) must be a LVC despite the fact that the VN samang occurs with an overt
Acc marker, since the subject lacks an Agent theta-role, following the
sufficient condition (i) above. Therefore, the VN samang in the following
(28a) is expected to resist adjectival modification:

---

6 Since seeming nominals (VN's) in LVCs are all verbal categories, Verbal Noun (from
Martin (1975)) is, in fact, a misnomer. Due to the lack of a better term, I will keep using
VN—a misleading term—throughout the chapter for expository purposes.
1.3 The structure of light verb constructions

I have claimed that the following sentences are unambiguously LVCs.

(29) a. Yenghi-ka yenge-lul (yelsimhi) kongpwu(-lul) ha-yess-ta
    -N English-A (hard) study(-A) HA-Pst-Decl
    (Younghee studied English (hard)).

b. Yenghi-ka ecey (coyonghi) samang(-lul) ha-yess-ta
    -N yesterday (silently) die(-A) HA-Pst-Decl
    (Younghee died yesterday (silently)).

c. kicha-ka onul (ceysikaney) pwusan-ey tochak(-ul) ha-yess-ta
    train-N today (on time) Pusan-at arrive(-A) HA-Pst-Decl
    (The train arrived at Pusan (on time) today.)

(29b-c) should be instances of LVCs since the subjects therein bear non-Agentive theta-roles. (Recall that heavy *ha* always assigns Agent (external) theta-role, hence *ha* (29b-c) cannot be light.) Then, what about (29a)? The verb *ha* in (29a) cannot be heavy since heavy *ha* does not license double objects as seen in the following.7

---

7 As is well-known, double objects are acceptable in Korean, depending on the choice of verbs. Observe the following:

(i) a. Yenghi-ka chelswu-lul ppyam-ul tayli-ess-ta
    -N -A cheek-A hit-Pst-Decl
    (Younghee hit Chulsoo on the cheek.)

b. Yenghi-ka chelswu-lul ppyam-ul po-ass-ta
    -N -A cheek-A see-Pst-Decl
    (Lit. Younghee saw Chulsoo on the cheek.)

Thus, the ill-formedness in (30) seems to be attributed to the inherent property of the verb *ha*. That is, (30) violates Theta-criterion since *ha* cannot license more than one internal arguments.
for (31b).  

The structure in (31a) gives rise to an interesting and desirable consequence in light of the present theory. Following Chomsky's (1986a) Principle of Full Interpretation (PFI), expletive pro in (31a) must disappear at LF. If expletive pro is deleted at LF due to the PFI, LF-substitution of the deleted expletive position by the embedded subject must occur in order to satisfy the ECP.  

However, there is, I believe, an alternative way to meet the PFI in (31a)—namely, restructuring IP₁ and IP₂ into a single IP at LF. In this fashion, the PFI is trivially fulfilled since the expletive pro disappears automatically at LF as a result of restructuring.  

(31a), furthermore, implies that the so-called VN *kongpwu* is not a noun but a "verb." Given this, let us witness how the proposed structure in (31a) can account for the following ungrammatical sentences:  

(32) a. *Yenghi-ka yenge-lul _ ha-n_ kongpwu [Relativization]  
-N English-A (hard) study-(A) HA-Rel  
Lit. Study that Younghee did English  

b. *kongpwu-cocha yenghi-ka yenge-lul _ ha-yess-ta [Topicalization]  
study-even -N English-A HA-Pst-Decl  
Lit. Even study, Younghee did English  

c. *kongpwu-lul yenghi-ka yenge-lul _ ha-yess-ta [Scrambling]  
study-A -N English-A HA-Pst-Decl  
Lit. Study, Younghee did English  

d. *Yenghi-ka yenge-lul _ ha-n-kes-un kongpwu-ta [Pseudo-cleft]  
-N English-A HA-Rel-T study-Decl  
Lit. What Younghee did English is to study.

As noted in Ahn (1989), the VN *kongpwu* in (32) cannot be extracted. This is a natural consequence if *kongpwu* is a verb. That is, if we assume an extended version of Emonds' (1976) Structure Preserving Constraint for X*-movements, as put forward in Chomsky (1986b), which restricts movement of an X* to only an X*-position, the movement of V*X*kongpwu* is illicit in (32) since relativized/topicalized/scrambled/pseudo-clefted positions in Korean are not X*-but XP-positions.  

Contrary to the impossibility of movement of *kongpwu* alone, the structure in (31a) correctly predicts that either IP₂ or VP can be freely dislocated. This is borne out by the following examples:

\[\text{(i)}\]

\[
\begin{array}{c}
\text{IP₁} \\
Yenghi-ka \\
\text{IP₂} \\
\text{VP} \\
yenge-lul \\
kongpwu \\
\end{array}
\]

This structure sharply contrasts with (31a-b) in that the former is mono-clausal while the latter is bi-clausal. (i) is also reminiscent of "do-support" in English. Parallel to English do-support, we may postulate "ha-support" here. This structure, however, cannot be maintained since the verb ha in (i) does not behave as a [+Aux] verb with respect to the phonological contraction facts (recall the discussion centering around (20)/(21)).
(30)  * Yenghi-ka yenge-lul (yelshimi) ku il-ul ha-yess-ta
    -N English-A (hard) that job-A HA-Pst-Decr

(intended reading: Younghee studied English (hard).)

Thus, the verb *ha used in (29a) should be light. If (29) is obligatorily a LVC, then we must ask what the proper structure for it is. Following Lee's (1990) insightful ideas within the framework of Relational Grammar, I will suggest that (29a) essentially has a bi-clausal structure (same account can hold for (29b-c), mutatis mutandis). Among others, I can imagine two possible structures, as illustrated below:

(31)

a.  
\[
\begin{array}{c}
\text{IP}_1 \\
\text{pro} \\
\text{VP} \quad I_1 \\
\text{IP}_2 \\
\quad \quad \quad \text{yess-ta} \\
\quad \quad \quad \text{pro} \\
\text{VP} \quad I_2 \\
\text{Yenghi-ka} \\
\text{V} \\
\text{yenge-lul} \\
\text{kong-pwu} \\
\end{array}
\]

b.  
\[
\begin{array}{c}
\text{IP}_1 \\
\text{Yenghi-ka} \\
\text{VP} \quad I_1 \\
\text{IP}_2 \\
\quad \quad \quad \text{yess-ta} \\
\quad \quad \quad \text{PRO} \\
\text{VP} \quad I_2 \\
\text{yenge-lul} \\
\text{kong-pwu} \\
\end{array}
\]

In (31a) all the arguments of the "content predicate" kong-pwu are generated under an embedded clause IP'. The light verb *ha in the matrix clause IP selects IP and the expletive pro is generated in IP' fulfilling the Extended Projection Principle (= the Projection Principle along with requirement that clauses have subjects, as in Chomsky (1982, 10)). In this structure, I assume that the light verb *ha (categorically)-selects (subcategorizes for) IP like verbs such as seem and appear in English. I further surmise that the embedded IP' lacks any Tense features (or is unspecified for Tense) so that IP'-Tense is always subordinate to the matrix Tense in IP'. However, I speculate that only embedded IP' bears an Aspect feature (maybe IP' = AspectP) so that the whole clause IP' always expresses IP'-Aspect. Hence, IP' necessarily shares the stativity features with IP' (recall the discussion around (11)). In any event, the structure (31a) seems to plausibly conform to all the principles of grammar.

Parallel to (31a), similar reasoning seems to be possible with (31b) except for one potential problem. More specifically, in (31b), it is not clear how the matrix subject Yenghi can be properly licensed if the verb *ha is thematically empty (except for c-selecting IP'). Presumably, a LF-restructuring process may partially save this problem under the assumption that the subject in IP' and PRO in IP' are somehow merged into one entity (or perhaps PRO simply disappears) as a result of this process. Yet, the partial problem still remains—how can (31b) overcome violation of the Projection Principle (Chomsky (1981))? No convincing solution seems to be ready at hand for this problem. For this reason, I will assume the structure in (31a) over that in (31b) throughout the discussion, pending a possibility
for nouns such as *mwoes 'what' and *kukes 'that thing' in (34a-b).

Further, note that if kongpwu is a verb, then kongpwu, a transitive V^o,
may directly assign Acc Case. In other words, in (31a) it is kongpwu not the
light V^o ha which directly assigns Acc Case to the NP yenge. This fact is
confirmed by the following examples:

(35) a. Yenghi-ka yenge-lul kongpwu-cwungey hwacangsil-ey ka-ss-ta
    -N English-A study-during bathroom-to go-Pst-Decl
    (While studying English, Younghee went to the bathroom.)

b. Yenghi-ka hangsang hakkwa-lul kongpwu-hwuey J-wa manna-ss-ta
    -N always school work-A study-after -with meet-Pst-Decl
    (After he always finished his school work, Younghee met J.)

In (35), unlike (31a), no potential governor assigning Acc Case except
kongpwu exists. That is, although there is no light V^o ha in (35), the object
NPs are assigned Acc Case. Unless we maintain that kongpwu is a Case
assigner in (35), these examples would remain problematic, if not
unaccountable. Thus, (35) further supports the view that kongpwu is not a
noun but a verb. (See Iida (1987) for relevant examples in Japanese.)

Of course, this conclusion is based on the customary assumption that Acc Case is assigned
by V^o (or the [-N] category including P^o) in Korean. Crucially (to our purposes here), N^o
cannot assign Acc Case in Korean. This is evidenced by the following ill-formed sentence:

(i) * Kwunin-uy tosi-lul phakoy-ka silphyhayysa
    soldier-G city-A destruction-N failed
    (Intended reading. The soldier's destruction of the city failed.)

Given the fact that the nominal tosi 'city' is governed by the (non-Case assigning) nominal
phakoy 'destruction' in (i), this sentence is predicted to be ungrammatical due to the
appearance of the Acc particle lul on the noun lost. If the Acc Case is replaced by the
genitive uy 'of' as in (ii), the sentence is grammatical.

(ii) * Kwunin-uy tosi-uy phakoy-ka silphyhayysa
    soldier-G city-G destruction-N failed
    (The soldier's destruction of the city failed.)
1.4 Three types of LVCs in Korean

Three distinct types of LVCs can be found in Korean (see Poser (1989) for two types of LVCs in Japanese). I will show that VN+ha combinations in the first type (hereafter Type I)—including the examples we have seen in the previous sections—do not form a “word unit” at D-/S-structure. For example, note that the VN+ha in Type I can be easily separated, as seen below:

(36) a. Yenghi-ka yenge-lul kongpwu-nun yelsimhi ha-yess-ta
    -N English-A study-Contra hard HA-Pst-Decl
    (Younghee studied English hard.)

b. Yenghi-ka samang-un aicik an ha-yess-ta
    -N die-Contra yet not HA-Pst-Decl
    (Younghee didn’t die yet.)

The VN+ha combination in the second type of LVCs (hereafter Type II)—which are most likely [+stative]—cannot be split by an Acc marker in (37a), nor by any XP, as in (37b).10

(37) a. *Yenghi-ka ecey phikon-ul ha-yess-ta (cf. (38))
    -N yesterday tired-A HA-Pst-Decl
    (Intended reading: Younghee was tired yesterday.)

b. *Yenghi-ka phikon-un aicik an ha-yess-ta (cf. (36b))
    -N tired-Contra yet not HA-Pst-Decl
    (Intended reading: Younghee was not tired yet.)

Recall that Type I can be split by an Acc marker, as seen in the following:

(38) Yenghi-ka ecey samang-ul ha-yess-ta
    -N yesterday die-A HA-Pst-Decl
    (Younghee died yesterday.)

However, both Type I and Type II can be separated by the delimiters as follows:

(39) a. Yenghi-ka ecey samang-un ha-yess-ta [Type I]
    -N yesterday die-Contra HA-Pst-Decl
    (Younghee DID die yesterday.)

b. Yenghi-ka ecey phikon-un ha-yess-ta [Type II]
    -N yesterday tired-Contra HA-Pst-Decl
    (Younghee was TIRED yesterday.)

The VN-ha combination in the third type of LVCs (hereafter Type III)—in this class VNs are unexceptionally mono-syllabic (C. Lee (1973))—

10 Note, incidentally, that the word phikon ‘fatigue’ is used as a pure “noun,” it can freely occur with Acc Case lul as well as Nom Case i, as seen in the following:

(1) a. phikon-lul ikica
    fatigue-A overcome
    (Let’s overcome the fatigue.)

b. phikon-i cakkwu ssai-tyen pyeng-i toyni
    fatigue-N repeatedly accumulate-if disease become
    (If the fatigue accumulates repeatedly, it becomes disease.)

Thus, (i) shows that the word phikon does not inherently resist (Acc) Case particles.
cannot be split by any elements, such as delimiters, Acc marker and XPs.

(40) * Yenghi-ka nayil cip-ey ka-kilo ceng-un (pelsse) ha-yess-ta
   -N tomorrow home-to go-to decide-Contra (already) HA-Pst-
   (Intended reading. Younghee already decided to go home tomorrow.)

I suggest that the VN+ha in Type III is derived by a Word Formation
Rule (WFR) in the sense of Lieber (1980). Thus, the inseparability of the
VN+ha in Type III is due to the Lexical Integrity Hypothesis or Atomicity of
words (see Scalise (1984) and Lapointe (1980) for extensive discussions on this
matter).

Type II, however, is a word derived by a Restructuring process at S-
structure and is, hence, not formed in the lexicon. The relevant evidence
for this line of reasoning will be discussed shortly.

The VN+ha complex in Type I, on the other hand, is not a word, but is
composed of two independent words prior to LF. Hence, Type I is
transparent to all syntactic operations while Types II and III are entirely
opaque to them.11

Three diagnostics are in order to confirm this fact.

First, observe VN-ellipsis in Type I:

(41) a. Yenghi-nun yenge-lul kongpwu-ha-yess-ciman chelswu-nun
    pwule-lul _ ha-yess-ta
    -Contra English-A study-HA-Pst-although
    -Contra French-A HA-Pst-Decl
    (Although Younghee studied English, Chulsoo did French.)
    b. Yenghi-nun owel-ey samang-ha-yess-ko chelswu-nun kwuwel
    -ey _ ha-yess-ta
    -Contra May-in die-HA-Pst-and
    -Contra September
    -in HA-Pst-Decl
    (Younghee died in May and Chulsoo did in September.)

(41) shows that Type I can undergo VN-ellipsis. Now, compare Type I with
Type II and Type III, as illustrated in (42a) and (42b), respectively.

(42) a. * Yenghi-nun ecey phikon-ha-yess-ciman chelswu-nun onul
    _ ha-yess-ta
    -Contra yesterday tired-HA-Pst-although
    -Contra today
    HA-Pst-Decl
    (L. r. Although Younghee was tired yesterday, Chulsoo is today.)
    b. * Yenghi-nun maum-ul ceng-ha-yess-ko chelswu-to _ ha-yess-ta
    -Contra mind-A decide-HA-Pst-and
    -also HA-Pst-Decl
    (Intended reading. Younghee made up her mind and Chulsoo did, too.)

(42) shows that Types II and III cannot undergo VN-ellipsis.

As another distinction between Type I and Type II-III, consider replies

---

11 Short lists of three types are provided here. To save the space, only VNAs are
illustrated.
(i) Type I: wunton, kyelceng, sengkong, salang, sel, il, mal, dulaipu, cakko,
   exercise, decision, success, love, bow, work, speak, drive, death
(ii) Type II: hawphi, philo, saynggak, kantam, hayngpok, tiauttut, pancakpanccak,
   avoid, fatigue, thought, simple, happiness, warm, twinkle
(iii) Type III: yak, kang, phyen, kwu, pyen, phi, tho, cham, chak, hun,
   weak, strong, easy, seek, change, avoid, vomit, nice, good, common
to yes-no questions in the following:

(43) a. Yenghi-ka yenge-lul kongpwu-ha-yess-ni? Ung, _ ha-yess-ta
   -N English-A study-HA-Pst-Q Yes HA-Pst-Decl
   (Did Younghee study English? Yes, she did.)

b. Yenghi-ka owel-ey samang-ha-yess-ni? Ani, kwuwele-ey _
   ha-yess-ta
   -N May-in die-HA-Pst-Q No September-in
   HA-Pst-Decl
   (Did Younghee die in May? No, she did in September.)

In replying to these questions, the VNs can be freely omitted in the answers in Type I, as shown in (43). In contrast, Type II in (44a) and Type III in (44b) do not allow the omission of VNs.

(44) a. Yenghi-ka ecey phikon-ha-yess-ni? * Ung, _ ha-yess-ta
   -N yesterday tired-HA-Pst-Q Yes HA-Pst-Decl
   (Was Younghee tired yesterday? Yes, she was.)

   -N mind-A decide-HA-Pst-Q Yes HA-Pst-Decl
   (Did Younghee made up her mind? Yes, she did.)

The third test is concerned with the interaction of the VNs and the placement of the negator an 'not' (cf. Kim-Renaud (1986) and Ahn (1989)). This diagnostics yields at least two consequences. First, it provides strong evidence that Type II may undergo S-structure Restructuring. Second, it essentially supports the existence of NegP, the projection of negation (Ahn and Yoon (1989), Ahn (1990)), in Korean as a result of the interaction of the negator an and Type I. Consider the following examples:

(45) a. Yenghi-ka ecey phikon-un ha-yess-ta
   -N yesterday tired-Contra HA-Pst-Decl
   (Younghee was TIRED yesterday.)

b. Yenghi-ka ecey phikon-un an ha-yess-ta
   -N yesterday tired-Contra not HA-Pst-Decl
   (Younghee was not TIRED yesterday.)

(45a) shows that Type II cannot be formed in the lexicon as a "frozen word," like Type III, since Type II can be split by a delimiter (recall (40) for Type III). Let us assume the following schematic derivation for Restructuring in Type II (details are omitted): 12

(46) \[ \begin{array}{c}
  \text{VP} \\
  \text{phikon} \\
  \text{S-S restructuring} \\
  \text{ha} \\
  \text{phikonha} \\
  \end{array} \]

(46) plausibly accounts for the impossible intervention of XPs between VN

12 The full D-structural representation of Type II must be same as that of Type I—anamely, bi-clausal structure. Thus, (i) may have the following bi-clausal D-structure representation in (ib), and mono-clausal S-structure representation in (ic) by Restructuring.

(i) a. Yenghi-ka ecey phikon-un ha-yess-ta
   -N yesterday tired-Contra HA-Pst-Decl
   (Younghee was TIRED yesterday.)

b. [IP pro [IP Yenghi-ka [VP ecey phikon]]-un ha-yess-ta]

c. [IP Yenghi-ka [VP ecey phikon-un ha-yess-ta]]

As in (ib), I assume that the delimiter an 'contrastive marker' is attached to IP2 at D-structure. See also fn.16.
and the light *ha, as was seen in (37b). If structural Case cannot not be assigned prior to Restructuring, the co-occurrence restriction with Acc marker in (37a) may be explained.

Now, let us turn to consider how (45a) can be generated. First, I will assume that all delimiters are base-generated at D-structure (contra Yim (1984)). Then, (45a) can be generated as in the following schemata:

\[
(47) \quad \text{VP} \quad \Rightarrow \quad \text{VP}
\]

\[
\begin{array}{c}
\text{phikon-un} \quad \text{V} \\
\text{S-S restructuring} \\
\text{ha} \quad \text{phikon-un ha}
\end{array}
\]

Let us now turn to (45b). (45b) can be generated in the following fashion: (For the logic of verb-raising and articulated IP including NegP in Korean, see § 3.3.2. Irrelevant details are omitted in the following trees.)

\[
(48) \quad \text{IP} \quad \Rightarrow \quad \text{VP/IP}
\]

\[
\begin{array}{c}
\text{NegP} \\
\text{I} \\
\text{VP} \\
\text{phikon-un} \\
\text{V} \quad \text{an} \quad \text{phikon-un V} \\
\text{ha} \quad \text{t}
\end{array}
\]

Thus far, I have shown that the third test in (45b)/(48) and (49a)/(49b) significantly supports the claim that Type II undergoes Restructuring at S-structure. Hence the VN+ha complex is visible only to certain limited syntactic operations, such as verb-raising, for example.

As one final note on Type II, recall (42a) and (44a) repeated here:

\[
(42) \quad \text{a. Yenghi-nun eccy phikon-ha-yess-ciman chelswu-nun onul} \\
\text{ha-yess-ta}
\]

- Contra yesterday tired-HA-Pst-although -Contra today

HA-Pst-Decl

(I. r. Although Younghee was tired yesterday, Chulusso is today.)

\[
(44) \quad \text{a. Yenghi-ka eccy phikon-ha-yess-ni? * Ung, } \quad \text{ha-yess-ta}
\]

- N yesterday tired-HA-Pst-Q \quad \text{Yes HA-Pst-Decl}

(Was Younghee tired yesterday? Yes, she was.)

(42a) and (44a) seem to yield the supposition that operations such as Ellipsis
should always follow Restructuring, in order that the restructured word not be transparent to those operations.

Now consider the second consequence of the third test above. First, observe the following ungrammatical sentences involving the LVCs of Type I:

(50) a. * Yenghi-ka ecey yenge-lul an kongpwu-ha-yess-ta
     -N yesterday English-A not study-HA-Pst-Decl
     \(\text{(Intended reading. Younghee didn't study English yesterday.)}\)

b. * Yenghi-ka ecey an samang-ha-yess-ta
     -N yesterday not die-HA-Pst-Decl
     \(\text{(Intended reading. Younghee didn't die yesterday.)}\)

Consider the case of (50a). (50a) should have the following D-/S-structure.

(51) [IP pro [IP Yenghi-ka ecey yenge-lul an kongpwu] ha-yess-ta]

A glimpse of the structure in (51) suggests nothing to be wrong there. Before setting up an account for ill-formed (50), let us first consider the following ungrammatical examples:

(52) a. * cip-ey an ka-la  \[\text{[Imperative]}\]
     home-to not go-Imp
     \(\text{(Intended reading. Don't go home.)}\)

b. * pap-ul an mek-ca \[\text{[Propositive]}\]
     meat-A not eat-Prop
     \(\text{(Intended reading. Let's not eat meal.)}\)

Interestingly, the negator an cannot appear in Imperatives or Propositions (see C. Lee (1978) for related issues). The common property of Imperatives and Propositions, I suppose, is that they are all tenseless sentences. I further suggest that a tenseless clause in Korean may not contain the negator an since there is a condition that Negation must c-command Tense, as will be proposed in § 3.3.2.3. In (52), since there is no Tense for Neg to c-command, this requirement is not met, hence, the sentences are ruled out.

Returning to (51), IP has been argued to be tenseless (recall the discussion around (31)), therefore, by the same reasoning as in (52) above, (51) can be ruled out by failure to meet the "Neg c-command requirement." Note, incidentally, that the mono-clausal analysis for this construction seems to be silent here, too.

1.5 LF-restructuring

In the last two sections, I have justified the claim that the LVCs of Type I (hereafter LVCs refer only to Type I) are uniformly bi-clausal and have structure like the following at D-/S-structure:

(53) a. [IP1 pro [IP2 Yenghi-ka yenge-lul kongpwu] ha-yess-ta]
     -N English-A study HA-Pst-Decl
     \(\text{(Younghee studied English.)}\)

b. [IP1 pro [IP2 Yenghi-ka kapcaki samang] ha-yess-ta]
     -N suddenly die HA-Pst-Decl
     \(\text{(Younghee died suddenly.)}\)
In this section, I will justify that matrix IP₁ and embedded IP₂ should be restructured to a single clause at LF. I will refer to this process as LF-restructuring (see Mahajan (1990b) for relevant facts in Hindi). In section 1, I have shown that the verb ha must share the same [±stative] feature with the content predicates—preceding VNs—in LVCs and negation construction (recall the discussion around (11)/(12)). There, these aspect ([±stative]) matching effects were contended to be due to the mono-clausal structure. In section 6, I will claim that (long-form) negation construction is mono-clausal at D-/S-structure (see extensive discussions in § 3.3.3). In this section, I will provide further evidence for this mono-clausal effect which strongly motivates LF-restructuring in LVCs.

First, observe the distributional characteristics of Negative Polarity Items (henceforth NPIs) in the following Korean sentences:


   I-T -N bread-anything but eat-Pst-Decl Comp think-HA? not HA-Prs-Decl

   (Intended reading. I don't think that John ate anything but bread.)


   I-T -anybody but bread-A eat-Pst-Decl Comp think-HA? not HA-Prs-Decl

   (Intended reading. I don't think that anybody but Younghee ate bread.)

(54), roughly, shows that NPIs such as ppang-pakkey and yenghi-pakkey in Korean must belong to the same clause as negation an(i) (cf. Choe (1988)).

This clause-mate condition, however, does not seem to hold in the following LVCs:

(55) a. [Yenghi-ka yenge-pakkey kongpwu] ha-ci an-h-ass-ta

   -N English-anything but study HA? not-HA-Pst-Decl

   (Youngehee didn't study anything but English.)

b. [Yenghi-pakkey yenge-lul kongpwu] ha-ci an-h-ass-ta

   -anybody but English-A study HA? not-HA-Pst-Decl

   (Intended reading. Anybody but Younghee didn't study English.)

In sections 3 and 4, we have seen relatively convincing evidence for the bi-clausal nature of constructions like (55). Here, then, we are confronted with a dilemma — (55) must be bi-clausal and mono-clausal at the same time. In order to account for both the bi-clausal and mono-clausal properties that these constructions exhibit, I suggest that (55) is bi-clausal at D-/S-structure while it is mono-clausal at LF.

Further, let us tentatively assume the following condition on the licensing of NPIs in Korean (see § 3.3.2.2.1 for more on this matter).

\[\text{If the clause-mate condition is met, the sentence is grammatical.}\]

\[(i) a. \text{na-nun [yenghi-ka ppang-pakkey an mek-ess-ta-ko] sayngkak ha-n-ta} \]

\[\text{I-T -N bread-anything but not eat-Pst-Decl Comp think-HA-Prs-Decl} \]

\[(\text{I think that John didn't eat anything but bread.})\]

\[b. * \text{na-nun [yenghi-pakkey ppang-ul an mek-ess-ta-ko] sayngkak ha-n-ta} \]

\[\text{I-T -anybody but bread-A not eat-Pst-Decl Comp think-HA? HA-Prs-Decl} \]

\[(\text{Lit. I think that anybody but Younghee didn't eat bread.})\]
(56) Negative Polarity Licensing Condition (NPLC)
Negative Polarity items (NPIs) must co-exist with their licensors at LF
in their local domains.

Given (56) for our purposes, the well-formedness of (57) below can be
entertained as follows:

(57) a. ppang-pakkey [na-nun yenghi-ka _ an mek-ess-ta-ko] sangkak-
     ha-n-ta
     bread-anything but I-T          -N not eat-Pst-Decl-Comp think-
     HA-Prs Decl
     (Intended reading: Anything but bread, I think Younghee didn't eat _)

     b. yenghi-pakkey [na-nun _ ppang-ul an mek-ess-ta-ko] sangkak-
     ha-n-ta
     -anybody but I-T        bread-A not eat-Pst-Decl-Comp think-HA-
     Prs-Decl
     (Intended reading: Anybody but Younghee, I think _ didn't eat bread.)

In (57), scrambled NPIs are apparently beyond the scope of negation at S-
structure. However, the sentences are still grammatical. Following Ahn,
Martin, and Tajima (1990a-b), I will assume that the scrambled phrases can
be reconstructed at LF. If so, then (57) can observe the NPLC at LF. Now we
have a basis to account for (55). If (55) undergoes LF-restructuring, (55) can
satisfy the NPLC at LF, although (55) does not meet the NPLC at D- or S-
structure, since LF-restructuring will turn the bi-clausal structure into the
mono-clausal structure, where NPIs have their local licensors (negators).
Thus, the distribution of NPIs in (55) supports LF-restructuring in LVCs.

In sum, the LVC in (58) has the following bi-clausal S-structure in
(59a) and the following mono-clausal LF in (59b) by Restructuring:

(58) Yenghi-ka yenge-lul kongpwu(-lul) ha-yess-ta
     -N English-A study(-A) HA-Pst-Decl
     (Younghee studied English.)
(59) a. [51 pro [52 Yenghi-ka yenge-lul kongpwu(-lul)] ha-yess-ta] S-S
     -N English-A study HA-Pst-Decl
     (Younghee studied English.)
     b. [S Yenghi-ka yenge-lul kongpwu(-lul) ha-yess-ta] LF

In the next section, I will demonstrate further evidences to support the bi-
clausal analysis of LVCs in Korean.

1.6 VP-movement and further consequences

In this section, I will discuss the nature of unaccusative LVCs in more
detail with respect to VP-preposing. By discussing this, the bi-clausal
nature of LVCs will be further confirmed.

As noted in section 1, the following sentence is undoubtedly a LVC
due to non-Agenthood of the subject:
(60) Yenghi-ka (kothongepsi) swipey samang(-ul) ha-yess-ta
         -N (without pain) easily die(-A) HA-Pst-Decl
(Younghee died easily (without pain).)

Note, however, that (non-)Agenticity of the subject can be only a partial determining factor in identifying the LVCs. Put another way, heavy ha always assigns an Agentive external theta-role, while light ha does not impose any restriction on its external argument. Thus, light ha may occur with either an Agentive or non-Agentive subject. In the following sentence, where the subject is volitional Agent, the sentence must be a LVC.

(61) Yenghi-ka (swumyencey-lo) swipey casal(-ul) ha-yess-ta
         -N (with sleeping pills) easily suicide(-A) HA-Pst-Decl
(Younghee committed suicide easily (with sleeping pills).)

This is directly derived from the fact that VN in (61) resists adjectival modification, as shown below, like that in (60).

(62) a. * Yenghi-ka (kothongepsi) swiwun samang(-ul) ha-yess-ta
         -N (without pain) easy die(-A) HA-Pst-Decl
(\textit{Intended reading}. Younghee died easily (without pain).)
b. * Yenghi-ka (swumyencey-lo) swiwun casal(-ul) ha-yess-ta
         -N (with sleeping pills) easy suicide(-A) HA-Pst-Decl
(\textit{Intended reading}. Younghee committed suicide easily (with pills).)

Notice, however, that VN in (60) and that in (61) sharply contrast each other with respect to extraction. That is, VN samang 'to die' in (60) cannot be extracted, whereas VN casal 'to suicide' in (61) is freely movable. This fact is shown in (63) and (64) below:

(63) a. * Yenghi-ka (kapcaki) _ ha-n samang-ttaymwuney ...
         -N (suddenly) HA-Rel die-because
(\textit{Intended reading}. Because of Younghee's sudden death ...)
b. * samang-un yenghi-ka (kothong-epsi) ha-yess-ciman ...
   die-Contra -N (pain-without) HA-Pst-although
(\textit{Intended reading}. Although Younghee died without pain ...)
c. * samang-ul yenghi-ka (kothong-epsi) ha-yess-umulo ...
   die-A -N (pain-without) HA-Pst-since
(\textit{Intended reading}. Since Younghee died without pain ...)

(64) a. Yenghi-ka (kapcaki) _ ha-n casal-ttaymwuney ...
         -N (suddenly) HA-Rel suicide-because
(\textit{Intended reading}. Because of Younghee's sudden suicide ...)
b. casal-un yenghi-ka (kothong-epsi) _ ha-yess-ciman ...
   suicide-Contra -N (pain-without) HA-Pst-although
(\textit{Intended reading}. Although Younghee committed suicide without pain ...)
c. casal-ul yenghi-ka (kothong-epsi) _ ha-yess-umulo ...
   suicide-A -N (pain-without) HA-Pst-since
(\textit{Intended reading}. Since Younghee committed suicide without pain ...)

Recall that the VN in the following LVC cannot be extracted:

(65) *kongpwu-nun yenghi-ka yenge-lul _ ha-yess-ta

study-T -N English-A HA-Pst-Decl

(\textit{Intended reading}. As for studying, Younghee did English.)

As was discussed in section 3, the movement of kongpwu (a type of V\textsuperscript{o}-movement) in (65) cannot be licit since no X\textsuperscript{o}-position is available as a landing site for topic/contrastive elements in Korean. However, in the case of (64), the moved element can constitute VP instead of V\textsuperscript{o}, hence the movement of VN in (64b), for example, can be seen as an instance of VP-preposing which strands the subject. In (65), on the other hand, the movement of VN cannot be an instance of VP-preposing since the moved VN strands the VP (V\textsuperscript{o}) internal complement yenge.\textsuperscript{14}

Now consider (63). Parallel to (64), the movement of VN in (63) can be regarded as an VP-movement. Then why is only (63), but not (64), ungrammatical? In what follows, I will try to show that the discrepancy hinges on an inherent difference between the two verbs involved—namely, samang is unaccusative, whereas casal is unergative.

\textsuperscript{14} There is an alternative way to get a surface order like (65) without recourse to V\textsuperscript{o}-movement. First, the object undergoes scrambling:

(i) yenghi-ka yenge-lul t\textsubscript{1} kongpwu-nun ha-yess-ta

-N English-A study-Contra HA-Pst-Decl

(\textit{Intended reading}. As for studying, Younghee did English.)

Then, the whole VP including t\textsubscript{1} is scrambled:

(ii) [vp t\textsubscript{1} kongpwu-nun yenghi-ka yengel-lul tvp ha-yess-ta

study-Contra -N English-A HA-Pst-Decl

(\textit{Intended reading}. As for studying, Younghee did English.)

However, the derivation (ii) is also illicit since t\textsubscript{1} is not bound—the violation of Fiengo's (1977) Proper Binding Condition—or t\textsubscript{1} is not properly governed—the ECP violation. Thus, either way, it is predicted to be ungrammatical.

It has been widely held that at least two classes of intransitive verbs exist in natural languages (see Perlmutter (1978) and Burzio (1986) among others). Roughly put, intransitive verbs, the subjects of which lack a volitional Agentive theta-role are generally referred to as being semantically "unaccusative." The remaining class of intransitives are often called semantically "unergatives" (terms are from Perlmutter (1978)). Beside the semantic distinction, these two classes of verbs are said to bear different syntactic properties.

According to Burzio (1986), unaccusatives inherently lack an external argument at D-structure, hence the surface subject in the Spec of IP originates from the D-structure object position by Case-seeking movement.

Based on Quantifier Floating (henceforth QF), Terada (1987) and Miyagawa (1989a-b) convincingly shows that the subjects of unaccusatives in Japanese exactly exhibit this property—they are base-generated V'-internally, and raised to the Spec of IP. I am going to exploit the same diagnostic for determining whether a verb in Korean is unaccusative or not.

First, observe the QF phenomena in the following sentences:

(66) a. haksyayng-i twumyeng sensayngnim-ul manna-ss-ta

student-N two teacher-A meet-Pst-Decl

(Two students met a teacher.)

b. haksyayng-i sensayngnim-ul twupwun manna-ss-ta

student-N teacher-A two meet-Pst-Decl

(A student met two teachers.)
(66a) involves QF from the subject, while QF from the object is exhibited in (66b).

Miyagawa (1989b) proposes that for an NP to be properly construed with a floating quantifier (FQ), they must c-command each other at Dstructure. Let us call this condition "mutual c-command requirement" (henceforth MCR). The MCR properly rules out (67a) and in (67b) below:

(67)  a. *haksayng-i sensayngnim-ul twumyeng manna-ss-ta
         student-N two teacher-A meet-Pst-Decl
(\textit{Intended reading}. Two students met a teacher.)

b. sensayngnim-ul haksayng-i _ twupwun manna-ss-ta
       teacher-A student-N two meet-Pst-Decl
(A student met two teachers.)

In (67b) the trace of the scrambled object and FQ mutually c-commands each other. Thus, the MCR is met. In (67a), however, assuming that there exists some condition which prevents scrambling of the subject (Saito 1985), the target NP (here, subject) and FQ cannot mutually c-command each other, hence violating the MCR, and the sentence is correctly ruled out. In (68) and (69), I illustrate QF in constructions involving unergative verbs.

(68)  a. ai-ka twumyeng kyosil-eyse kapcaki twuy-ess-ta
         kid-N two classroom-at suddenly run-Pst-Decl
(Two kids run suddenly in the classroom.)

b. yeca-ka seymyeng umakhoeyse khunsolilo wus-ess-ta
       woman-N three concert-at loudly laugh-Pst-Decl
(Three women laughed loudly in the classroom.)

c. namca-ka hanmyeng kaswu-wa chwumchwu-ess-ta
       man-N one singer-with dance-Pst-Decl
(One man danced with a singer.)

(69)  a. ?* ai-ka kyosil-eyse kapcaki twumyeng twuy-ess-ta
         kid-N classroom-at suddenly two run-Pst-Decl
(\textit{Intended reading}. Two kids run suddenly in the classroom.)

b. ?* yeca-ka umakhoeyse khunsolilo seymyeng wus-ess-ta
       woman-N concert-at loudly three laugh-Pst-Decl
(\textit{Intended reading}. Three women laughed loudly in the classroom.)

c. ?* namca-ka kaswu-wa hanmyeng chwumchwu-ess-ta
       man-N singer-with one dance-Pst-Decl
(\textit{Intended reading}. One man danced with a singer.)

The deviance in (69) is expected under the same scenario as (67a). That is, given the fact that the subjects of unergative verbs are base-generated VP-externally, the target NPs and FQs cannot mutually c-command each other in (69) due to intervening VP-internal adverbial phrases. In (70) below, I attempt to demonstrate QF in constructions involving unaccusative verbs.

(70)  a. ai-ka onul achim kapcaki twumyeng cwuk-ess-ta
         kid-N today morning suddenly two die-Pst-Decl
(Two kids died suddenly this morning.)
respectively.

(72) a. pro [yenghi₁-ka [vp (kothongepsi) swipkey t₁ samang]-ul] ha-
yess-ta
    -N (without pain) easily die(-A) HA-Pst-
Decl (Younghee died easily (without pain).)

    b. pro [yenghi₁-ka [vp (swumyencey-lo) swipkey casal]-ul] ha-yess-ta
    -N (with sleeping pills) easily suicide(-A) HA-Pst
    (Younghee committed suicide easily (with sleeping pills).)

Since the V⁰ samang is unaccusative, as in (72a), the subject originates
VP(V)-internally, and ends up in the Spec of IP, while in (72b) the subject is
base-generated outside of VP(V). (For a while I will digress from the VP-
internal-subject hypothesis.)

Now what happens if VP is moved in (72a)?

(73) [vp t₁ samang]-ul [yenghi₁-ka ... tvp ...]

In (73), t₁ is neither bound nor properly governed. Notice that since t₁ is an
argument trace, it cannot be deleted at LF since it gets marked [-γ] at S-
structure (see Lasnik & Saito (1989), henceforth L&S). Thus (73) violates
either Fiengo's (1977) Proper Binding Condition (PBC), which states that

The contrast in (71) clearly shows that samang is "unaccusative" while casal
is "unergative." If this is the case, then we are led to conclude that the
structures of (63) and (64) prior to VP-movement can be (72a) and (72b)
trace must be bound, or L&S's ECP. Either way, (73) can be correctly ruled out.

Concerning VP-movement in Korean, let us consider another type of VP-movement. It is generally held that there exist the so called VP-focus constructions in Korean (see Choe (1985) and Kang (1988) among others). I illustrate some of these in the following:

(74) a. Yenghi-ka [VP (ppallii) twuyki]-nun ha-yess-ciman ...
    -N (fast) run-Contra HA-Pst-although
    (Although Younghee DID run fast ...)

b. pi-ka [VP (manhi) oki]-nun ha-yess-ciman ...
    rain-N (a lot) come-Contra HA-Pst-although
    (Although it DID rain a lot ...)

(74a) includes the unergative content verb, while (74b) contains the unaccusative content verb. The crucial difference between VP-focus constructions and LVCs is that the content verb can be any verb in the former while it can only be a VN in the latter. Since we have already identified VN as a verb, no significant distinction between the two constructions seems to be necessary.

Now consider the following contrast when a focused VP is preposed:

(75) a. [VP (ppallii) twuyki]-nun Yenghi-ka tvp ha-yess-ciman ...

Parallel to VP-fronting in LVCs (cf. (63)-(64)), only VPs headed by an unergative verb can be preposed, as seen in (75). Parallel to the case of unaccusative LVCs (cf. (73)), I propose that (75b) has the following illegitimate output after VP-preposing:

(76) [VP (manhi) t1 oki]-nun pi1-ka tvp ha-yess-ciman ...

For the same reasons as were discussed concerning (73), t1 in (76) violates the ECP or PBC, hence (75) is expected to be ill-formed (see Hoji, Miyagawa and Tada (1988) for parallel facts in Japanese).

Since VP-focus constructions and LVCs behave identically, we may use a term "LVC" covering both constructions. Then, the verb ha in VP-

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15 In chapter 2, I will argue that the PBC should be subsumed under the ECP.

16 The following long-form negation construction seems to be akin to VP-focus constructions.

(i) pi-ka [VP (manhi) o-cl]-nun ani ha-yess-ciman ...
    rain-N (a lot) come-?-Contra not HA-Pst-although
    (Although it didn't rain a lot ...)

However, unlike VP-focus preposing in unaccusative LVCs, ?P-preposing containing the unaccusative verb o 'to come' is possible, as seen below.

(ii) [VP (manhi) o-cl]-nun pi-ka _ ani ha-yess-ciman ...
    (a lot) come-?-Contra rain-N not HA-Pst-although
    (Although it didn't rain a lot ...)

This shows that the preposed ?P seems not to be a VP. This fact also weakens the claim that VP-focus constructions and long-form negation constructions are strongly related—one is derived from the other(cf. Song (1988) and Kang (1988)). I suggest that (i) has the following mono-clausal structure which differs crucially from VP-focus/LVCs.
focus constructions can be also treated as a light verb.

Before closing this section, I would like to highlight one important issue related to VP-focus/movement in Korean. In Korean VP-focus constructions, the scope of focus marker attached to the "verb stem+ki" unit is ambiguous. For instance, consider the following example:

(77) Yenghi-ka ppang-ul mek-ki-nun ha-yess-ciman
     -N bread-A eat?-Contra HA-Pst-although
     (Younghee DID eat bread.)

(77) can be best understood as being ambiguous at most in three ways, depending on the focused scope of the Contrastive marker nun.

First, it is possible for only the verb to be focused. In that case, (77) can be glossed as Younghee ATE (but not chewed) bread. Second, it is possible for only the object to be focused. Then (77) means something like Younghee ATE BREAD (but not a candy). The third, and last, possible reading that (77) can convey is the VP-focused reading. In this case (77) delivers a meaning close to Younghee ATE BREAD (but not watch TV).

Notice, however, that the subject cannot be within the scope of the focus. Thus, (77) cannot imply at YOUNGHEE (but not chelsuw) ate bread.

This amounts to claiming that the constructions under consideration in Korean can be true VP-focus (or VP-movement, if the focus part is fronted) but not sentential focus/movement (see Nakayama and Koizumi (1990) for similar argument in Japanese).

1.7 Two kinds of Case

The following pair of sentences in Japanese have significant underlying differences despite their similarities:

(78) a. John-ga [eigo-no benkyoo]-o sita
     -N English-G study-A did
     (John did a study of English.)

b. John-ga eigo-o benkyoo-sita
     -N English-A study-did
     (John studied English.)

First, note that (78b) must be a LVC since the VN benkyoo in (78b) resists adjectival modification (recall the discussion of (25) and (26) for Korean), as is shown in the following:

(79) * John-ga eigo-o muzukasii benkyoo-sita
     -N English-A difficult study-did
     (John studied English difficulty.)
Further note that (78a) is an instance of a HVC because VN can be modified. The minimal difference of VNs between the two constructions displayed in (78) is the presence or absence of the Acc Case particle o. Note further that for VNs, the Acc Case particle o must be obligatorily realized in a HVC, while overt o is not generally allowed in a LVC. This is illustrated by the following examples (here too, we ignore the deletion of o in a colloquial speech):

(80) a. *John-ga [eigo-no benkyoo]-sita
    -N English-G study did
    (John did a study of English)

b. ?*John-ga eigo-o benkyoo-o sita
    -N English-A study-A did
    (John studied English)

The ill-formedness in (80) is in fact predicted by Burzio's Generalization (BG), which states that a verb assigns an external theta-role if it assigns (structural) Case. Notice that heavy verb su in (80a) can allocate an external theta-role like other transitive verbs while light verb ha in (80b) cannot. This amounts to saying that only heavy su can (and must) assign a structural Case. For these reasons, the examples in (80) both violate BG, hence the deviance in (80) naturally follows.

The following LVCs in Korean, however, raise an apparent problem for BG:

(81) a. Yenghi-ka yenge-lul kongpwu-lul ha-yess-ta (= (25))
    -N English-A study-(A) HA-Pst-Decl
    (Younghee studied English.)

b. Yenghi-ka kapcaksulepkey samang-ul ha-yess-ta (= (27))
    -N suddenly die-A HA-Pst-Decl
    (Younghee died suddenly.)

As we have seen before, examples in (81) should be instances of LVCs.

Then, the appearance of the accusative Case particle (l)ul on VNs apparently seems to invalidate BG. Put differently, the light verb ha has a null argument structure—it doesn't bear any theta-roles to assign. Yet, rather surprisingly, this verb seems to assign a Case. (This is, in fact, the position taken in Grimshaw and Mester (1988) for the treatment of light verb su in Japanese.)

In what follows, I will attempt to show that the appearance of accusative Case particles on VNs in (81) can be only an apparent problem for BG. I will claim that there are two types of (l)ul in Korean which I will call "strong" and "weak" accusative Case markers, respectively. "Strong" accusative Case (henceforth S-Case) is similar to "inherent" Case in Chomsky (1986a) in that it is tied to the thematic properties of the verb. More specifically, I assume that a verb assigns an internal theta-role if it assigns S-Case in Korean. "Weak" accusative Case (hereafter W-Case), on the other hand, is roughly equivalent to "structural" Case in that it is not related to the verb's theta-grid. For example, in a configuration like [V' XP Vo], XP can be assigned a W-Case (l)ul in Korean. However, this Case
becomes S-Case if the governing V^o assigns an internal theta-role to the XP. Concerning the Visibility Condition (Aoun (1979), Chomsky (1981)), I further surmise that only S-Case marked XPs are visible at LF. In this sense, S-/W-Case are not parallel to inherent/structural Case.

Now let us consider the difference between heavy verbs and light verbs in Korean under S-/W-Case system. I contend that heavy ha can assign S-Case, while light ha can only assign W-Case. To be precise, heavy ha can assign either S-Case or W-Case or both, whereas light ha cannot assign S-Case except for W-Case. Thus, the appearance of (lul) on the VN in (81) can be regarded as an instance of W-Case. The existence of W-Case is supported by the appearance of (lul) in the following sentences in Korean:

(82) a. Yenghi-ka sey-sikan-ul talli-ess-ta [Unergative]
   -N three-hour-A run-Pst-Decl
   (Youngee ran for three hours.)

   -N dog-by leg-A be bitten-Pst-Decl
   (Youngee was bitten on the leg by a dog.)

Given the fact that the phrases, sey-sikan ‘three hours’ and tali ‘leg’, are not theta-related arguments for the verbs in (82), we plausibly understand that [+W,-S]-Case, the non-theta-related Acc Case, is assigned to those phrases

17 The appearance of W-Case on the VN poses an apparent problem under our claim that the VN in LVCs are categorically verbs. One conceivable answer to this problem is possible by adopting the hypothesis that verbs need Case, as put forward in Fabb (1984). Given this hypothesis, we can understand that W-Case on VN is an overt manifestation of Case on verbs. Alternatively, we can conjecture that W-Case is not directly attached to VN, but in fact, it is attached a category XP larger than the VN(V^o)—say, VP or IP—under the assumption that any XP can be Case-marked in Korean. In any case, it will suffice to our purposes. I will not pursue further possibilities here.

under sisterhood. Thus, it seems that unergative and passive verbs in Korean lack only the ability to assign S-Case, presumably because there is no internal argument in the case of unergatives, and that the S-Case in passives is absorbed by a hidden argument in the sense of Baker, Johnson and Roberts (1989). If the line of approach, postulating two kinds of Case, turns out to be basically correct, we may reinterpret (or weaken) BG in the following way.18

(83) Revised Burzio’s Generalization

A verb assigns an external theta-role if it assigns “S-Case.”

By (83), (81) is no more problematic since the appearance of (lul) on VN, an instance of W-Cases, does not violate the revised BG.

Before closing this section, let us clarify one important problem. Recall (80b) in Japanese, which is repeated here.

(80) b. ?*John-ga eigo-o benkyoo-o sita
   -N English-A study-A did (John studied English)

Note that Korean counterpart of (80b) in (81a) is grammatical (although slightly awkward) for most native speakers, while (80b) is ungrammatical for most (but not all) native speakers of Japanese. Given our revised BG, light su in Japanese seems to assign S-Case, contrary to light ha in Korean. This

18 Note, incidentally, that our proposal may be reminiscent of Belletti’s (1988) “partitive” Case versus “structural” Case. At this stage, however, it is not at all clear how to relate the “strong/weak” distinction in Korean with the “partitive/structural” distinction in other languages, as discussed in Belletti (1988). I will come back to this question in section 9. Note also that since at least Chomsky’s (1986a) “structural/inherent” distinction on Case, many recent works have proposed two types of Case for various reasons; to mention a few, “upper/lower” in Kuroda (1988), “S-Case/I-Case” in Gerdes and Youn (1989), and “lexical/structural” in Maling (1989). Here, I will not discuss how our “S-Case/W-Case” may crucially differ from them. See details therein.
prediction, however, does not seem to be correct. In the next section, I try to show that light su assigns W-Case, not S-Case. I will further claim that the ungrammaticality (or marginality for some speakers) of (80b) is due to some independent reasons, apart from the violation of a revised BG.

1.8 The Double-o-Constraint in Japanese

In this section, I will show that S-/W-Case distinction can be justified in Japanese by examining the so called Double-o-Constraint.

The sequence of two o-marked NPs is generally not allowed in Japanese. This restriction has been referred to in the literature as the Double-o-Constraint (Harada 1973, henceforth DoC). In Poser (1981), two types of DoC are noted: a Surface DoC and a Deep DoC. The Deep DoC is a grammatical constraint while the Surface Doc seems to be a stylistic constraint in Japanese. This is motivated, in part, since the latter manifestation of the constraint varies greatly among speakers. For the sake of proceeding our discussion, I will formulate these two constraints as follows:

(84) The Double-o-Constraints
i. Deep Double-o-Constraint (cf. Dubinsky (1989, 24))
   No single clause may contain two distinct arguments (NP or S') that occupy S-Case-marked positions.
ii. Surface Double-o-Constraint
   o-marked phrases cannot be adjacent to each other.

Now, notice how (84i) can rule out the following examples from Kuroda (1978, 39) and Sells (1989, 23):

(85)  a. *Taroo ga Hanako o t takaseta no wa mesi (o) da.
       nom    acc      cook-made top rice acc be
       (The thing (lit. one) Taroo lets Hanako cook is rice.)
    b. *Mary-wa John-ni / *o ookami-ga kuru to iw-aseru
top        dat acc  wolf nom comes comp say-makes
       (Mary makes John say that the wolf is coming.)

The ill-formedness of (85) is due to the presence of two (abstractly) S-Case-marked NPs in the same clause; note that the variable trace in (85a) and S' complement in (85b) are visible arguments for Case assignment. Thus, although there are no adjacent o-marked phrases in (85), the sentences are ruled out by the DoC.

In contrast to (85), there are constructions in Japanese where o-marked phrases are adjacent, and one of them is an "oblique accusative" (borrowing the term from Poser (1981)). Interestingly, these sentences are marginally acceptable:

(86)  a. ?Kare wa uma o kawa o wataraseru. (Poser 1981 : 7)
       he  top horse acc river acc cause-to-cross
       (He makes his horse cross the river.)
    b. ?Watasitati wa kodomo o benti o tatseta.
       we  top   child acc bench acc caused-to-get up
       (We made the child get up from the bench.)
The marginality in (86) is possibly a reflex of the Surface DoC. I conjecture that the so-called oblique o in Japanese is an instance of W-Case.

Observe further that the so-called "traversal" object in (87a) and the "locative" object in (87b) are also exempt from the Deep DoC (examples are from Dubinsky (1985)).

(87) a. Kono mon o Taroo wa muriyari kono kuruma o toosita.
     this gate acc top forcibly this cart acc pass-PRF
     (Taro passed this cart forcibly through this gate.)

b. Isya ga kanzya o arukaseta hooru.
     doctor nom patient acc walk-cau-PRF hall
     (The hall which the doctor made the patient walk.)

Since o-marked phrases are not adjacent, (87) violates neither the Deep DoC (assuming that traversal o and locative o are all realization of W-Cases) nor the Surface DoC. Therefore, (87) is correctly ruled in.

Now, I am poised to consider (80b), repeated here.  

(80) b. *John-ga eigo-o benkyoo-o sita
     -N English-A study-acc did
     (John studied English)

Notice that if two o-marked phrases become non-adjacent, the acceptability of the sentences improves saliently even for the speakers who rule (80b) out.

(88) a. ? John-ga eigo-o issyokenmee ni benkyoo-o sita
     -N English-A hard study-acc did
     (John studied English hard.)

b. ? eigo-o John-ga _ benkyoo-o sita
     English-A -N study-A SU-Pst-Decl
     (John studied English)

(88a) involves an intervening adverb between two o-marked elements, and in (88b) one of the adjacent o-marked phrases is scrambled. If (80b) is an instance of the Deep DoC violation, the relative degree of grammaticality between (80b) and (88) is not expected.  

Note also that (88) is significantly

19 Recall that even when two o-marked NPs are adjacent in LVCs, sentences such as (i) are marginally acceptable for some native speakers with some stress on VNs. (Kazuhiro Tajima, p.c.)

(i) a. ??John-ga eigo-o BENKYOO-O sita
     nom English-acc study-acc did
     (John studied English)

b. ??John-ga Mary no ronbun-o HIHAN-O simasita.
     nom gen paper-acc criticism-acc did
     (John criticized Mary's paper.)

Notice that these examples parallel the two adjacent NP-o's involved in oblique objects illustrated in (86) before. The speakers who tolerate (86) also tend to marginally accept the overt Case marking of VN in unaccusative LVCs that I will discuss shortly. It seems that the productivity of the use of W-Case o varies among dialects in Japanese.

20 Sells (1989) also notes a following set of grammatical data on a par with (88).

(i) a. Kaiketu no hokoo o sono hokokusyo ga Mary ni t SISA o siteiru.
     solution gen direction acc this report nom to suggestion acc does
     (This report suggested to Mary the direction of the solution.)

b. John ga Mary no ronbun o kibisiku HIHAN o simasita.
     nom gen paper acc severely criticism acc do-past
     (John severely criticized Mary's paper.)

As he notes, (ii) sharply contrasts with (i) in that only (ii) violates (Surface) DoC.

(ii) *sono hokokusyo ga Mary ni Kaiketu no hokoo o SISA o siteiru.
     this report nom to solution gen direction acc suggestion acc does
     (This report suggested to Mary the direction of the solution.)

He further notes (iii) the ungrammaticality of which, he suggests, is due to the (Surface)

DoC.

(iii) *John ga Mary no ronbun o kibisiku HIHAN o simasita.
     nom gen paper acc severe criticism acc do-past
better than what appear to be clear violations of the Deep DoC, as seen in the following sentences:

(89) a. * John-ga Mary-o kinoo hon-o ateta.
    nom    acc yesterday book acc give-past
    (John gave Mary a book yesterday.)

b. * John-ga Mary-o uti-de hon-o yomaseta.
    nom    acc home at book acc read-made
    (John made Mary read a book at home.)

(89) suggests that the Deep DoC is overridden even if the two *-marked NPs are not adjacent. This implies that (88) does not violate the Deep DoC. Thus, the Acc particle * in *benkyoo may not be an S-Case marker, but rather, an instance of a W-Case marker in Japanese.

As one last note before closing this section, consider the so-called unaccusative LVCs in Japanese. Miyagawa (1987, 1989a) observes that there exists a class of VNs in Japanese which, unlike common VNs such as *benkyoo-(*)-su 'to study', do not allow the VN-0-0 alternative. Some of them are illustrated below.

(90)  seikoo (*0) suru, tanzyoo (*0) suru, antei (*0) suru, rikai (*0) suru.
      success   birth stability comprehension

According to my Japanese informants, the grammaticality judgements of (90) vary from speaker to speaker. Assume that unaccusative VNs only appear in LVCs, the appearance of *o in (90), if possible, should be W-Case. I further speculate that the dialect (or idiolect) difference with respect to the range of the acceptability of W-Case on VNs in LVCs may hinge on the parametrized BG in Universal Grammar, which I will label "weak" BG and "strong" BG, respectively.

(91)  Weak Burzio's Generalization
A verb assigns an external theta-role if it assigns "S-Case."

(92)  Strong Burzio's Generalization
A verb assigns an external theta-role if it assigns either "S-" or "W-Case."

Given dialect A which obeys weak BG, overt W-Case *o must be always allowed on VNs in LVCs. Given dialect B which observes strong BG, overt W-Case *o may not be possible on VNs in LVCs. Korean and some dialects of Japanese may belong to dialect A, and other dialects of Japanese may belong to dialect B. I will leave the further consequences of this parameter for future research.
1.9 The verb *be* in English

In this section, I will discuss the verb *be* in English which essentially exhibits a similar distinction on a par with the verb *ha* in Korean. We begin by observing some insightful comments on two types of *be* made in Safir (1985). Safir (1985, 116-121) observes that there are at least two separate lexical entries for *be*: "identificational" *be* (hereafter I-BE) which has been previously called "equative" or "specificational" (Higgins (1973)), and "predicational" *be* (henceforth P-BE). He claims that the following examples are instances of I-BE (ibidem ch. 4 (56)).

(93)  a. John is the president
      b. The president is John

Abstracting away from some (stress influenced) presuppositions, he assumes that (93a) and (93b) are synonymous, and the role of I-BE is, loosely speaking, as follows (ibid. 117):

I-BE "identifies" or "specifies" one of its NPs, call it NPa, in terms of some other specific property or label, expressed by NPb, which could also stand for NPa.

Safir further suggests, following Stowell (1978), that P-BE subcategorizes for a small clause as seen in (94) (perhaps, as an internal argument), although it is essentially without meaning.

(94) John is [SC silly]

Thus, as Safir notes, the "predicative" property of P-BE (for the subject *John*) in (94) is simply inherited from the small clause predicate *silly*, and does not result from any intrinsic meaning of P-BE itself. This amounts to saying that P-BE serves merely to bear tense/agreement features, and can sometimes be omitted when no such features are required, as is correctly borne out in the following context (ibid. 117-118):

(95)  a. I thought John to be quite silly
      b. I thought John quite silly

He further notes that P-BE and I-BE sharply contrast with each other in the following pair of sentences.

(96)  a. I thought John to be a fool
      b. I thought Shakespeare to be the author of *The Tempest*

Suppose that the definite NPs are not used predicatively, then *be* in (96b) is used as a true predicate which links two arguments in a way similar to (93). While in (96a), if *a fool* can be used predicatively, the role of *be* therein appears to be vacuous. Hence, it is predicted that *be* in (96a) can be omitted parallel to (95b), and unlike *be* in (96b). This is borne out in the following:

(97)  a. I thought John a fool
      b. * I thought Shakespeare the author of *The Tempest*
The facts discussed so far support the claim that there exist two kinds of *be* in English—P-BE in (96a) and I-BE in (96b)—as is pointed out in Safir (1985).

Safir further notes that I-BE should assign Case unlike P-BE. This is shown by the following examples:

(98)  
(a) It's me  
(b) The real villain is him  

Note that in (98), the postverbal NPs are assigned Acc Case by I-BE. By Burzio's Generalization, I-BE must take an external argument, hence it in (98a) should be a full argument, presumably an indexical or a demonstrative pronoun. P-BE, on the other hand, never assigns Case since it always takes a small clause complement, according to Safir. The relevant cases are illustrated below:

(99)  
(a) John is [SC [AP happy]]  
(b) John is [SC [NP a fool]]  

Note, particularly, that a *fool* in (99b) does not seem to be a referential NP, but rather, a predicational NP which is reminiscent of VNs in LVCs. If this is the case, the predicate *a fool* must not (or need not) be Case-marked on a par with the AP *happy*. Hence, it is plausible to assume that P-BE doesn't assign Case unlike I-BE.

Up to now, I have reviewed some essential differences between I-BE and P-BE, as discussed in Safir (1985). The contrasting properties of these two kinds of *be* in English draw an interesting parallelism to what has been detected in light/ heavy distinction for the verb *ha* in Korean. First, let us consider a summary of the contrasting behavior of I-BE and P-BE in Safir (ibid. 121).

(100)  
I-BE  
A. Assigns Case  
B. Has "identificational" meaning  
C. Has two theta-positions, including an external argument  
D. Takes only an NP complement  

P-BE  
A. Does not assign Case  
B. Has no meaning  
C. Has no external argument  
D. Takes a small clause complement  

Recall that heavy *ha* and light *ha* behave almost exactly parallel to I-BE and P-BE, respectively. First, heavy *ha* assigns Case, while light *ha* doesn't (ignoring W-Case for the moment). Second, heavy *ha* has a full-fledged thematic structure, while that of light *ha* is almost null except subcategorizing for a sentential complement (recall the discussion around (31)). Third, heavy *ha* selects only an NP complement, while light *ha* takes a sentential complement essentially akin to a small clause. I suggest that the striking parallelism between *ha* and BE is not merely coincidental, but is principle-governed. I claim that P-BE is an instance of a thematically light verb in English, while I-BE is thematically heavy.  

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21 There is in fact the third usage of *be* which is often referred as an auxiliary verb usage.  
(i) a. John is studying linguistics  
   b. GB is criticized by GPSG

Although the property of Auxiliary *be* is very similar to that of light *be* (P-BE), I shall
have seen follows: P-BE (light be) has a null argument structure except for its taking a clausal complement which it c-selects. Given this assumption, we may expect that P-BE construction such as (99a), for example, has the following D-structure on a par with (31).

Given that P-BE does not assign a Case, John must move to the Spec of IP₁ to get Case at S-structure. (Here I ignore BE-to-I and A-to-I raising. But see chapter 2 on this matter.) Thus, this will yield the following S-structure:

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22 Note, incidentally, that my proposal is reminiscent of LF-restructuring in small clauses proposed in Stowell (1988). Larson (1988) also presents a similar way of treating small clauses. He argues that secondary predicates (extendable to small clause predicates) must form a V-unit with matrix verbs at D-structure. I simply note the similar spirit of these works here.
article a, and I simply put the article of predicational nominal inside an Nc.)

(104)

\[ IP_1 \\
| \ \\
| | \\
| VP \\
| | \\
| Past V IP_2 \\
| | \\
| be John I \\
| | \\
| NP \\
| | \\
| N \\
| | \\
| a fool \\

Since P-BE does not bear the capacity to assign Case, John is raised to the Spec of IP_1 and gets nominative Case at S-structure. The whole bi-clause subsequently undergoes LF-restructuring resulting in a mono-clause, on a par with the representation (102) and (103). Note that this idea crucially hinges on the fact that the predicate nominal a fool essentially differs from referential nominals in that it may not (perhaps must not) be Case-marked. One might challenge our assumption that the predicate nominal is Caseless, and suggest that a fool in (104) is in fact somehow Case-marked, conceivably by P-BE. Although, the issue regarding Case-marking on the predicate nominal in general will not be of direct concern to us here, and discussion of it would take me too far afield, let me briefly sketch one clear problem which casts doubt on this line of reasoning.

First, consider a typical usage of the predicate nominal found in a small clause like following:

(105) I consider John a fool

In examples like (105), the predicate nominal a fool can be claimed to be Case-marked by some entity—a plausible candidate, I imagine, is the verb consider. This would then appear to be parallel to the so-called double object constructions hosted by the verbs such as give, send, buy, etc. As correctly noted by Safir (1985, 76), the claim that a fool is Case-marked by the verb consider along with John seems implausible because even prepositions, such as with, would have to license two Cases.

(106) With John an invalid, it will be tough to make ends meet

Notice that the preposition with in general does not have the capacity of assigning two Cases:

(107) * With Mary a book, it will be happy for everybody

Thus, I conclude that there is no independent motivation for the assumption that the predicate nominal is Case-marked (see further discussion in Safir (1985, 77-78). Therefore, our assumption that P-BE does not assign Case can be maintained.

Our next step is to extend our P-BE formations to small clause constructions in general, such as (105), and secondary predicate sentences. I will not get into a detailed analysis of these constructions in this section (see § 2.4). However, I will briefly consider some related matters concerning
secondary predicates, and make some preliminary remarks on there-constructions before ending this section.

Observe the pair of following sentences in English:

(108) a. Many men are sick
    b. There are many men sick

At first glance, it seems plausible that these two sentences should be somehow related to each other. I attempt to take a step toward that direction—relate these two constructions in some explicit way. As a first step, let us reconsider (108a) in light of the discussion of (101-103). Suppose the D-structure representation of (108a-b) is (109) on a par with (101).

(109)

Suppose further that many men in the Spec of IP₂ can raise to the Spec of IP₁, or alternatively, that it can remain in situ for some reason (soon to be clarified). Then, (108a) is obtained by raising of many men. If many men remains in situ, the Spec of IP₁ must be filled by a lexical element—such as expletive there.²³ If P-BE (light be) does not assign Case, as I have assumed thus far, an apparent problem arises: how can many men void Case Filter or Visibility Condition if many men is not Case-marked? To solve this problem, let us assume that P-BE in fact assigns some kind of Case which is somewhat distinct from the conventional "structural" Case, along the lines of recent proposals in Belletti (1988), Cinque (1988), Lasnik (1989) and Larson (1988) (but contra Safir (1985)). Belletti (1988) coins this as "partitive" Case, and Cinque (1988), "inherent" Case. I term this "W(eak)-Case" opposed to "S( trong)-Case," which is in essence equivalent to traditional (structural) Case (recall the facts and discussion related to this distinction in section 8). I further surmise that Case Filter and Visibility Condition may be reformulated as follows (see also Mahajan (1990, ch.1) for analogous ideas).

(110) Case Filter

A lexical NP in an A-position must have Case (either W- or S-) at S-structure

(111) Visibility Condition

A chain (or CHAIN) must have a S-Case in order to be visible at LF

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²³ There are several conceivable scenarios triggering the insertion of the expletive in English (and other languages). One of the most popular sorts is suggested in Chomsky (1982) known as Extended Projection Principle—stipulates that Spec of IP must be filled at S-structure. Another plausible account in my mind is Kase Discharge Principle proposed in Fuku & Speas (1986)—roughly put, Infl in English bears certain Kase features to be discharged, hence some elements must occupy the Spec of IP to help these Kase features to be discharged. It is not our immediate concern here to formalize the principles which trigger there-insertion. It suffices to say for our purposes that Spec of IP₁ cannot remain unfulfilled.
longer violates Case Filter at S-structure. Further, at LF the CHAIN (there, many men) can meet (111). Thus, the variants in (108) can be properly accounted for. One last point I wish to make before leaving this section is that not all P-BE small clauses may have there-insertion counterparts. Consider a simple case below:

(112) a. John is sick
    b. * There is John sick

(112b) would seem to be ruled out by what is known widely as the Definiteness Effect (see Milsark (1974) and Safir (1985) among others). At this stage, let us simply stipulate that W-Case marked NPs cannot be definite (cf. Belletti (1988) where it is claimed that partitive Case-marked NPs cannot be definite). I will further justify this claim in the subsequent sections.

1.10 There-constructions

It is generally held that expletive there is inserted in a non-theta position in order to satisfy the Extended Projection Principle (Chomsky (1982)). The pair in (113) below represents a typical case:

(113) a. A book is on the table
    b. There is a book on the table

Hereinafter, let us refer to the sentence like (113b) as there-BE constructions in order to distinguish them from other there-constructions involving main verbs. In section 9, I claim that the construction (114a), roughly put, has the D-structure (114b), the S-structure (114c), and presumably the LF-structure like (114d).

(114) a. There are many men sick
    b. $[S_1 e [VP are [S_2 many men [AP sick]]]]$   D-structure
       (by there-insertion)
    c. $[S_1 there [VP are [S_2 many men [AP sick]]]]$   S-structure
       (by Restructuring)
    d. $[S there+many men [VP are+ sick ]]$   LF

Let us assume the following Scope Principle for English (Enc (1990, class lectures)):

(115) Scope Principle (provisional)

$£$ has $¥$ in its scope if $£$ m-commands some member of $¥$-chain at S-structure

With (114) and (115) in our mind, let us consider the contrast in the following pair:

(116) a. Many men aren't sick
    b. There aren't many men sick
As noted in Safir (1985, 142), (116a) is ambiguous (except for some dialects, where only the reading in (117a) is available) while (116b) has only the interpretation paraphrased as (117b).

(117)  a. There are many men such that they are not sick  
       b. It is not the case that there are many men sick

The ambiguous reading of (116a) is predicted by (115) given the S-structure representation of (118).

(118)  [S1 many men [VP aren't [S2 t [AP sick]]]]

Notice that many men m-commands the negator n't, and the negator n't also m-commands t, a member of the chain containing many men, hence it is predicted that either many men or the negator n't can take wide scope over the other. In (117b), however, many men must always take narrow scope under negation, as seen in the following (119):

(119)  [S1 there [VP aren't [S2 many men [AP sick]]]]

Given (115), it is predicted that in (117b)/(119) only the "Neg > many" reading should be available (see Safir (1985, 142-152) for similar line of reasonings).24

24 Along the same lines, the scope contrasts in the following raising contexts can be correctly captured (Safir (1985, 148)).

(i)  a. There seem to be many ships in the harbor  
     b. Many ships seem to be in the harbor

Returning to the there-BE constructions illustrated in (113b), repeated here, the same argument holds as with (114).

(113)  b. There is a book on the table
(120)  [S1 there [VP is [S2 a book [PP on the table]]]] S-structure

Notice, however, that there are clearly other instances of there-BE constructions. Here, I illustrate one of the instances, the so called there-BE construction under "list reading" (Milsark (1974)), as shown below:

(121)  A: Who do we have to play Othello?  
       B: Well, there's John, his uncle, and the man with a limp

As noted in Milsark, this sentence is licit when some sort of "heading" for the list is presupposed. Following an insight from Safir (1985), I suggest that there-BE constructions under the "list reading" essentially employ an I(dentificational)-BE (or heavy be in our sense). Unlike light be, I have claimed that heavy be assigns S-Case. Hence the Definiteness Effects (DE) does not necessarily show up in (121B) since this effect only arises with W-Case ([+W, -S]-Case) marked NPs. Note further that (121B) is inherently mono-clausal (contra P-BE constructions) as with normal transitive sentences. Thus, (121B) may have the following D-/S-/LF-structure.

(122)  [S there [VP is NP]]

Witness that in (ia), it is not possible for many ships to take scope over seem, whereas it is possible in (ib).
Note in passing that the postverbal NPs are assigned an accusative S-Case by I-BE, and by Burzio's Generalization, I-BE must take an external argument. Therefore there in (121B) should be an argument, perhaps some sort of indexicals or demonstrative pronouns.

To summarize up to this point, there seem to exist at least two kinds of there-BE constructions the contrast of which essentially hinges on the two types of be — namely, P-BE and I-BE. I propose that P-BE lacks the ability to assign S-Case, but that it can assign W-Case. Whereas, I-BE assigns S-Case (and perhaps W-Case, too). I further suggest that the DE is strongly tied to Case-marking (cf. Belletti (1988)). More specifically, it is only W-Case marked NPs that must be indefinite (more precisely speaking, [+W,-S]-Case marked NPs display the DE). I further note that seeming expletive there employed in I-BE there-constructions crucially differs from that in P-BE there-constructions in that the former has some thematic import, while the latter has very little import. I also claim that I-BE only selects an NP, hence I-BE there-construction is mono-clausal. However, P-BE there-constructions are necessarily bi-clausal at D-/S-structure since, by assumption, P-BE inherently selects a (small) clause argument.

In what follows, I will briefly describe what the overt manifestation of the W-Case that P-BE assigns may look like. In English, there seems to be no phonetic realization of W-Case. Thus, it is not possible to see whether it is nominative-like, accusative-like, oblique-like, and so forth. Interestingly, however, there seem to be some surface manifestations of W-Case in other languages. We have already seen a surface realization of W-Case in Korean — the phonological shape of it is identical to the "accusative" S-Case counterpart. Also there is an overt manifestation of W-Case detected in Es gibt impersonal constructions in German, as noted in (Safir (1985, 128)). The postverbal NP in these constructions seem to exhibit the DE, and is marked with Accusative Case.

(123) Es gibt einen Mann im Garten
there gives a + ACC man in + DAT garden
(There is a man in the garden.)

The appearance of Acc Case in German there-construction may shed light on several significant consequences of the analysis of P-BE there-constructions I have conjectured. First, the German examples may support our claim that P-BE in English plausibly does assign Case (W-Case). Second, if W-Case is assigned, it may be identical to "Accusative" Case which is anyway phonetically invisible in English.

Similar evidence can be found in il-constructions of French, as observed by Pollock (1984) and R. Kayne (cited in Cinque (1988)).

(124) a. Comme il vous l'a dite, le colloque n'aura pas lieu
(As it was said/declared it to you, the conference will not take place.)
b. Comme il me l'est passé par la tête, ...
(As it came to my mind, ...)

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25 Recall our revised version of BG in (83) of section 7, repeated here, which is relevant to our concern.

(1) A verb assigns an external theta-role if it assigns "S-Case."
Note that as shown in (124a-b), the clitics are assigned morphologically accusative Case in French there-constructions. Thus, this fact further supports our conjecture.

Our proposal may further shed light on the ungrammaticality of the following sentences, as noted in Safir (1985, 149).

125 a. * There seems a man (to be) sick
     b. * There are believed many ships (to be) unseaworthy.

Assuming that the verbs such as seem and believed do not assign W-Case although they can select sentential complements, we can understand why these sentences do not allow there-insertion variants since the postverbal NPs in (125) are Caseless, hence it invokes a violation of Case Filter. Note in passing that this line of reasoning is also consonant with the proposal provided by Burzio (1981). He conjectures that raising verbs such as seem and appear do not assign Case, whereas the verb be in English exceptionally assign Nominative Case across a clause boundary (in fact, he argues that be is the only one). However, my proposal clearly departs from Burzio (1981) in that be (P-BE) assigns "accusative" W-Case.

I further show that P-BE is not the only verb which can assign Acc W-Case in English. In what follows, I will demonstrate that unaccusative verbs in there-constructions generally bear this potential.

Consider the following pair of sentences in English:

126 a. A severe thunder storm arose
     b. There arose a severe thunder storm

Following proposals in Burzio (1986), I assume that the verbs permitting "there-insertion" can be analyzed as unaccusatives (Perlmutter (1978)), hence the sole argument of arise is an underlying object, and its subject position is vacant at D-structure:

127 [IP e [VP arise a severe thunder storm]]

Given (127) as the underlying structure for (126a-b), a simple intransitive form like (126a) is derived by shifting the object NP to subject position. And, when the NP optionally remains VP-internally, the vacant IP subject position triggers insertion of dummy there, which yields (126b). As noted in Milsark (1974), however, it is not the case that the entire class of unaccusatives allow there-insertion variants. It seems that pleonastic there appears only with a certain semantic class of intransitives connoting "existence" or "coming into existence" and "availability" or "coming into availability." Thus, as shown by Larson (1988, 23), in pairs of verbs like appear/disappear, arise/fall, enter/exit, only the former admits expletive there despite the similarity of their underlying syntax:

128 a. i. There appeared a tall, dark stranger
     ii. * There disappeared a tall, dark stranger
b. i. There arose a great civilization
   ii. * There fell a great civilization

c. i. There entered a small, shy child
   ii. * There exited a small, shy child

For expository purposes, let us call the type of there-constructions displayed
in (128), there-unaccusatives. Recall that in P-BE there-constructions, it is
claimed that P-BE (light be in our term) takes a small clause underlyingly.
Extending this idea to there-unaccusatives, let us assume that unaccusatives
in English can be optionally used as a light verb taking a small clause
complement on a par with P-BE. Further assume that there exists hidden
predicate underlying in the small clause $S_2$ below, based on the assumption
that every clause should contain a predicate. Thus, (128bi) may have the
following D-/S-/LF-structure (the hidden predicate is indicated as E):

(129) a. [S1 e arose [S2 a great civilization E]]
       D-structure

    b. [S there arose [S2 a great civilization E]]
       S-structure

    c. [S there+a great civilization [VP arose+E]]
       LF

I further speculate that the semantics of the hidden predicate E denotes
"existence" or "coming into existence", or "availability" or "coming into
availability" which is, in some way, tied to the matrix predicate at LF. Note
that by the LF-restructuring process, the merging of the two predicates, arise
and E, results. Thus, I surmise that only a certain class of unaccusative verbs
in English which are compatible with the underlying semantics of E can

yield there-insertion alternatives.\(^{26}\)

To summarize this section, I have discussed several kinds of there-
constructions in English. I have suggested that they can be partitioned into
two groups: I-BE there-constructions on one side, P-BE and unaccusative there-
constructions in the other. I have also proposed that P-BE and some
unaccusative verbs in there-constructions take a sentential complement, an
analogue of a small clause. I have also claimed that P-BE and the
unaccusatives in there-constructions assign W-Case ([+W,S]-Case), whereas
I-BE (in there-constructions) assigns S-Case (perhaps [+S,±W]-Case).\(^{27}\) I
have further conjectured that [+W,S]-Case assigned NPs must be
"indefinite," hence the DE is subsequently invoked in P-BE and unaccusative
there-constructions.

26 Very limited class of passive constructions allow there-alternatives. I illustrate some of
them as follows:
(i) a. * There was seen a man in the garden
    b. ? There was given a book to John by Betsy
    This process, however, is clearly far from productive in English as shown in the following:
(ii) a. * There was hit a man by Mary
    b. * There was eaten an apple by a child
    c. * There were watched TV by many kids
    I have no particular insight into why this should be so. Presumably, W-Case cannot be
assigned by past participles in English unlike other languages (see Belletti (1988)) which
do allow these alternations relatively freely in passive constructions. I speculate that
passive participle in English not only absorb S-Case but also W-Case. While, in other
languages, I guess past participles absorb S-Case only (see Afarli (1989) for similar
proposal). If this is correct, the examples in (i) seem to be exceptional cases in English.

27 Notice that W-Case and S-Case do not have to be in complementary distribution. That
is, logically, there may exist four kinds of "Cases" in our system: [+S,W], [-S,W], [+S,+W]
and [-S,-W]. I have claimed that light verbs in Korean, Japanese and English are [-S,+W]-
Case assigners: this class of verbs includes ha in Korean, su in Japanese, and P-BE and
unaccusative verbs in English there-constructions. Heavy verbs, I assume, assign [+S,±W]-
Case — i.e. S-Case with W-Case unspecified. I leave open the differences between
[+S,+W]-Case and [+S,-W]-Case, and the nature of [-S,-W]-Case in this work.
1.11 Conclusion

This chapter has explored the nature of light verbs and LVCs in Korean, Japanese and English. I have tried to show some explicit ways of distinguishing LVCs from HVCs, in terms of Theta-theory and Case-theory. The clear distinction has not been made in other literature discussing LVCs, to my knowledge, hence it has often invoked various confusions. I have also demonstrated three types of LVCs in Korean by providing formal machinery for explaining them. Essentially, I have claimed that the first type is formed in Lexicon, and the second type undergoes Restructuring at S-structure. I have further proposed that the third type of LVCs in Korean employs a bi-clausal structure at D-/S-structure (cf. Lee's (1990)), and subsequently undergoes Restructuring at LF. Then, I have put forward some empirical consequences and theoretical implications of the bi-clausal nature of LVCs by examining the contrasts in extracting unaccusative VNs versus unergative VNs, on a par with VP-movements. I have also raised several apparent problems concerning the validity of Burzio's Generalization, and offered possible solutions by putting forward the existence of two kinds of Case. This idea has supported by discussing Double-a-Constraints in Japanese. I have further extended our bi-clausal analysis of LVCs to there-constructions in English based on the assumption that the verb be and a certain semantic class of unaccusative verbs in English can be used as a light verb.

Chapter 2

VP-MOVEMENT

2.0 Introduction

In chapter 1, I claimed that the following structures involving unaccusative V are ill-formed due to either the PBC or ECP.

(1) a. * [VP swipkey t1 samang](-ul) [yenghi=ka tvp ha-yess-ta] easily die(-A) -N HA-Pst-Dec
   (die easily, Younghee did.)
   b. * [VP (manhi) t1 oki](-nun) [pi=ka tvp ha-yess-ciman] ...
   (a lot) come-Contra rain-N HA-Pst-although
   (rain a lot, although it did ...)

Also recall that similar constructions involving unergative V allow VP-movement freely. As indicated in the following schema,
the fronted VP in unergative constructions, I have claimed, does not include the trace of the subject (contra (1)), hence neither the PBC nor the ECP violation occurs.

My proposal, however, is clearly contrary to the so called VP-internal subject hypothesis (hereafter VP-ISH) of Fukui and Speas (1986), Kuroda (1986), and Speas (1990) among others, which basically claims that the subject of a clause originates in [Spec, VP]. To put it more specifically, the subject in a unergative construction in (3), for example, should have a S-structure like either (4a) or (4b), given VP-ISH.

(1) will ignore V-to-I raising and some details in the functional projections until chapter 3.)

(3) Yenghi-ka ppali ttwuyki-nun ha-yess-ta
   -N fast run-Contra HA-Pst-Dec (Younghee DID run fast.)

(4) a. [s₁ pro [s₂ pro [vp Yenghi-ka ppali ttwuyki-nun] ha-yess-ta]
    b. [s₁ pro [s₂ Yenghi-ka [vp t₁ ppali ttwuyki-nun] ha-yess-ta]

If subjects can remain VP-internally to get Case from INFL, we expect (4a), while if subjects must move to specifier of IP for some reason, we may get (4b). Then, in order to achieve a surface order like (2), structures like (4a) and (4b) may yield the following S-structures, (5a) and (5b) respectively.

(5) a. [vp t₁ ppali ttwuyki-nun [s₁ pro [s₂ Yenghi-ka [s₂ pro tvp ]] HA-yess-ta]
    b. [vp t₁ ppali ttwuyki-nun [s₁ pro [s₂ Yenghi-ka tvp ]] HA-yess-ta]

(5a) is derived by the VP-fronting preceded by the scrambling of the embedded subject Yenghi. While (5b) is derived by the VP-fronting which contains the trace of the embedded subject. In either event, an apparent problem arises; that is, neither of them should be immune to PBC/ECP effects. Thus, , if the derivations are correct, both of them should be ruled out. But, as we have noted earlier, the VP-fronted version of (3), repeated below, is surprisingly grammatical.

(6) a. [vp ppali ttwuyki-nun Yenghi-ka tvp ha-yess-ta
    -N (fast) run-nun HA-Pst-Dec
    (run fast, Younghee did.)

Thus, the VP-ISH does not seem to be tenable in Korean. The evidence so far, however, is not conclusive for rejecting the VP-ISH in Korean. In what follows, I wish to show that in fact some version of the VP-ISH should hold in Korean and English. Essentially, I will justify the following premises: (i) There is a projection which immediately dominates VP. Let us call this projection μP. (ii) Subjects are base-generated in [Spec, μP] in Korean and English; not VP-internally. Thus, strictly speaking, subjects in English and Korean are not VP-internal, but VP-external. Subjects in the Spec of μP position are raised further up in English, maybe up to [Spec, AgrP]. (iii) The PBC must be subsumed under the ECP. (iv) VP-movement does not exist in
English (I will argue that the relevant cases are all instances of a certain XP-movement—larger than VP, presumably a projection of Aspect; AspP) but it does exist in Korean and the cases we have seen so far should be instances of true VP-movement.

This chapter is organized as follows. First section concerns VP-fronting in English. I suggest that seeming VP-fronting in English is in fact AspP-fronting. I will further claim that the PBC should be subsumed under the ECP. In section two, I will briefly discuss the status of real VP-movement in English, and show that it is always illicit due to V-raising. Hence, it doesn’t exist in English. Section 3 provides an analysis of ECM constructions in English. Following Johnson’s (1990) suggestion, I will offer a new definition of A/A*-position and make some necessary revisions to the ECP based on the new definition of A/A*-positions. I will also show that our revised ECP can account for some problems concerning ECM constructions in English. In section 4, I will extend the analysis of ECM constructions to small clauses in English, and demonstrate some further desirable consequences of our proposal. In section 5, I will explore the nature of the movement of to-infinitives in English. Here, I will briefly consider several previous proposal for immobility of “raising” to-infinitives, and show that there are all unsatisfactory. In section 6, I put forward a solution to the problems raised in section 5 concerning the movements of various to-infinitive types. I will suggest that the asymmetries can be accounted for under our conjunctive formulation of the ECP—essentially by the role of L-government. Section 7 briefly considers various potential alternatives for explaining the apparent ECP/PBC violation in the construction such as “How likely t to win is John?” and show that none of the previous approaches are adequate. In section 8, I return to the status of VP-movements in Korean and show how they should differ from those in English. Essentially, I will justify that V-movements exist in Korean unlike in English.

2.1 VP-movement in English and the PBC

First, consider the following VP-fronting sentences in English.

(7) a. hit by Mary, I think, John was [Passive]
b. arrive early, I think, the train did [Unaccusative]
c. be in the house, I think, John would [Copular]

Assuming that the passive/unaccusative/copular construction in English involves an NP-movement from the object position of the verb to the [Spec, AgrP] position, we may get the following derivations for (7).¹

¹It is not crystal clear how to identify verbs of unaccusative class in English. However, two diagnostics have been suggested in Burzio (1986, chapter 2). Burzio notes that the majority of verbs with which there can appear most naturally can be regarded as unaccusatives. This is shown by the following minimal pair (Burzio 1986, 160).

(i) a. There began a riot
b. *There started a riot
By this test, we may illustrate some of unaccusative verbs in English (Burzio 1986, 159).
(ii) begin, arise, emerge, develop, ensue, exist, occur, arive, follow
He further observes that unaccusatives cannot undergo -er affixation.
(iii) killer, walker, *arriver
The raising verbs such as seem and appear along with the copula be also share this property (See further details therein). The first diagnostic alone, however, may not suffice to distinguish unaccusatives from unergatives due to the existence of the so-called “presentational” there-constructions. as seen in the following sentences:
reconstruction or not (see further evidence in Saito (1989)).

Note further that the fronted wh-phrases exhibit reconstruction (or connectivity) effects as discussed in Barss (1986).

Which pictures of himself did John think Bill saw t

is ambiguous with respect to the interpretation of the anaphor himself; that is, himself can either refer to John or Bill. This amounts to saying that (10) may show the multiple reconstruction possibilities—partial reconstruction to the Spec of the embedded CP or full reconstruction to the D-structure object position. VP-reconstruction structures, however, exhibit a more limited range of reconstruction possibilities. Thus, the anaphor contained in a fronted VP in (11), is not ambiguous; i.e. himself can refer to only the embedded subject Bill.

Criticize himself1/2, John1 thinks Bill2 would not

This is rather a surprising consequence, given the fact that the fronted VP can undergo (partial) reconstruction like the fronted wh-phrase in (10).

There are at least two possible solutions for this contrast, as noted in Huang

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2 Barss (1986) notes the following "that-t effect."

(i) * who do you think [cp that [t [VP likes Bill]]]

Barss observes that in (i) who is adjoined to the lower VP, yielding (ii), then raised to its matrix position through the Spec of CP.

(ii) * who do you think [cp that [t [VP t [VP likes Bill]]]]

Following Chomsky's (1986) definition of m-command, t properly governs t in (ii), voiding the ECP violation. However, the PBC may correctly rule out this illicit derivation if the notion bound is defined in terms of c-command. Of course, the ECP can also rule this derivation out by changing m-command into c-command for Barriers. (See Chomsky (1986, fn.48) for further problems.)

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(iv) There walked/danced/jumped/hopped/ran a man down the street

Actually, unergatives seem to be more productive with there, in a presentational context, than unaccusatives, which have a number of semantic restrictions, as I discussed in § 1.10. Thanks to Roger Martin for reminding me of this fact.
(1990): (i) The difference comes from two different modes of A*-movement—one is wh-movement, the other is Topicalization. (ii) The contrast underlies in whether a wh-phrase or a non-wh-phrase is moved. Neither of these conceivable answers, however, seems to capture the correct generalization, as Huang points out. Huang notes that topicalization of an NP also contrasts with VP-fronting and behaves on a par with wh-questions as seen below.

(12) a. Those picture of himself_{1/2}, John_{1} thinks Bill_{2} will buy t
b. Criticize himself_{1/2}, John_{1} thinks Bill_{2} would not t
c. Which pictures of himself_{1/2} did John_{1} think Bill_{2} saw t

(12a) clearly shows that neither a difference in the landing site nor a difference in wh-features of the fronted phrases can be responsible for the contrasts. Thus, the correct generalization, suggested by Huang (1990, 4) (due to Barss) is that:

"whenever a predicate is moved, it displays a pattern of reconstruction possibilities more limited than when an argument is moved."

This point is confirmed by the following examples from Huang (1990, 4-5).

(13) a. How proud of himself_{1/2} does John_{1} think Bill_{2} will be t
b. A victim of himself_{1/2}, John_{1} thinks Bill_{2} will never be t

(13) shows that other fronted predicates, either AP or NP, pattern with VP (see further discussion in Huang (1990)). Then, why do only fronted predicates (say, a VP) give rise to the limited reconstruction possibilities?

Following the spirit of Huang’s (1990) conjecture, I suggest that the fronted predicates contain the trace of the subject left by the movement to the Spec of AgrP while the fronted arguments in (12a) and (12c), on the other hand, does not include this sort of the trace. Then, predicate-fronting structures can be schematized as follows: (PredP = Predicate Phrase)

(14) [PredP t_{1} Predicate^{0} himself_{1/2}, John_{1} ... Bill_{1} ...

Given this structure, when a VP or AP or predicate nominal is fronted, the trace of the subject in the PredP is also fronted with it, hence, the fronted PredP (VP/AP/NP) is a Complete Functional Complex (CFC) in the sense of Chomsky (1986), in which the anaphor himself must be bound. Therefore, himself must be bound by t_{1}, the trace of Bill. John, however, cannot be a possible antecedent for himself since the anaphor himself cannot be free in its CFC (PredP) containing its potential binder t_{1}. Thus, the ill-formed readings in (12b) and (13) follow correctly. In (12a) and (12c), however, the fronted NP does not contain the trace of the subject; therefore, himself can be bound by John when the fronted NP is partially reconstructed, and further himself can be bound by Bill where the fronted NP is reconstructed to its D-structure position.3 (14), however, is apparently an instance of a PBC (or

3 At this stage, one may wonder whether the fronted PredPs actually undergo reconstruction. The data observed up to this point does not display any convincing evidence for PredP-restructuring. The following examples from Huang (1990), however, show that the fronted VP and AP should undergo reconstruction.

(i) a. * t_{2} Criticize John_{1}, he_{1} said I_{2} will not t
b. * t_{2} [t_{1} Criticize John_{1}, I said he_{1} will not t

(ii) a. * t_{2} How proud of John_{1}, does he_{1} think I_{2} should be t
b. * t_{1} [t_{2} How proud of John_{1}, do you think he_{1} should be t

The violation of Principle C seems to be accounted for in (ib) and (iiib) without recourse to reconstruction effects, since John is not free in the fronted PredP. The ill-formed reading in (ia) and (iia) cannot dispense with the reconstruction of the fronted PredP, otherwise, the
ECP) violation on a par with (8). Furthermore, consider the following examples parallel to (14) and (8).

(15) a. John\textsubscript{1} is likely t\textsubscript{1} to win
    b. [How likely t\textsubscript{1} to win] is John\textsubscript{1}

(16) a. John\textsubscript{1} is certain t\textsubscript{1} to win
    b. [How certain t\textsubscript{1} to win] is John\textsubscript{1}

Notice that the offending traces in (8), (14), (15) and (16) are all instances of NP-traces. Huang (1990) conjectures that the binding requirement of an NP-trace is crucially different from that of a WH-trace. That is, the binding requirement of the NP-trace can be fulfilled by reconstruction effects, whereas reconstruction effects are not available to the principle of A'- or variable binding (in section 2.7.1 I will discuss this problem in detail). Recall from (9), repeated here, that WH-trace inside the fronted phrase does not void a PBC violation.

(9) a. ?? Who\textsubscript{1} do you wonder [which picture of t\textsubscript{1}]\textsubscript{2} John likes t\textsubscript{2}
    b. * [which picture of t\textsubscript{1}]\textsubscript{2} do you wonder who\textsubscript{1} John likes t\textsubscript{2}

My account for this contrast, however, essentially departs from the approaches that basically treat A-traces as independent of A'-traces. This implies that the contrast between NP-trace and WH-trace demands an alternative explanation with respect to reconstruction effect on independent grounds. More specifically, I will show that all instances of traces (A-/A'-

traces) must conform to the ECP: the trace must be properly governed. I will further propose that the PBC can (and should) be reduced to the ECP on a par with the Head Movement Constraint (Travis (1984), Chomsky (1989)).

First, let us consider how the subject in English can be generated. Assume the following clausal projection in English (and presumably, universally). (Temporarily I ignore TenseP and NegP, here. But see (23.).)

(17) \begin{center}
\begin{tikzpicture}
  \node (Subj) {\text{Subj.}};
  \node (AgrP) at (1,0) {\text{AgrP}};
  \node (Agr') at (2,0) {\text{Agr'}};
  \node (AspP) at (1,-1) {\text{AspP}};
  \node (t') at (2,-1) {\text{t'}};
  \node (Asp') at (3,-2) {\text{Asp'}};
  \node (Asp) at (4,-3) {\text{Asp}};
  \node (t) at (5,-4) {\text{t}};
  \node (μ) at (6,-5) {\text{μ}};
  \node (VP) at (7,-6) {\text{VP}};

  \draw (Subj) edge (AgrP);
  \draw (AgrP) edge (Agr');
  \draw (Agr') edge (AspP);
  \draw (AspP) edge (t');
  \draw (t') edge (Asp');
  \draw (Asp') edge (Asp);
  \draw (Asp) edge (t);
  \draw (t) edge (μ);
  \draw (μ) edge (VP);
\end{tikzpicture}
\end{center}

As shown in (17), the subject in English is base-generated in [Spec, μP] at D-structure and is further raised to [Spec, AgrP] through the Spec of Aspect Phrase at S-structure. The articulated clausal projection in (17) yields the consequence that what is fronted in VP-fronting can be a category bigger than the bare VP. Essentially, I suggest that the fronted category is the AspP in English. Armed with this idea, let us reconsider the problematic VP-fronting cases in English. Now (11) and (13) can be rewritten as the following structures.

(18) a. [AspP t'\textsubscript{1} \text{μP} t\textsubscript{1} [VP criticize himself\textsubscript{1}/2]]\textsubscript{2}, John\textsubscript{2} thinks Bill\textsubscript{1} would not t
b. \([\text{AspP } t_1 \text{ [\text{AP how proud of himself}]} / \text{t}_2]\) does John$_2$ think Bill$_1$ will be t
c. \([\text{AspP } t_1 \text{ [\text{NP a victim of himself}]} / \text{t}_2]\), John$_2$ thinks Bill$_1$ will never be t

Assume a version of the ECP proposed in Lasnik & Saito (1989). Under L&S's system of the ECP, all arguments must be \(\gamma\)-marked at the final stage of S-structure while all the adjuncts (non-arguments) are \(\gamma\)-marked at the final stage of LF. L&S's system cleverly rules in the derivations in (18).

Notice that \(t_1\) is an argument trace while \(t'_1\) is not, given the assumption that subjects are base-generated in [Spec, \(\mu\)P] in English. At S-structure, \(t_1\) is antecedent-governed by \(t'_1\), hence \(t_1\) is assigned a [+\(\gamma\)] index. \(t'_1\), however, is not assigned \(\gamma\)-index at S-structure, and by the Full Interpretation principle, \(t'_1\) must be deleted at LF. Consequently, there remains no offending trace at LF, thus the ECP is satisfied. Under the PBC account, \(t'_1\) is clearly an offending trace—\(t'_1\) is not bound—although the trace does not violate the ECP. Since the sentences are all grammatical, the PBC is too strong in this regard unlike the ECP. The ECP account further properly rules in the following sentences, which the PBC incorrectly rules out.

(19) a. \([\text{AspP } t'_1 \text{ [\text{\(\mu\)P } t_1 \text{ [VP hit } t_1 \text{ by Mary]}]}], I \text{ think, John}_1 \text{ was} [\text{Passive}]\)
b. \([\text{AspP } t'_1 \text{ [\text{\(\mu\)P } t_1 \text{ [VP arrive } t_1 \text{ early]}]}], I \text{ think, the train}_1 \text{ did} [\text{Unaccusative}]\)
c. \([\text{AspP } t'_1 \text{ [\text{\(\mu\)P } t_1 \text{ [VP be } t_1 \text{ in the house]}]}], I \text{ think, John}_1 \text{ would} [\text{Copula}]\)

Parallel to the account for (18), \(t_1\) can be properly governed (antecedent-
governed by \(t'_1\). \(t'_1\) and \(t'_1\), however, can be deleted at LF since they are not arguments. Thus (19) is expected to be well-formed under the ECP account. The PBC account, on the contrary, fails to rule in (19), since \(t'_1\) is not bound there. The apparent violation of the PBC/ECP in (15) and (16), repeated here, follows in exactly the same way.

(20) a. \([\text{AspP } t'_1 \text{ [\text{\(\mu\)P } t_1 \text{ [VP likely to win]}]}], I \text{ think, John}_1 \text{ is} [\text{AspP } t'_1 \text{ [\text{\(\mu\)P } t_1 \text{ [VP likely to win]}]}], I \text{ think, John}_1\)

On a par with (18) and (19), (20) is correctly ruled in by the ECP but not by the PBC. (20), however, contrasts sharply with the following where only embedded IP is moved stranding the matrix AspP and \(\mu\)P.

(21) a. * to win (the race). I think, John is likely
b. * It is to win (the race) that John is likely

(21a), for example, may have the following S-structure.

(21') \([\text{IP } t_1 \text{ to win (the race)}], I \text{ think, John}_1 \text{ is [AspP } t'_1 \text{ [\text{\(\mu\)P } t_1 \text{ [\text{AP likely to win]}]}]}]\)

(Here we can also interpret IP as \(\mu\)P and the embedded IP lacks AspP. We will return to this problem later.)

Unlike (20), (21') is an instance of the ECP violation since \(t_1\) is not properly governed—in this case not antecedent governed (assuming a conjunctive formulation of the ECP as in Chomsky (1986)). Thus (21) is expected to be ill-
formed unlike (19) and (20). Note, incidentally, that the PBC violation in (9b), repeated here, can be subsumed to the ECP violation.

(22) * [which picture of t1] John likes t2

Given the conjunctive ECP, t1 in (22) is not properly governed because the trace is not antecedent-governed regardless of the lexical government. This trace cannot be deleted at LF since t1 is an argument trace. Thus (22) can not eschew the ECP violation, either. Up to now, we have seen that the PBC is too strong in (18) and (19) since it incorrectly rules out the well-formed sentences. PBC is also too weak to capture the contrast between (19) and (20). The ECP, on the other hand, can correctly account for the contrast between (19) and (20) and, further, properly distinguishes the differences in (18)/(19) and (22). Thus, I suggest that the ECP subsumes the PBC.

2.2 VP-movement and V-raising in English

One question naturally arises at this point. What happens if a VP moves in English? (or alternatively can a bare VP move at all in English.) Here, I will claim that all instances of seeming VP-fronting discussed so far are in fact a subcase of AspP-fronting. In what follows, I demonstrate some instances of pure VP-raising in English. I will show that pure VP-raising is impossible due to V0-raising in English. Before proceeding the facts on VP-fronting, let us briefly consider Johnson's (1989, 1990) arguments for V-raising in English. Johnson (1990, 7) convincingly shows that an adjacency requirement for direct objects put forward in Stowell (1981) can be derived from the following premises.

(23) a. Specifiers of XP precede X'.
   b. Verbs always move out of the VP they head.
   c. Accusative Case-marked NPs move to Specifier of VP.

According to (23), the S-structure of (24a) can be roughly as (24b).

(24) a. John eats an apple slowly
   b. \[ \ldots_{\mu} \]
      \[ \mu \]
      \[ VP \]
      \[ \mu \]
      \[ NP \]
      \[ eat \]
      \[ an apple slowly \]
      \[ V' \]
      \[ V \]
      \[ t_0 \]
      \[ t_1 \]

(24b) gives rise to an interesting consequence that the following (25b) should be an illicit VP-fronting.

(25) a. I think John eats an apple slowly

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4 Along this line, the following contrast noted in Huang (1990, 8) may also receive a straightforward account.
(i) a. It was [PRO to be frank] that John tried
   b. * It was [t1 to be frank] that John seemed

(ib) violates the ECP while nothing is wrong in (ia), hence the contrast follows.

b.* an apple slowly, I think, John eats

Assuming the structure in (24b), the fronted VP in (25b) will contain the trace \( t_v \) left by V-raising. This is shown below.

(26) \([\text{VP} \text{ an apple} \ 1 \ 1 \text{ slowly [v v t_v t_t ]}]\) ....

Assuming that \( t_v \) cannot be deleted at LF due to the Projection Principle, (26) violates the ECP, given the fact that the HMC/PBC can be reduced to the ECP. Thus (25b) is correctly ruled out.

2.3 ECM constructions in English

Johnson (1990) observes that following ECM constructions in English involve raising of embedded subject to Spec of the matrix VP.

(27) a. John believed Betsy to be intelligent

b. 

```
  \( t_v \) \\
  \mu' \\
  \mu \\
  \text{believe NP} \\
  Betsy t_v \text{ AspP} \\
  V' \\
  \text{VP} \\
  \mu \\
  \mu' \\
  1 \\
  \mu \\
```

Johnson's conjecture has an interesting consequence concerning the following contrast, due to Epstein (1987), which was problematic in the previous analyses on ECM constructions.

(28) a.* I believed sincerely Betsy to be intelligent
b.* I believed Betsy sincerely to be intelligent
c. Who did you believe sincerely to be intelligent?

The ill-formedness of (28a) is accounted straightforwardly by (23c). The contrast between (28b) and (28c), however, invokes a further elaboration in the theory of grammar. The method I will develop for capturing this contrast heavily hinges on the definitions of A and A'-positions. Let us define A/A'-positions contextually, along the following lines, in some sense, similar to Johnson's proposal (1990, 56).6

(29) An A-position = def.

i. a theta-marked position, or
ii. a position governed by a Case assigner, or
iii. a position locally bound by a Case-marked phrase.

An A'-position = def. an XP-position that is not an A-position

---

6 Note, incidentally, that (19-iii) essentially differs from one in Johnson (1990, 56), which states as follows.

(1) a position minimally bound from an A-position
I will discuss the consequence of this minimal difference shortly.
I will assume L&S’s (1989) ECP: which basically states that the ECP is
evaluated at S-structure for argument traces, and at LF for all others. I
further suggest that traces in A-positions defined as (29) can not be erased at
LF while those in A’-position can. We are now ready to address the contrast
in (28b-c). Consider first the ungrammatical (28b), whose S-structure will be
as in (30)

(30)

Following (29), both \( t_1 \) and \( t_2 \) are in A-positions. An argument trace \( t_1 \) is
antecedent-governed by \( t_1 \) at S-structure. \( t_1 \) is not an argument, and must
fulfill the ECP at LF. Note that \( t_1 \) cannot be deleted at LF since it is in an A-
position by (29-iii). \( t_1 \), however, is not antecedent-governed since the V’
immediately dominating sincerely is a Barrier.\(^7\) Thus, (28b) can be correctly

Following Johnson’s (1990) conjecture, if the Case Filter (Visibility Condition
for CHAINs) must be met at LF, the chain (\( \text{who}_1, t_1', t_1 \))—missing the Case-
marked member in Spec of VP—can be licit at S-structure, thus the
representation (31) should be licit. Notice that there is nothing that forces
the trace in Spec of VP in (31) at S-structure. On a par with (30), \( t_1 \) in (31) can

\(^7\) I will sidestep the exact formulation of a Barrier at this stage. For our present purposes,
let us define Barriers in the following fashion to incorporate X’ projections, following
Johnson (1990, 51)
(I) \( A, A=X^* \), is a blocking category for B iff A includes B and is not theta-governed.
\( E \) is a barrier for \( B \) iff \( E \) includes \( B \) and :
(1) \( E \) is a blocking category for B, or
(2) \( E \) immediately dominates a blocking category for B
The definitions of “theta-governs” and “governs” are argued to be (II).

(II) A theta-governs B iff A theta-marks and governs B.
A governs B iff A c-commands B and no more than one projection includes B and
excludes A.
conform to the ECP. However, unlike (30), t'₁ can void the ECP violation. Note that t'₁ in (31) is in an A'-position, by (29), hence t'₁ can (and must) be deleted at LF contrary to t'₁ in (30). Therefore, (18c) is a well-formed S-structure representation, as desired. Further, a licit LF can be derived by a back-and-forth movement of who in [Spec, CP] position to [Spec, VP] position (see L&S (1989)). In this fashion, a Visible Chain (who, t', t) can be produced as in (31'). (Recall that t'₁ must be erased due to the Full Interpretation principle since all superfluous symbols must be deleted at LF.)

(31')

Thus, (31') can observe both the ECP and the Case Filter, and consequently, (28c) is grammatical.

Next, let us briefly see how AspP-fronting cases can be properly accommodated by the revised ECP and our new definition of A/A' position in (29). Recall that the revised ECP essentially includes the following premises.⁸

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⁸The conjunctive formulation of the ECP that I wish to pursue in this thesis essentially departs from L&S's disjunctive formulation. We may reexamine the well-known argument/adjunct asymmetry in the following pair of English sentences in the following way:

(i) a. ?? What₁ do you wonder [CP whether John₂ [μ₁P t₂ lμ₁] fixed [VP t₁ [μ₁P t₁ [V tv t₁ t₁]]] ]

b. How₁ do you wonder [CP whether John₂ [μ₁P t₂ lμ₁] fixed [VP t₁ [μ₁P t₁ [V tv t₀ t₁]]]]

As noted in the previous literature, (ia) does not invoke the ECP violation while (ib) does. The marginal status of (ia) is presumably due to the mild subjacency violation. In (ia), argument trace t₂ is antecedent-governed by t₁ at S-structure, and t₁ in A'-position can be deleted at LF, thus the ECP violation does not occur. In (ib), I assume that t₁ is generated inside VP (presumably, adjoined to V'), thus t₁ is L-governed by the verb. Therefore, the first conjunctive part of the ECP is satisfied. t₁ can be also antecedent-governed by t₁ at LF. The offending trace is in fact t' since it cannot be antecedent-governed by how₁ since CP is a barrier. Further, t₁ cannot be deleted at LF since licensing (evaluating g-feature) cannot occur before deletion at the same level, here at LF, as proposed by L&S. Thus, we can correctly rule out (ib) by the conjunctive ECP, too. Note further that the revised ECP along with our treatment of ECM constructions can properly accommodate the following example discussed in L&S (1989).

(ii) a. ?? Who do you know whether John expects [t to win the race]? B
(ii) is marginal (due to subjacency) but clearly better than the ECP violation cases (cf. (1b).) L&S suggest, due to (ii), that the ECP must be formulated in the following disjunctive way.

(iii) A properly governs B if
i. A theta- or Case-governs B, or
ii. A antecedent-governs B

Let us consider (ii) under our reformulation of the ECP. (ii) can be reproduced as follows.

(iv) Who do you know [CP whether John [μ₁P t₁ lμ₁] expects [VP t₁ [V tv t₁ [AsP t₁ lμ₁ t₀ t₀]]]] [to win the race]]

Consider the chain (who, t', t', t'). By (19), the traces t', t' and t are all in A'-positions, hence, they can be marked +g] by antecedent-government at S-structure. t', however, is in an A'-position by (19), hence it can be deleted at LF. Thus, (iv) satisfies the ECP and the marginality of (ii) correctly follows (due to Subjacency only). We will return to the further consequences of the conjunctive formulation of the ECP and more details in section 2.5.
(32) The Revised (conjunctive) ECP
i. Traces must be lexically governed and antecedent-governed.
ii. Argument traces are evaluated at S-structure, and at LF for all others.
iii. Traces in A-positions can not be deleted at LF, but those in A'-positions can.

Now consider the following S-structure representation of a simple clause focusing on the derivation of the subject.

(33) a. John hit Mary
   b. \AgrP
      \   \(NegP)\  \\
      John t''1 TP
      t1 AspP
      \   \\(t 1\muP)\  \\
      t\(t1\mu')\  \\
      V P
      hit NP2 V'
      Mary tv t2

Recall (29) and consider the A-chain (John, t'', t', t, t).

(29) An A-position =def.
   i. a theta-marked position, or
   ii. a position governed by a Case assigner, or
   iii. a position locally bound by a Case-marked phrase.

An A'-position =def. an XP-position that is not an A-position.

According to (29-i), t in [Spec, µP] is in an A-position since it is a theta-marked position. By (19-iii), t'' in [Spec, NegP] or t' in [Spec, TP] (if NegP can be absent) is in an A-position, too. Thus, none of the traces (t'', (t'), (t)) can be deleted at LF, following (32-iii). t' in [Spec, AspP], however, is not in an A-position since it is neither in a theta-marked position, nor is governed by a Case assigner, and is locally bound by the non-Case-marked t'. Thus, t' can be deleted at LF by (32-iii) since it is an A'-trace. This correctly accommodates the predicate-fronting facts discussed before. Recall that t_1 in (27), repeated here, can be deleted at LF to avoid an ECP violation.

(18) a. [AspP t' [µP t [VP criticize himself]]) John1 thinks Bill2 would not t
   b. [AspP t' [µP t [AP how proud of himself]]] does John1 think Bill2 will be t
   c. [AspP t' [µP t [NP a victim of himself]]] John1 thinks Bill2 will never be t

The deletion of t_1 is possible at LF since t_1 is in an A'-position. Thus (18) is expected to be licit.

So far, I have shown that pure V'-fronting is not possible based on independent arguments (e.g. V-raising) provided in Johnson (1989, 1990). I have also briefly discussed an alternative treatment of ECM constructions whose essential ideas originate from Johnson (1990).\(^9\) This line of approach

\(^9\) Here, I have slightly modified Johnson's proposal. Johnson suggests that the embedded clause is not defective, but a full CP clause. Thus our AspP and µP correspond to Johnson's CP and CP respectively. However, there are some independent motivations to bar improper movement (a movement from the Spec of CP to an A-position). Consider so called "super-raising" sentence in English as follows.
(i) *John seems that it is likely [t to win the race]
   At least two derivations in (ii) seem to be conceivable for (i).
   (ii) a. John seems [CP that [IP it is likely [AspP [µP t to win the race]]]
         \[+γ] [+γ]
   b. John seems [CP that it is likely [AspP t [µP t to win the race]]]
      \[+γ] [+γ] [+γ]
along with an enriched clausal structure both has interesting theoretical implications and gains some further empirical support.

2.4 Small clauses in English

In what follows, I offer some supporting evidence for our claim along the lines with Johnson's conjecture. I will further propose a uniform treatment of so-called Small Clause constructions on a par with ECM constructions in English. Thus, (34b-c) involve similar S-structure representations to (34a), as is shown in (35).

(ii) is an instance of an ECP violation since there is an offending trace in the Spec of AspP. Note that this trace is locally bound by a case-marked phrase John, so the trace is in an A-position and it should be fulfilled the ECP. However, the trace is not antecedent-governed since CP dominating a Blocking Category—say, IP—is a Barrier. Note, incidentally, that permitting more traces between IP and AspP cannot save the ECP violation since the uppermost trace would not be properly governed for the same reason. Thus (iii) correctly rules (i) out. Note, however, that if improper movement is allowed as in (ii), all the traces can void the ECP violation, hence (i) must be wrongly ruled in. Thus the improper movement must be independently motivated.

Further, observe the following ill-formed sentences in English (see, however, Johnson (1990,55-61) for an alternative conjecture).

(iii) a. *John was tried to win the race
b. *John was wanted to win the race
By the same logic, (iii) can be incorrectly ruled in, given the following S-structure derivations involving improper movement.

(iv) a. John was tried [CP t AspP t to win the race]]
   \[\gamma] [+\gamma] [+\gamma]
b. John was wanted [CP t AspP t to win the race]]
   \[\gamma] [+\gamma]
   [+\gamma] [+\gamma]

Another evidence of blocking improper movements is induced in Kayne (1987) for French clitic constructions. For these reasons, I adopt the view that embedded clauses in ECM constructions are CP-less in English (see, however, Kayne (1981) for French and Rizzi (1982) for Italian.)

Assuming (35) to be correct, some interesting consequences follow.

First, as noted in Huang (1990, 12), when the small clause predicate is fronted, it displays a pattern of reconstruction possibilities parallel to the predicate fronting observed in (11) and (13) above.
(36)  a. How angry at each other did John think that he has made the men?
    b. * How angry at each other did John think that they have made John?

(36) shows that the reciprocal must be bound by the most deeply embedded subject, the subject of the small clause. Given the S-structure representation of (36b) as follows,

(27) [AspP t₁ [μP t₁ [AP how angry at each other] / *2]] did the men think that they have made John

(37) correctly predicts the restricted nature of predicate reconstruction with respect to the effects of binding principle A.

The second consequence of the representations in (35) is that small clauses cannot be moved as a unit.10

(38)  a. * Betsy intelligent, John considered
    b. * Betsy angry at him, John made

Given (35), small clause fronting in (38) can be actually seen as VP-fronting. When this happens, tv contained inside the fronted VP invokes an ECP violation since tv is no longer antecedent-governed by the raised V consider in (38). Thus (38) is expected to be ungrammatical.11

Note further that ECM constructions in English exhibit facts parallel to

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10 This fact is also noted in Huang (1990, 12) but left unexplained.
11 Parallel to V* to-µ raising, we may plausibly speculate A* to-µ raising in small clauses. Thus (116b) can be, in fact, more like the following representation.

```
... µ′
  / \   
 /   \  
 \    \  
 VP   / \  
 |   / \  
 make NP   \  
 |   / \  
 Betsy t_v AspP  
 |   / \  
 t₁ μP  
 |  / \  
 t₁ μ′  
 |  / \  
 μ AP  
 | / \  
 angry A′  
 | / \  
t_A PP  
 | /   
 at him
```

This representation implies that the fronted XP's in the following examples from Huang (1990, 11) are not AP's but AspP's (recall (26b/27)).

(iii)  a. Stupid, I consider John; but intelligent, I consider Bill
    b. How stupid do you consider John?
    c. How happy would she make him?
A* to-µ raising in (i) is further supported by ill-formedness of the following sentence.

(iii)  a. How happy would she make him? at you?

Thus, we may conclude that A* has to raise onto µ, hence (ii) is unambiguously AspP-fronting. We will see further evidence for this reasoning in section 5.
small clauses in that the embedded clause along with its subject cannot move as a unit.

(39) *Betsy to be intelligent, John believed

Given the ECM structure in (27b) repeated here,
(27) b. $\mu$
    /   \  
   /     \  
  $\mu$    V
  \       /  
  /     \  
 believe NP1 /  V'
  \      /  
   /     \  
  Betsy tv / AspP
  \      /  
   /     \  
  /     \  
 t1 $\mu$
  \       /  
  /     \  
  /     \  
 t1 $\mu'$
  \        /  
   /       \  
  /       \  
 $\mu'$  l'

to be intelligent

(39) can be ruled out on a par with (38), since the fronted phrase (VP in our account) in (39) contains the trace of a raised verb tv, which is not antecedent-governed.

ECM constructions, however, sharply contrast with small clauses in that the embedded S cannot be fronted stranding its subject. Observe the ungrammatical example in (40a), contrasting with (36b) and (ii) in fn 11 (I repeat one of them in (40b)).

(40) a. *to be intelligent, I believe Betsy; but to be stupid, I believe Bill
b. Stupid, I consider John; but intelligent, I consider Bill

If the fronted phrases in (40) are (41a) and (41b), respectively,

(41) a. *[AspP t1 [\muP t1 [to be intelligent]] I believe Betsy ...

b. [AspP t1 [\muP t1 [\muP stupid]] I consider John ...

It is not exactly clear, why this contrast should arise in the first place. However, in the next section I will examine several possible approaches to this problem, and elaborate a solution.

2.5 Movements of to -infinitives and L-government

In this section I attempt to account for the contrast shown in (40/41) relying on the ECP and, in particular, the role of L-government.

As a point of departure, let us briefly consider the characteristic paradigm of movement of to -infinitives. First, notice that the ill-formedness of (40a) cannot be simply stated as follows:

"to -infinitives cannot undergo movement of any sort."

Recall that "control" to -infinitives can freely undergo movement. ((42b) is marginal for some speakers, but the reason for this is unclear.)

(42) a. To win the race, John never tried t
b. ? To win the race, John never wanted t
c. To win the race, John never preferred t

"Raising" to -infinitives in general, however, cannot be moved in contrast
with "control" to -infinitives.

(43)  a. *To be smart, John was never believed t
      b. *To be smart, John never seemed t
      c. *To win the race, John is likely t

As a first approximation, one might suggest that the trace of fronted to -infinitives in (43) is not properly governed. Note that we are assuming a conjunctive formulation of the ECP, which I roughly sketched in section 2.4. Let us consider the relevant parts of the ECP, for our present concern, in more detail. First, I suggest we define L-government and antecedent-government in the following way.

(44)  L(exical)-government (must be respected at S-structure)
      £. L-governs ¥ iff
      (i) a. £ is a head
           b. £ m-commands ¥
      (ii) £ = [{±V ±N}] (NB: to ≠ £)
      (iii) no barrier intervenes

(45)  Antecedent-government (can be respected at S-structure or LF)
      £. antecedent-governs ¥ iff
      (i) £ c-commands ¥
      (ii) £ and ¥ are coindexed
      (iii) no barrier intervenes

Then, the ECP can be assumed as follows.

(46)  A non-pronominal [-P] empty category must be properly governed
      £ is properly governed iff
      (i) £ is L-governed
      (ii) £ is antecedent-governed

Note that (46i) and (46ii) are conjunctively formulated, hence, both must be satisfied to obey the ECP.

Let us consider the validity of L-government. Consider the contrast in the following pair of sentences.

(47)  a. Win the race, I think John did t
      b. *Won the race, I think John t

The minimal difference between the two sentences can be due to the fact that there is a potential L-governor for the trace of the fronted phrase in (47a) (assuming emphatic did as Lexical), while one is not available for the fronted phrase in (47b). Note, incidentally, that antecedent-government cannot capture the contrast here since the fronted phrases in (47) seem to be all properly antecedent-governed. Thus it seems motivated that L-

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12 Also note that the VP trace seems to behave on a par with an argument trace rather than an adjunct trace:
   (i)  ? ... and [win the race] I wonder whether he did t
   (ii) a. ? What did you wonder whether John fixed t
        b. * How do you wonder whether John fixed the car t

Thus, (iia) seems to be a mild violation of subadjacency (1-subadjacency in the sense of Chomsky (1986b)) parallel to (i). We may assume that Inf (theta-governs VP like other lexical
government is independently required, in addition to antecedent-government to meet the ECP.¹³

Returning to the deviance in (43), it seems implausible to claim that raising predicates are not appropriate L-governors, otherwise the following sentences are wrongly predicted to be ruled out.¹⁴

(48)  a. John is believed to be a liar
       b. How angry did he seem t

Thus, the deviance in (43) seems to be related to the status of the trace left by the fronted phrases. One conceivable approach to this problem is provided in B. Kang (1988, 174-180). He proposes that to of to-infinities in (43) be treated as a part of raising predicates in the syntax. Thus believed to, seemed to and likely to may behave as one syntactic unit. This line of reasoning seems to be consonant with the fact that adverbs are not easily inserted between a raising predicate and to (see Kang (1988, 179)).

(49)  a. ?? John [seems, is likely] very much to be nice
       b. John tried very hard to be nice

The marginality of (49) may pattern with the following ill-formed sentences, as Kang points out (I add some similar example here).

(50)  * John [has, ought, is going, is intended, doesn’t need] really to leave

Note, however, that this account does not appear to properly accommodate the following contrast altogether (recall also (40)).

(51)  a. * to be intelligent, I believe Betsy
       b. to go home with her, I persuaded Bill
       c. to marry your father, I will never promise anyone

To our eyes, the contrast in (51) parallels that in (42)/(43).

Further note that the deviance in (49a) is reminiscent of the following ill-formedness (recall also the discussion surrounding (28)).

(52)  * John believed Mary sincerely to be intelligent

¹³ Numerous evidence has been adduced under various proposals to show that L-government is required independently of antecedent government. I briefly note some classical examples here.

(i)  a. * how raw did John [VP eat the meat] t
      b. how angry did John [VP make his friends t]

      (Chomsky 1986b, 81-83)

(ii)  a. * Betsy said (that) t₁ is happy [that old woman]  
       b. ? Betsy thought t₁ to be happy [that old woman] 

      (Johnson 1988, 603)

(iii) a. * How is he [t tall]  
      b. Quanto è [alto l]?

      (Rizzi 1990, 35-36)

(iv)  a. It was apparent *(that) Kay left 
      b. The book arrived yesterday *(that) Kay wrote
      c. (That) Kay left was obvious to all of us
      d. Kay believes, but Kay doesn’t, *(that) Ray is smart

      (AHLW 1987, 541)

Note that in (i-iii) all the traces left by movement are properly antecedent-governed. Assuming that the traces in (i-iii) all fail to be L-governed unlike those in (i-iii)b, the contrasts can be obtained without further complications in the theory. (iv) may also display that that -deletion is possible only if it is properly L-governed. See relevant details in the works cited.

¹⁴ There is a puzzling fact with respect to the capacity of L-government by the predicate likely. Consider the following contrasts noted in Kayne (1984) ((iiia) is mine).

(i)  a. What is it likely Max will forget to bring _?
       b. * Who is it likely _ will forget to bring the beer?

      (ii)  a. the man whom it is likely Max admires_
       b. * the man whom it is likely _ admires her

I have no account for the contrasts shown above, however. I merely speculate that these contrasts may not be related to the ungrammaticality of (33c).
That is, the deviance in (49a) can be accounted for on a par with (52). Put another way, considering a schematic derivation for (49a) as (53):

(53) John ... t' v very much Ip t ...

The trace t' below the adverb, left by the subject-raising, is not antecedent-governed by t' due to an intervening adverb very much, which creates a Barrier, hence the ECP violation is invoked. We may easily extend this line of account to the deviance in (50) by assuming that modal-like elements therein all belong to a subclass of raising verbs.

Let us consider another conceivable explanation for the deviance in (43) and (51a), along the lines suggested in Stowell (1981) and Safir (1985). Stowell claims that to -infinitival complements, unlike tensed CPs, need not be assigned Case, and that they always occupy Case-less positions when they are verb complements. He suggests that for this reason, to -infinitives cannot be topicalized unlike other sentential complements in English. Here are some relevant examples that are given in Stowell (1981, 175) to show the contrast between to -infinitives and other sentential complements with respect to the possibility of movement fronting:

(54) a. * [Who to visit], I asked John t
    b. * [To be stupid], John seems t
    c. * [To be invited], I never expected t
    d. * [For Scott to arrive late], Bill thinks we were hoping t

(55) a. [That the water is bad], I believe Jenny forgot to mention
    b. [The water's being bad], I believe Jenny forgot to mention

In contrast with to -complements in (54), some instances of that -complements and gerundives, seem to be able to undergo Topicalization, as seen in (55). Stowell's proposal, however, appears to be too strong since control to -infinitival complements can be topicalized (recall (42) and (51b-c)). Furthermore, in a similar context tensed CPs cannot be topicalized either, as noted in Safir (1985).

(56) a. * Who Bill visited, I asked John t
    b. * That John is stupid, it seems t
    c. * That Scott will arrive late, Bill thinks that we are hoping

Safir (ibid.) suggests that the ill-formedness in (54) and (56) stems from the fact that the traces of fronted sentential complements essentially behave as variables which must be Case-marked at S-structure. He further argues that a variable should always be an NP category whether its A'-antecedent is an NP or not. That is, although the moved elements in (54-56) are categorically distinct from an NP, say, IP or CP, the traces (variables) left behind are uniformly NPs, according to Safir. Thus he suggests that the deviance in (54) and (56) be attributed to a violation of the Case Filler since, as he argues, the matrix verbs such as seem in (56b) and hope in (56c) are not Case-assigning verbs, then the variable in (56a) is not in the Case-marked position, hence the ill-formedness in (54) and (56) results. Safir further observes the
following set of contrasts which may strengthen his claim (ibid. 80).

(57)  
   a. That Mary leave, which John insisted *(on) t , upset Joe  
   b. That Mary was leaving, which John whined *(about) t , upset Joe  
   c. That Mary was leaving, which Bill was happy *(about) t , upset Joe  
   d. * That Mary was leaving, which John quipped/remarked t , upset Joe  
   e. * That Mary was leaving, which it seemed t , upset Joe

The examples in (57) seem to show that the trace of *wh is inhibited in the positions where only CP can appear, since the verbs/adjectives such as insist, whin, certain, quip, remark and seem are all unable to assign Case. Thus, a preposition can be inserted in (57a-c) to save the sentences. If this option is unavailable, as in (57d-e), the sentences will ultimately be ruled out.

Safir's proposal may give us a partial clue to the contrasts we have observed so far. That is, the following examples seem to minimally contrast with each other along this vein (ibid. 81).

(58) That John is alone I'll never believe t  
(59)  
   a. * That John is alone I would never remark t  
   b. * That John is alone it is bizarre t

The contrast can be explained in terms of the fact that only the trace t in (58) is Case-marked and hence a licit variable. If the Case-theoretic account is on the right track, presumably the illicit movements of to-infinitives have nothing to do with infinitives per se.

In what follows, I will show that Safir's conjecture fails to accommodate the full paradigm that I have shown. More specifically, it is not clear in his account how (54c) can be properly ruled out, since the verb expect is most likely a Case-assigning verb as seen by the following example.

(60) John never expected the wrong result

One might conjecture that the deviance in (44c) hinges on a violation of some version of the Control theory; that is, PRO contained in the fronted clause is not bound by its controller. This line of reasoning, however, can be hardly maintained, since there are well-formed sentences where PRO is clearly not bound by its controller. ((61a) is from Stowell (1981, 231.).

(61)  
   a. [How eager [PRO to help us]] do you think that John really is t  
   b. [PRO to win the race] John never tried t (cf. (32))

Observe further that there are instances where the variables left by A'-movement are clearly not Case-marked.

(62)  
   a. How angry did he seem _  
   b. ? Whether Mary left on time, I asked John _

(62a) shows that some instances of A'-trace (a variable) need not be Case-marked contra his claim (also see an extensive discussion on this matter in Epstein (1987)). The grammaticality of (62b) further invalidates Safir's
reasoning in ruling out (56a) based on the Case Theory.

Finally, I do not see how the contrast in (51), repeated here, can be captured along these lines without further complicated stipulations.

(51) a. * to be intelligent, I believe Betsy
b. to go home with her, I persuaded Bill
c. to marry her, I promised my father

In the next subsection, we seek for an alternative way of looking into these problems essentially exploiting the conjunctive formulation of the ECP.\footnote{However, I will not attempt to provide an full account for the facts noted by Safir. I assume that his conjecture is partially correct in some respects. Particularly, for the contrast surrounding tensed CP-movements in (47) and (48-49), his argument can be valid in part. For (47), I speculate that the fronted CP, a head of relative clause formation, is in fact a base-generated NP dominating CP, thus the category mismatch between the heads and the relative pronouns can be circumvented. In other instances of real CP-fronting cases, I have no direct solution at hand. There are, however, many more mysteries which beg for an explanation. For example (Stowell 1981, 164):

(i) a.* That John is guilty seems
b.* That the mayor liked the wine appeared
c. That John likes Susan is certain
d. That the war is over is hardly likely

These puzzling facts along with CP-movement asymmetries are beyond the scope of my thesis.}

2.6 Toward a solution

Up to this point, we have considered three possible accounts for the contrasts noted above. The paradigms under consideration are summarized here in slightly different forms.

Contrast A
(63) a. To win the race, John never tried t
b. * To be smart, John never seemed t

Contrast B
(64) a. * to be intelligent, I believe Betsy
b. How angry at himself\_{1/2} John\_{1} made Bill\_{2} 

One solution to these contrasts relies on the role of L-government for the trace left by the fronted clauses: for example, t in (63a) is L-governed by tried while t in (63a) is not L-governed by seemed in (63b). This line of approach also encounters empirical problems as demonstrated in (48), where the trace can be licensed by the same verb employed in (63a).

A second approach to these contrasts basically hinges on the connection between a raising predicate and the infinitival marker to (B. Kang (1988)). This proposal however clearly fails to be generalize Contrast B, the account of which should ideally be assimilated to that of Contrast A.

Finally a suggestion made by Safir (1985), despite its numerous insights for tensed CP-movements, does not successfully extended to explain the contrasts shown in the movement of to-infinitives. Recall, in particular, the problems surrounding (60-63).

In this section, I will try to provide a unified solution to Contrast A and Contrast B along with some further problems.

Contrast A yields a sharp asymmetry between the movements of "control" to-infinitives and "raising" to-infinitives. We may provide a descriptive
generalization such that "raising to -infinitives cannot be movable." This generalization does not seem to be extended to other "raising" clause-type other than to -infinitives, since "raising" small clause, for example, seems to be movable as illustrated in Contrast B (recall that the partial construal possibility detected in (64b) displays that the fronted category might be larger than simple AP). Thus, we are directly faced with at least two questions: (i) Why do "raising" to -infinitives show this immobility restriction, unlike "control" to -infinitives? (ii) Why do "raising" small-clause not pattern with "raising" to -infinitives (particularly, with ECM to -infinitives) despite their striking similarities (see (38) and (29))? Before examining these two questions, another important paradigm should be noted. In addition to Contrast A and B, let us further observe the following contrast ((65a) is due to Stowell (1981, 231)).

Contrast C.

(65) a. [How likely [ t to win the race ] ] do you think that John really is _
    b. * [to t win the race ] I think John is really likely _

Consider more articulated schemata for (55) in (55'a) and (55'b) respectively: (irrelevant details are omitted)

When we consider the status of the traces in both derivations, we must recall that with our formulation of the ECP, in (44)/(45), L-government must be fulfilled at S-structure, while antecedent-government can be fulfilled at S-structure or LF. We assume the γ-marking mechanism of L&S (1984).

Now, consider (65'a). t seems to meet the ECP since t is L-governed by win and antecedent-governed by t' (recall that L-government exploits
"m-command" while antecedent-government exploits "c-command"). Then, t' is deleted at LF. Notice further that t must be L-governed at S-structure before it is deleted at LF. This requirement is respected as in (65'a) wherein likely (or presumably the trace of it) properly L-governs t' (ignoring the minimality effect here). In (65'b), on the other hand, t' cannot satisfy L-government requirement since to a functional head of infinitives, is not LEXICAL (by assumption), hence t' violates the ECP at S-structure. Thus we can get the minimal contrast in (65) is predicted.

Let us now return to Contrast A in (64). This contrast is now easily explainable. Assuming the s-structure schemata for them as follows,

(63') a. [PRO to win the race] ...
   b. [AspP t' [Asp' to [μP t] [μ win] ...

(63'b) is expected to be ruled out on a par with (65'b). The fronted phrase in (63'a), on the other hand, includes a PRO subject which does not interact with the ECP since it is [+pronominal] category by the PRO theorem (Chomsky (1981)), hence the sentence is correctly ruled in.

Further observe the contrasting examples in (64) whose partial schematic representations are as follows

Parallel to (65b)/(65'b), (64a) is expected to be ill-formed due to the offending trace t' in (64'a), which is not L-governed at S-structure. (64'b) in this respect, sharply contrasts with (64'a). Notice that in (64'b), t' is no longer an offending trace since t' is properly L-governed by a Lexical element angry, raised from μ originating from A°, which now occupies the head of AspP. Note, incidentally, that t is L-governed by the trace left by angry (NB: LEXICAL doesn't necessarily imply "phonetically overt"), t is also antecedent-governed by t' (being subsequently deleted at LF). Hence the ECP is met in (64'b) contra (64'a), thus the contrast follows.

To summarize up to this point, the L-government part of the ECP is
crucial for accommodating Contrasts A, B and C. Note that our account essentially hinges on the assumption that to of to-infinitives is not "Lexical."

Let us observe a further contrast, which apparently raises a problem for our assumptions.

Contrast D

(66)  
a. [ Win the race ], John never tried to t.
b. * [ Win the race ], John never seemed to t.
c. * [ Win the race ], John never is likely to t.
d. * [ Win the race ], John was never believed to t.

The deviance in (66b-d) may be expected if to is not Lexical; that is, the trace left by fronted phrases cannot fulfill Lexical-government requirement. In this way, however, (66a) is incorrectly predicted to be ungrammatical.\(^\text{17}\) To obtain the correct results, I propose that Contrast D has nothing to do with L-government property of to. Instead, I suggest that the try to sequence can optionally undergo Reanalysis rendering two separate items into a single V\(^{o}\), hence the trace t can be properly L-governed at S-structure in (66a). This claim can be further motivated by the following contrast.

(67)  
a. John tried diligently to win the race.
b. * Win the race, John tried diligently to t

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17 In Rizzi (1990, 34), T\(^{o}\) is assumed to be a proper L-governor, and the VP trace in (56a), for example, can be properly L-governed by to in T\(^{o}\). His analysis, however, fails to capture the ill-formedness in (56b-d).

When an adverb intervenes between tried and to, Reanalysis cannot take place, hence the ill-formedness of (67b) results. However, if Reanalysis can take place in (66b-d), the deviance can’t be due to the trace t, because after Reanalysis of seemed and to, t can be L-governed by the reanalyzed [V\(^{o}\) seemed to]. Thus, the ill-formedness of (66b-d) should stem from some other force. Notice that the fronted XP in (66) can’t be an instance of AspP since to is stranded (recall that to occupies Asp\(^{o}\)) there. Thus, the fronted phrases in (66) should be μPs (note that they can’t be smaller than μPs, say, VP s for example, since the verb win necessarily occupies μ\(^{o}\) by obligatory verb-raising, I assume). (66b-d) then yield the following S-structure representation.

(66') I[μP t I[μP win [VP ...

In this schema, the trace t left by subject-raising violates the ECP since it is no longer antecedent-governed by t' in contrast with (65). Recall also that the trace can’t be deleted at LF, either, since it is an argument trace. Thus (66b-d) can be still correctly ruled out.

2.7 More on "how likely..." constructions

Recall that the following example no longer violates the ECP under
our account.

(68) [How likely \( t_1 \) to win] is John? 

There may be several other conceivable analyses for treating this apparent violation of the PBC/ECP besides our treatment based on the articulated structure and an elaborated ECP. In this section, I will briefly consider some potential alternatives, and show that our treatment is superior to others.

2.7.1. Huang (1990)

Huang (1990) suggests that the NP-traces and the WH-traces are treated somewhat differently with respect to the ECP. Essentially he proposes that NP-traces can fulfill the ECP under Reconstruction while WH-traces cannot. The characteristic paradigm is repeated here for the ease of exposition.

(69) a. [How likely \( t \) to win] is John?  
b. * [which picture of \( t_1 \), do you wonder who], John likes \( t_2 \)

Recall, however, that (66), also repeated here, cannot be accounted for based solely on this conjecture:

(66) a. [Win the race], John never tried to \( t \).  
b. * [Win the race], John never seemed to \( t \).

If our account for the deviance of this example is basically correct, Reconstruction clearly cannot cancel an ECP violation with respect to NP-traces, either.

2.7.2. Barss (1986)

Barss (1986, 412) states:

The apparent parallel between (2) and (6) [below], which might be interpreted as indicating that NP-trace is an anaphor, can be explained as being due to a certain similarity between the ECP and the licensing condition for anaphors.

(2) How likely \( t \) to win is John.

(6) I which pictures of himself \( t \) did John see

What he seems to mean by this paragraph, as I understand it, is that there is a uniform way of handling both cases. The tool he exploits is his so-called Chain-Binding mechanism, by assimilating the distribution of NP-traces to that of anaphors. This line of approach, extensively defended by Chomsky (1981), doesn’t seem to be on the right track, either.

First, it is conceptually weak since the behavior of anaphors varies across languages while there is no evidence, to my knowledge, showing that the behavior of NP-traces varies across languages. That is, the locality condition for lexical anaphors can be relaxed in many languages (even in English), while no evidence is found for relaxing the locality condition for NP-traces. A typical paradigm can be detected by the following contrast in English.
(70) a. *John₁ seems that it is certain τ₁ to like ice cream (Chomsky 1981, 58)
b. They₁ expected that it would be possible for pictures of themselves₁
to be on sale (Bouchard 1984, 118)

Whatever mechanism is used to salvage the locality requirement on
anaphors in (70b), it cannot hold for NP-traces in (70a). Thus, the treatment
of NP-traces on a par with anaphors is empirically unjustified as well, since
the Binding Theory formulated in Chomsky (1981, 1986a) is both too weak
for constraining the distribution of NP-traces in (70a).

Further observe that Barss's Chain Binding effect may account for the
apparent violation of Binding condition A in (71).¹⁸

(71) a. [Books about himself₁]₂ seem to John₁ τ₂ to be on sale.
b. [Each other₁'s children₁]₂ appear to the women₁ τ₂ to be unhappy

That is, himself in (71a) can be bound by John since the trace of its container
τ₂ is c-commanded by John. However, Barss's Chain Binding effect cannot
successfully accommodate the contrasts in (63), (65), (66), and so forth. Thus,
it appears that Barss's (2), given in the quote above, cannot be reduced to
Barss's (6).

².7.3 Lasnik and Saito (1989)

Following Kroch and Joshi's (1985) observation, L&S argue that τ in
(56) is not an instance of NP-traces, but actually a PRO. Thus, there is no
trace to violate the ECP there in the first place, according to them.
Conceptually, nothing goes wrong with their account. Empirically,
however, their proposal is not convincing. Jacobson (1986) notes further
diagnostics to distinguish Equi verbs from Raising Verbs. First, Equi verbs
allow VP-ellipsis, while Raising verbs do not.

(72) a. John tried to win, but Mary didn't try
b. *John was believed to be smart, but Mary wasn't believed
c. *John seemed to be smart, but Mary didn't seem

Further, nominalization of Equi adjectives is possible but not of Raising
adjectives.

(73) a. John's eagerness to win.
b. *John₁'s belief [ τ₁ to be intelligent]
c. *John₁'s likelihood [ τ₁ to win]

Based upon these diagnostics, the adjective likely seems unambiguously a
raising predicate.¹⁹

¹⁸ £ chain binds ¥ iff £ and ¥ are coindexed, and the definition of Chain Binding is given in
Barss (1986) as follows:
(i) £ c-commands ¥, or
(ii) £ c-commands a trace of A, where A=¥ or A contains ¥

¹⁹ Notice, however, that the grammatical judgement given for (59c) and (60c) in L&S
differs essentially from ours. They do not star both of them but mark them ?? None of
L&S further note that the trace $t_1$ in the following examples is unambiguously an instance of NP-traces, following Kroch & Joshi (1985).

(74)  
   a. There$_1$ is [ likely $t_1$ to be a riot]  
   b. * [How likely $t_1$ to be a riot] is there$_1$

(75)  
   a. Advantage$_1$ is [ likely $t_1$ to be taken of John]  
   b. * [How likely $t_1$ to be taken of John] is advantage$_1$

Thus, according to them, (74b) and (75b) are true violation of the ECP/PBC. However, I suggest that the deviance in (74b) and (75b) is not due to the ECP violation at “S-structure.” Rather, I claim that they are all instances of the ECP violation at LF. Specifically, in (74b) expletive there must be replaced (or adjoined to) at LF by a coindexed argument a riot. Suppose that a riot is moved from the fronted clauses to replace the expletive there at LF in the following fashion:

(76)  
   [How likely $t''_1 ... t''_1 ... t_1$ to be $t_1$ ] is there+a riot$_1$  
       \[ [-\gamma] \quad [+\gamma] \quad [+\gamma] \quad [+\gamma] \]
       \[ \text{LF} \]

Since the upmost trace $t''_1$ cannot be antecedent-governed at LF, the ill-formedness of (74b) follows.

A similar account can be given for (75b). Suppose that idioms must be reassembled at LF by Restructuring (this process in a sense can be assimilated to Expletive-Replacement, or vice versa). In this event, extracting the phrase taken... of out of the fronted clauses should violate the ECP, since the trace left by this movement fails to be antecedent-governed (although, at this stage, it is not clear how exactly the process of assembling takes place at LF).

In sum, the fronted clauses (74b) and (75b) do not necessarily contain the offending traces with respect to the ECP at S-structure, as suggested by L&S, but it is at LF where the offending trace(s) should show up. At least one problem remains in our account, however. If the fronted phrase can literally undergo Reconstruction at LF, the violation of the ECP seems to be voided. Although I have no direct answer to this problem, I speculate that Reconstruction should be blocked in this context, or Reconstruction cannot take place prior to affect-α such as “expletive substitution (adjunction)” and “reassemblage of idioms” at LF.

2.7.3.1 Further Evidence: Scope facts

Barss (1986) observes some peculiar scope facts which may support our conjecture that the reconstruction of the fronted phrase, as in (74b)/(75b), is barred at LF in certain other contexts as well (Barss 1986, 418).

(77) How likely [ t to address every rally ] is someone?

Someone must take widest scope over likely & every rally. Note, incidentally, that someone may take narrow scope over likely & every rally in the following
stipulation; a marked coindexing of *be and likely in terms of a kind of restructuring, as he conjectures. His proposal yields an interesting consequence with respect to the apparent ECP violation in (68) repeated here.

(68) [How likely t to win] is John?

Since the proper governor t is carried along with it in (68), t no longer violates the ECP therein.

We may naturally extend our analysis to the apparent violation of the ECP when predicates of passives and unaccusatives are fronted, as we have seen in the beginning of this chapter (cf. (1)/(8), repeated below).

A significant problem arises with this approach, however. Recall the contrast in VP-movements in Korean and English that I noted in the beginning of this chapter (I repeat the relevant examples, here).

(1) a. *(vP swipkey t1 samang)(ul) [yenghi1-ka vP ha-yess-ta]
   easily die(-A) -N HA-Pst-Dec
   (die easily, Younghee did.)
   b. *(vP manhi t1 okil-num [pi1-ka vP ha-yess-ciman] ...)
   (a lot) come-Contra rain-N HA-Pst-although
   (rain a lot, although it did ...)

(8) a. *(vP hit t1 by Mary), I think, John1 was [Passive]
   b. *(vP arrive t1 early), I think, the train1 did [Unaccusative]
   c. *(vP be t1 in the house), I think, John1 would [Copula]

(8) can be accommodated under Chomsky’s system; namely, t1 can be antecedent-governed by coindexed X* such as hit, arrive and be. Thus, an ECP

2.7.4 Chomsky (1986b)

Chomsky (1986b, 78) suggests that the trace in (79) can be antecedent governed by likely, in virtue of the SPEC-head agreement holding between the term John and the raised verb be +INFL.

(79) John is [likely [t to win.]]
violation does not occur in (8). Following these lines, however, it is not clear how to rule out (1) in Korean. Assuming the coindexing strategy between X\textsuperscript{p} (samang, oki) and the trace left by the NP-movement, (1) will be incorrectly ruled in. One possible solution to this problem is to assume that this coindexing mechanism simply does not take place in Korean, hence the mechanism is a marked language-particular process. This is clearly not an attractive proposal. Alternatively, we may conjecture that this process cannot occur in Korean due to the lack of the Spec-Head Agreement for subjects. Recall that the coindexation between the trace and its governing lexical head is motivated by the Spec-Head Agreement between its antecedent (subject) and Infl (here Agr) in Chomsky’s system. Although this line of approach, with suitable modification, may entertain most of the problematic cases that I have shown in English, there arises a new problem under this account. Take a simple unaccusative sentence in Korean, repeated here, which was widely discussed in Chapter 1.

(84) a. aij-ka onul achim kapcaki [V t\textsubscript{1} twumyeng cwuk-ess-ta] kid-N today morning suddenly two die-Pst-Dec

(Two kids died suddenly this morning.)

In chapter 1, I have shown that like other languages the subject in an unaccusative construction must be derived from the canonical object position (immediately dominated by V) in Korean. This was confirmed by the Q-float phenomenon as shown in (84a). Now the question is: How can we license the NP-trace in (84a) under Chomsky’s system? If coindexing mechanism is not available in Korean (due to the lack of the Spec-Head Agreement), we should recourse to the classic ECP to license the NP-traces in Korean, unlike in English. Then, Chomsky’s theory of coindexing through Spec-Head Agreement becomes a mere ad hoc apparatus since NP-trace in one language does not behave uniformly across languages, and furthermore the principle governing NP-traces is language-particular. This is obviously an undesirable result with respect to the learnability considerations; that is, American kid builds alternative principle like Chomsky’s coindexing with the governing predicates to license the NP-traces. Thus, there is no strong reason to consider Chomsky’s proposal a “theory.”

Our account, on the other hand, is based on the parametric difference of the phrase structure of fronted VP. I have claimed that the fronted VP is covered with the articulated functional projections—μP and AspP—while it is bare VP in Korean. (This fact is further clarified and supported by some independent evidence, as will be shown in § 2.8.) Notice that under our theory the theory of the ECP can remain a powerful tool which can account for not only WH-traces but also NP-traces in English and Korean. Thus, in the technical sense, I believe our theory is more explanatory and natural than that of Chomsky’s and others. In other word, it is highly implausible to parameterize the application of a universal principle such as the ECP across languages since it weakens the validity of this principle \textit{per se}. Otherwise, the contrast in (1) and (8) would remain unsolved under Chomsky’s account.
2.8 V'-movement in Korean

So far I haven't fully clarified that why the fronted categories in (1) should differ from those in (8). Particularly, I have claimed that the fronted phrases in Korean are all instances of VPs while those in English should be larger than VP, namely, AspP. In this section I will try to establish several additional arguments that confirm this claim.

First, consider the following VP-focus construction in Korean, which was discussed in §1.6.

(85) Yenghi-ka [ppang-ul mek-ki] nun ha-yess-ciman -N bread-A eat-? Contra HA-Pst-although (Younghhee did eat bread.)

I have shown that (85) can have focus interpretation in three ways excluding "subject" focus; namely, V₀ focus, VP-focus and "object" focus. Suppose that the certain elements (X₀ or XP) must be within the scope of the focus marker nun at S-structure in order to convey a focus interpretation. Let us call this requirement the "Focus Licensing Condition (FLC)." 21 By the FLC, we can understand that the subject Younghee in (85) is not under the scope of the focus marker nun unlike the object, V₀ and VP. This fact is borne out under the assumption that the focus marker is attached to VP in Korean. Note further that unergative VP-focus constructions in Korean display parallel facts. Consider the following.

21 Perhaps the FLC can be subsumed under some general condition on variable-binding (WH-chain, quantifier scope) or licenser-licensee (polarity licensing). I will leave out the further extension of the FLC here.
(86) a. Yenghi-ka [vp ppalli twuwy-ki]-nun ha-yess-ciman ...
    -N fast run?-Contra HA-Pst-although
    (Although Younghee did run fast, ...)
b. Yenghi-ka [vp khukey wul-ki]-nun ha-yess-ciman ...
    -N loudly cry?-Contra HA-Pst-although
    (Although Younghee did cry loudly, ...)

Examples in (86) yield three way's ambiguity with respect to the focus reading. In (86a), either the adverb ppalli 'fast' or the verb twuwyki 'to run' or the VP ppalli twuwyki 'to run fast' can be focussed. And in (86b), either the adverb khukey 'loudly' or the verb wulki 'to cry' or the VP khukey wulki 'to cry loudly' can be focussed. The following unaccusative and passive VP-focus constructions in Korean, however, sharply contrast with the constructions discussed above.

(87) a. Kicha-ka [vp ilcik ttena-ki]-nun ha-yess-ciman ...
    train-N early depart?-Contra HA-Pst-although
    (Although the train did depart early, ...)
b. kumko-ka [vp swipkey yelli-ki]-nun ha-yess-ciman ...
    safe-N easily be opened?-Contra HA-Pst-although
    (Although the safe was opened easily, ...)

Parallel to the transitive and unergative VP-focus sentences, V°, VP and the adverbs can receive focus in (87). Unlike (85) and (86), however, the subject can be also focussed in (87); that is, (87a), for example, can convey the interpretation like "THE TRAIN (but not THE BUS) departed early." Given the fact that the subjects in the passive and unaccusative constructions are derived from their underlying object positions, as shown in the following schemata,

(87') [IP Subject] [VP t1 ... V° ...]-nun ...

we can understand that the NP-trace left inside VP invokes the subject-focus reading in (87) by the FLC. Note, incidentally, that the findings above substantially weaken versions of the VP-Internal Subject Hypothesis put forward in Y-S. Kim (1988), Joo-Shim (1989) and S. Ahn (1990) for Korean (cf. Kitagawa (1986), Kuroda (1988) and Fukui (1986) for Japanese).22 Put differently, if the subjects in transitive and unergative constructions, originate VP-externally, we expect the subject-focus reading in (85) and (86) by the FLC we are assuming. However, since this reading is not obtained therein, VP-ISH seems not to hold in Korean.

There is, however, an alternative way of entertaining the aforementioned facts without abandoning VP-ISH. In what follows, I wish to establish an alternative solution to these facts leaving VP-ISH unaffected at least in Korean.

Suppose that the focussed phrases in (85-87) are not VPs but intermediate projections V's. That is, examples in (85-87) are all, in fact, instances of V'-focus constructions, hence the focus marker nun is directly attached to a V' instead of a VP. Along this line, the absence of the subject-

focus reading in (85-87) can also be accounted for along the same line as the VP-focus account. However, notice that under V'-focus treatment we are not led to abandon VP-ISH as was the case with the VP-focus treatment. Thus, the validity of VP-ISH in Korean remains neutral under this alternative.23

Furthermore, V'-focus treatment yields several desirable results. First, consider again the sentences in (1), repeated here.

(1) a. *[Ω swipkey t1 samang]-ul [yenghi]-ka typ ha-yess-ta  
   easily die(-A) -N HA-Pst-Dec  
   (die easily, Younghee did.)
   b. *[Ω (manhi) t1 oki]-nun [p1]-ka typ ha-yess-ciman ...  
   (a lot) come-Contra rain-N HA-Pst-although  
   (rain a lot, although it did ...)

Suppose that the fronted element Ω in (1) is VP, and the Spec of VP is utilized as an escaping hatch for NP-movements. Then the fronted VP in (1) may employ the following schematic representation (1') (irrelevant details are omitted):

(1')

```
  VP
 / \  
t'  V'  
 /  \  
t  V
```

This invokes a serious problem for ruling (1) out under our formulation of

the ECP. Put another way, t is L-governed by V° and antecedent-governed by t' at S-structure. Further, t' is L-governed by V° (assuming m-command for government) at S-structure and subsequently deleted at LF (note that there are no requirement forcing t' to remain at LF). Then the ECP will be met in (1), hence the sentences are incorrectly predicted to be ruled in.

By contrast, given the alternative of V'-fronting, the ill-formedness of (1) can be easily accommodated since t in fronted V' would not be antecedent-governed, hence (1) can be correctly ruled out due to an ECP violation. Thus V'-fronting accounting is superior to VP-fronting in this respect.

Let us further observe what may be instances of V'-movement in Korean. First, consider the following ditransitive constructions in Korean.

(80) a. Nay-ka Yenghi-eykey chayk-ul cwu-ess-ta  
    I-N -Dat book-A give-Pst-Dec  
    (I gave a book to Younghee.)
   b. Nay-ka Yenghi-eykey phyen-ci-ul ponay-ss-ta  
    I-N -Dat letter-A send-Pst-Dec  
    (I sent a letter to Younghee.)

Assume that the indirect object is generated higher than the direct object in Korean as shown in schemata (81) (see S. Ahn (1990) for Korean, and Hoji (1985) for Japanese).

23 However, VP-ISH still cannot hold in English since the Spec of VP must be vacated for housing the shifted object. Along this vein, it seems plausible to assume that [Spec, VP] is not available, either in Korean, for the base-generated external arguments. Then, the VP-ISH still remains weakened in Korean.
Now observe the following examples which show that the constituent of DO+V° can undergo syntactic operations such as movement and substitution in Korean.

(82)

a. Nay-ka Yenghi-eykey chayk-ul cwu-ess-ta
   I-N -Dat book-A give-Pst-Dec
   (I gave a book to Younghee.)

a'. [y chayk-ul cwu-ki]-nun nay-ka Yenghi-eykey _ ha-yess-ta
    book-A give?-Contra I-N -Dat HA-Pst-Dec
   (Lit. Give a book, I did _ to Younghee.)

a''. Nay-ka chelswu-eykey-to _ kulay-ss-ta
    I-N -Dat also do so-Pst-Dec
   (Lit. I did so _ to Chulsoo, too.)

b. Nay-ka Yenghi-eykey phyenci-ul ponay-ss-ta
   I-N -Dat letter-A send-Pst-Dec
   (I sent a letter to Younghee.)

b'. [y phyenci-ul ponay-ki]-nun nay-ka Yenghi-eykey _ ha-yess-ta
     letter-A send?-Contra I-N -Dat HA-Pst-Dec
   (Lit. Send a letter, I did _ to Younghee.)

b''. Nay-ka chelswu-eykey-to _ kulay-ss-ta
    I-N -Dat also do so-Pst-Dec
   (Lit. I did so _ to Chulsoo, too.)

Given (81), the above sentences provide an argument for the existence of V-movement in Korean. The structure in (81) also correctly predicts that IO+V° cannot form a constituent excluding DO, hence movement or substitution of IO+V° combinations stranding DO should be illicit in Korean. This prediction is borne out in the following examples.

(83)

a. Nay-ka Yenghi-eykey chayk-ul cwu-ess-ta
   I-N -Dat book-A give-Pst-Dec
   (I gave a book to Younghee.)

a'. [y Yenghi-eykey cwu-ki]-nun nay-ka chayk-ul _ ha-yess-ta
    -Dat give?-Contra I-N book-A HA-Pst-Dec
   (Lit. Give to Younghee, I did _ a book.)

a''. ?* Nay-ka ton-to _ kulay-ss-ta
    I-N money-also do so-Pst-Dec
   (Lit. I did so _ money, too.)

b. Nay-ka Yenghi-eykey phyenci-ul ponay-ss-ta
   I-N -Dat letter-A send-Pst-Dec
   (I sent a letter to Younghee.)

b'. ?* [y Yenghi-eykey ponay-ki]-nun nay-ka phyenci-ul _ ha-yess-ta
     -Dat send?-Contra I-N letter-A HA-Pst-Dec
   (Lit. send to Younghee, I did _ a letter.)
Given (84), we can now see why V(VP)-movement or substitution is impossible in English. Specifically, when VP or V is moved, the trace tv left by the verb will always invoke an ECP violation. This fact may independently give rise to the consequence that seeming VP-movements in English and Korean are actually two different processes; the former is AspP-movement, while the latter is V'-movement. In fact, if we carefully look into these constructions in English and Korean, we can find more differences that support our claim. First, note that the trace of the fronted VP in English can be governed by any modal/auxiliary including the dummy do, as seen below.

(85) Win the race, I think, John did/may/can/will t

By contrast, the trace of the fronted VP in Korean is always governed by the verb ha.

(86) a. Yenghi-ka [VP ppalli ttway-ki]-nun ha-yess-ciman ...
   \-N fast run-?-Contra HA-Pst-although
   (Although Younghee did run fast, ...)
   b. [VP ppalli ttway-ki]-nun Yenghi-ka t ha-yess-ciman ...
   (Run fast, Younghee did.)

Recall from §1.2 that the verb ha employed in here is a light verb, which crucially differs from the auxiliary ha (recall the discussion surrounding (20) and (21) in §1.2). In English, it is an auxiliary which governs the trace of VP. I conjecture that this minimal difference between these two languages
indirectly invokes this contrast.

Further, note that bare VP in Korean always carries a morpheme *ki* which blocks V*-raising in this context, I surmise. The morpheme *ki* is traditionally referred to as a nominalizer, the role of which is very similar to the nominalizer -*ing* in English. In contrast to the sentential -*ing* in (87) from Baker (1984),

(87) a. John's singing the aria amazed me
    b. We depend on Linda's solving the problem
    c. The army's destroying the city (disturbed me)
    d. Your (consistently) paying attention to his lies

when the verb is attached by the nominalizer -*ing*, V+ing cannot assign Case in English. Hence, the complement NP appears in an *of*-phrase, as in (88) (examples are from Baker (1984, 8)):

(88) a. (I enjoyed) John's singing of the aria
    b. The first careful singing of the aria in public

Baker (ibid.) suggests that affixing -*ing* to a verb stem takes place in Lexicon, rather than Syntax. I further speculate that the behavior of nominalizer -*ing* is parallel to that of the morpheme *ki* in Korean in that V*-raising is blocked if this kind of -*ing* is attached on the verb. I further assume that nominalizer -*ing* and *ki* is generated prior to D-structure, and the outcome—V+ing or V+ki complex—becomes totally opaque to the syntactic process such as V-Raising. Following Baker. In any event, I contend that the difference status of fronted predicates in English and Korean is due to the independent grounds that I have put forward, and has nothing to do with parametric application of the universal principle—e.g. the ECP—*per se.*

2.9 Conclusion

In this chapter, I have discussed the different status of VP-movement in Korean and English. I have claimed that what we have seen as VP-movement is, in fact; V*-movement in Korean, and AspP-movement in English. I have also dealt with movement of *to* -infinitives in English. By examining these two movements I concluded that

(i) NP-traces must obey the ECP, and
(ii) The PBC be subsumed under the ECP.

The nature of *to*-infinitive movement, particularly, gave rise to the further theoretical consequences;

(iii) The ECP must be formulated with two conjunctive elements; namely, both Lexical-government and antecedent-government are required. I have further explored the ECM constructions and small clauses in English. There, we have observed that the contextual definition of A/A-bar positions is motivated in conjunction with the ECP to account for certain surprising facts in English. I have also observed various other approaches of the
apparent ECP violation in "How likely to win is John," and tried to prove that our account is both empirically and theoretically superior to others.

Chapter 3

NEGATION AND CLAUSAL ARCHITECTURE

3.0 Introduction

Recent work in syntactic theory has developed the extension of the X'-
schema to the projection of functional heads (Chomsky (1986b)) and a more
articulated conception of sentence structure (Pollock (1989), Chomsky (1989)).
Most commonly known extensions are:

i) Infl to be taken to head of S; IP
   (Stowell 1981)

ii) Comp to be taken to head of S; CP
    (Chomsky 1986b)

iii) Det(terminers) to be taken to head of NP; DP
    (Fukui and Speas 1986)

iv) Deg(ree) words to be taken to head of AdvP; Deg P (Abney 1987)
Infl is known as a portmanteau of Agreement, Tense, Modal, etc. Pollock (1989) proposes a structure where Tense and Agreement occupy independent structural projections separated by the maximal projection of negation called NegP. Pollock has suggested that this enriched structure is needed to account for the previously poorly understood phenomena concerning word order variations with respect to negation and adverb placement in French and English.

In this chapter, I address several issues related to the number and hierarchical relations of functional projections in clausal structure. Further I particularly focus on the syntactic nature of negation, and I attempt to establish the argument to show that there exists NegP in Korean.

This chapter is organized in the following fashion. In the first section, I will outline some theoretical background for the extension of IP to more articulated structure advanced in Pollock (1989), and examine the validity of his arguments. I will particular focus of the status Affix-lowering operation advocated in Chomsky (1989) and implicitly assumed by Pollock. I will essentially show that their reasoning for postulating the rule of Affix Hopping is not well-motivated, and raise some further problems on their Affix-lowering account based on Agr parameter. The section primarily concerns the nature of the negator not in English. I will demonstrate that there exist two types of not's in English—a head of NegP, and VP-adverb. I will further elaborate Johnson's (1990b) view on the clausal structure of English in conjunction with our claim that not is an affixal head of NegP. I will also take the position that main verbs do raise in English contra Pollock (1989) and Chomsky (1989). I will justify the view that the obligatory nature of Verb Raising is induced by the affixal nature of functional morphemes such as Tense in English. The last section mainly deals with the behavior of the negator an 'not' in Korean. After some preliminary observations concerning the clausal architecture in Korean, I will establish a proper treatment of the negator an 'not' essentially parallel to English not in that there also exist two types of an in Korean; one heads NegP, and the other, emphatic adverb. I will further provide three pieces of evidence—namely, Negative Polarity Licensing, scope ambiguity, and Negation-Tense cooccurrence requirement—which give strong supports for the existence of NegP in Korean. I will also briefly look at the relationship between the two types of negative formations in Korean; they are used to called “short” and “long” form negation. I will suggest the long-form negation is, in some sense, derived from the short one. I will also examine the proposal that argues the long-form is underlyingly related VP-focus constructions, as proposed in Song (1988).


In what follows, I will briefly sketch the proposals made in Pollock(1989) and Chomsky (1989) concerning AgrP, TP, and NegP, and show some problems in their suggestions.
3.1.1 Verb Raising and Agr Parameter

Following an insight which dates to Emonds (1976, 1978), Pollock (1989) has argued that the different scope of verb movement can capture the following contrasts between French and English.

(1) a. *John kisses often Mary
b. Jean embrasse souvent Marie
c. John often kisses Mary
d. *Jean souvent embrasse Marie

Pollock claims that if the VP-initial adverbs *often and *souvent are generated in a position adjoined to VP at D-structure, the contrasts in (1) overtly show that the main verb moves to the inflectional head in French, while it does not do so in English. To be more concrete, Pollock (1989) suggests the following structure for a simple sentence in English and French:

(Intermediate one bar projections are omitted here.)

```
TP
/ \
AgrP
/ \  
  VP
/ \  
Adv VP
/ 
V
```

Pollock suggests that Tense and Agreement constitute distinct heads, and Tense is projected higher than Agr(eement). Moreover, he proposes that Agr in French is rich enough to attract the verb onto it. He takes the view that the scope of V-raising is restricted by the richness of Agr. He argues that Agr in French is "transparent" in the sense that the verb adjoining it can transmit its ability to assign theta-roles to its trace, while Agr in English is "opaque" in that the verb cannot transmit its ability to assign theta-roles to its trace if it adjoins to the "opaque" Agr, hence theta-assigning main verbs in English cannot move into Agr since it would violate theta-Criterion. It is this property of Agr, either "transparent" or "opaque," that displays the contrast as shown in (1a-b), as Pollock claims. Note, however, that (1a) can be ruled out independent of V-raising since there is an overriding condition in English which forces the NP complement and its theta-assigning verb should be adjacent at PF (Stowell 1981). That is, it is not clear whether V-raising or the Adjacency Requirement is responsible for the ill-formedness resulted in (1a). In fact, in the environment where the Adjacency Requirement is not forced, we can find the cases which may show that V-raising is possible in English. Consider the following examples from Johnson (1989, 49):

(2) a. Chris walked quickly down the street
b. Mickey talked slowly to Gary
c. Betsy spoke loudly with everyone
d. Sam said suddenly that we must all leave
e. Chris tried diligently to leave
Johnson (1989) observes that Affix Hopping cannot plausibly account for the adverb placement in (2) without stipulating the downwards movement of adverbs. Johnson notes that the Projection Principle in its strictest form enforces only complements to be sisters to the verb at D-structure. Thus without Verb Raising (or undesirable adverb lowering), the surface order of intervening adverbs between the verbs and their complements in (2) is highly problematic. (See also Pesetsky (1989) and Jaeggli and Hyams (1989)) I will return to these examples in § 3.2.3.

Pollock further suggests that only auxiliary verbs can raise to opaque Agr in English, as in (2), since these verbs, by assumption, do not assign theta-roles, hence the movement of these terms to Agr would not induce the violation of theta- Criterion.

(3) a. John has done it.
   b. John is usually working at night.

Again, contra Pollock(1989), (3) can be seen as a simple V-raising case under our conjecture on a par with (2) since the Adjacency Requirement is not imposed.

To summarize so far, there is an alternative way to interprete the contrasts in (1a) and (1b) in one hand, and (1a) and (2), on the other. That is, the contrast in (1a) and (1b) may not hinge on the scope of V-raising but may be due to the presence or absence of the Adjacency Requirement on Case in these languages. Further, the contrast in (1a) and (2) may not be attributed to the different nature of main verbs and auxiliaries per se with respect to raising possibility onto Infl, but because of the force of the Adjacency Requirement. More specifically, following Johnson(1990a), the deviance in (1a) is invoked since the object does not raise to the appropriate position to be assigned a Case from the verb.

Now let us turn to the argument for the existence of AgrP in English and French, as put forward in Pollock (1989).

3.1.2 AgrP

Pollock puts forth the evidence for the existence of the maximal projection "AgrP" partly based on the following data (Pollock (1989, 382)).

(4) a. Peter is said to seldom have enough money.
    b. (?) Peter is said to have seldom enough money.
    c. Peter is said to seldom make enough money.
    d. * Peter is said to make seldom enough money.

(5) a. (?) I believe John to be often sarcastic.
    b. * I believe John to sound often sarcastic.

Pollock suggests that have/be in English infinitives can optionally raise to Agr (and may be further to Tense)\(^1\)—which he calls "short verb

\(^1\) Pollock (1989, 376) illustrates the following examples to show the optional movement from Agr to Tense under the assumption that NegP is positioned between Tense and Agr.

(1) a. Not to be happy is a prerequisite for writing novels.
    b. ? To be not happy is a prerequisite for writing novels.
    c. Not to have had a happy childhood is a prerequisite for writing novels.
    d. (?) To have not a happy childhood is a prerequisite for writing novels.
movement"—while main verbs never do. Iatridou (1990), on the contrary, argues that often sarcastic can form a predicate in (5), hence (5a) does not necessarily show the be-raising to Agr. Iatridou (ibid.) further points out that the unacceptability of (5b) arises from a semantic incompatibility between the verb sound and the reading of the lower predicate often sarcastic imposed by the adverb (see details therein). Thus according to her, employing appropriate adverbs will not exhibit the contrast as in (6), in contrast to (5) (ibid., 561).

(6) a. John is believed to be deliberately sarcastic.
   b. John is believed to sound deliberately sarcastic.

I assume Iatridou's observation is basically correct in that the contrast shown in (5) is not necessarily due to the fact that main verbs in English do not undergo Verb Raising, but auxiliaries do. Iatridou's argument, however, may not be extended to the contrasts in (4), since seldom enough money may not constitute a predicate unlike often sarcastic, because an adverb (seldom) cannot modify an NP (enough money). Thus, (4b) can be a real instance of V-raising in English infinitives. This, however, does not necessarily mean that V-to-Agr raising ensues in (4b) since the adverb like seldom is not a VP-modifying type but more likely a sentence-modifying type (Jakendoff 1977).

Thus, the result that we have obtained from the contrast in (5b) and (5d) is: There is a certain position (not necessarily Agr or T) where only auxiliaries but not main verbs can move.

In sum, Pollock's evidence for the existence of AgrP in English is not sufficient and not well-motivated with those examples that he has provided. However, we get one interesting by-product in this discussion; that is, we have to differentiate the scope of V-raising between auxiliaries and main verbs in English based on the contrast in (5). I will turn to this issue in more detail in §3.2.

Now I wish to observe further compelling evidence being consistent with this supposition.2

3.1.3 NegP

In this section I would like to consider the proposal as to the status of NegP in English. Based on the following paradigm in (7) and (8) in English and French, Pollock argues that negation must head its own maximal projection NegP.

(7) a. *John understands not
   b. John has not understood

(8) a. Jean (ne) comprend pas
   b. Jean (n')a pas compris

---

2 Here, I omit the discussion concerning the status of AgrP in French, as widely discussed in Pollock (1989). But see Iatridou (1990) for arguments against AgrP in French.
This set of data shows that verbs can (in fact "must" in this context) move over *pas* in French, while only auxiliary verbs can cross over *not* in English. Pollock postulates the position of NegP below Tense but above AgrP:

\[ \begin{array}{c}
   TP \\
   \quad / \backslash \\
   \quad \text{NegP} \\
   \quad / \backslash \\
   \quad \text{AgrP} \\
   \quad / \backslash \\
   \quad \text{VP}
\end{array} \]

Under Pollock's account, main verbs in English cannot move to Agr due to theta-theory, hence (5a) cannot be obtained. Auxiliary verbs in English, on the other hand, can move to Agr and can further raise up to T, hence (7b). In French, however, all verbs can move to Agr and ultimately to T. He further suggests that V-raising to T through Agr is in fact obligatory whenever it is possible. Pollock's theory for obligatory V-raising to T runs as follows: First, he takes the position that Tense [+Finite] is a sentential operator which must bind a variable. And, in order to meet the ban on vacuous quantification, some material should raise to adjoin T—say, a verb, Agr—then, the trace of raised V and/or Agr can serve as a variable for T operator. The requirement that T must bind a variable requires V-raising as an obligatory rule under his account. By this, we achieve the right (and only possible) order "V Neg" in (8) for French and (7b) for English, given the structure in (9). Under this account, another important question arises: How can the movement skipping over NegP void the violation of the Head Movement Constraint (HMC, Travis (1984)) or the ECP? Pollock suggests that the HMC must be subsumed under the ECP in this case, and he further assumes:

(i) AgrP is not inherent barrier, and
(ii) The verb raised on T L-marks NegP, hence the verb crosses no barrier.

Thus, under these assumptions the ECP is respected.

Notice, however, that moving V° directly onto T° over Neg° would violate the HMC. Thus, in Pollock's account, the HMC is too strong, and must be subsumed under the ECP.

Now consider the ill-formed sentence in (7a). In order to achieve this surface order, lexical verbs\(^4\) in English either raise to T over Neg through Agr—a two step derivation—or directly move to T skipping over Agr and Neg—a single step derivation. Two step derivation is predicted to be illicit under Pollock's view since (theta-assigning) lexical verbs cannot exploit opaque Agr as a "escaping hatch."

Now take the single step derivation. It seems that this long distance V°-movement must be licit under his account based on the ECP, since moving a V° to T° would not cross any barrier on a par with the account for (7b)/(8) above. Thus, (7a) is incorrectly predicted to be grammatical under Pollock's theory.

Further, recall that in § 3.1.2 we have seen that the ban on V-to-Agr movement for lexical verbs is not well-motivated in English. Then, here

---

\(^3\) Movement of a zero-level category A is retracted to the position of a head B that governs the maximal projection M of A, where B theta-governs or L-marks B if A\(\in\)C.

(Chomsky (1986), 711)

\(^4\) Note that I am using the term "lexical verbs" and "main verbs" interchangeably, and "auxiliary verbs" or "auxiliaries" as a general term for non-lexical or non-main verbs. Also following general convention, I use T for T°, or Agr for Agr°, etc.; or vice versa.
too, the contrast in (7) only manifests the fact that main verbs in English cannot move to T or a functional node F higher than Neg. The facts become relatively consistent with regard to the distance of V-movement in English; namely, "the auxiliary verbs can move farther than the main verbs in English." Let us bear this fact in our mind until § 2.2, and consider more problematic cases in Pollock's account in the next section.

3.1.4 Affix hopping

Consider the following contrast:

(10) a. John often kisses Mary.
    b. *Jean souvent embrasse Marie.

According to Pollock, adverbs such as often and souvent are generated sister to VP, hence, the ill-formedness in (10b) shows that the verb in French must raise to Infl out of VP. In (10a), however, he suggests that the inflectional ending is amalgamated with the verb not by Verb Raising but by Infl-lowering onto the verb often called Affix Hopping (AH, Chomsky (1957)).

One question immediately arises under Pollock's account for (10b): Why is AH not possible in (10b)? Pollock's answer is: V-raising is obligatory whenever it is possible. Since V-raising is possible in French because of the transparent nature of Agr, it must occur obligatorily at "S-structure" in order to satisfy Tense quantification requirement. In English, on the other hand, if main Verb Raising is inhibited due to the opaque nature of Agr, Infl and verb are amalgamated by alternative means—namely, Affix-lowering. In this situation, another question arises for English sentences where V-raising is barred. How can Tense quantification requirement be fulfilled in this context? Consider the following simple affirmatives:

(11) a. John left.
    b. John leaves.

In this case, Pollock postulates a null do, a nonlexical counterpart of pleonastic do, which is generated under Agr, and subsequently moves to T at S-structure to satisfy Quantification Theory. He further suggests that null do movement is blocked in the following sentence due to intervening NegP.

(12) John not leaves.

More specifically, assume the following derivation for (12):

(Here ø symbolizes for null do.)

(13) \[ \begin{array}{c}
TP \\
| \\
\text{T} \quad \text{NegP} \\
| \\
\text{Agr} \quad \text{T} \quad \text{not} \quad \text{AgrP} \\
| \\
\text{ø} \quad \text{t}_0 \quad \text{VP}
\end{array} \]

Following Pollock, ø cannot L-mark NegP since it is not Lexical. Note that
in (11), \( \phi \) crosses over only AgrP which is stipulated as not an inherent barrier, hence no ECP violation occurs there. If (lexical) \( do \) is generated under Agr, instead of \( \phi \), the output would be (14).

(14) John does not leave.

Now in (14), according to Pollock, \( do \) can L-mark NegP since it is Lexical in contrast to null \( do \). Note that this account crucially hinges on the fact that the negator not is an element of NegP—either its head or its specifier. If not is an adverb, null \( do \) movement must not be blocked on a par with other negative adverbs as seen in (15).

(15) John hardly/never/seldom speaks.

Thus, the contrast in (11) and (12) can be another important evidence to support the existence of NegP in Pollock’s proposal.

Further note that under Pollock’s treatment of (15), there are two independent processes involved—null \( do \) raising and affix lowering. In particular, affix lowering does not have to be necessarily “syntactic” in his proposal. Pollock (1989,394) conjectures that affix movement does not seem to be an ordinary rule of syntax taking place at D-structure/S-structure, since moving down the terms is not generally allowed due to the Proper Binding Condition or the ECP. Thus, he speculates that affix movement would rather be a rule applying on the PF side of the grammar. Logically, there are at least three specific choices for accounting for the verb+Infl complex in English, if it is not achieved by “syntactic” process;

(i) by some unknown PF-process such as downward movements in conjunction with free deletion of traces (or by some sort of PF-readjustment rules), or (ii) by “morphological” transformations, along the lines in Roeger and Siegel (1978), or (iii) by strictly lexical process (Lapointe (1980), Kiparsky (1982), and Mohanan (1982)).

First of all, the morphological or lexical treatment of the verb+inflectional paradigm in English seems very implausible because their distribution is highly predictable and well-constrained by syntactic principles, as will become clearer. Thus, I will not take the options (ii) and (iii) seriously. A similar objection can be made for the choice of (i). For instance, take the following illicit derivation of lowering the matrix Infl onto embedded verb:

(16) a.* John \( T^o_1 \) Agr \( T^o_2 \) say that they \( T^o_2 \) Agr \( s_1 \) leave

This derivation can be wrongly ruled in under Pollock’s proposal; that is, null \( do \) can be generated under Agr \( T^o_1 \) and Agr \( T^o_2 \), and moves to \( T^o_1 \) and \( T^o_2 \), respectively. Hence, Quantification Theory for Tense is satisfied in (16). Further, the (3rd person singular) inflection \( s \) can move down to the verb leave, and 3rd person plural phonetically null inflection can move to the verb say. These long-distance movements would not violate the ECP (and perhaps would not violate Subjacency, either) if the traces left by movements can be freely deleted. However, if Affix movement is in fact syntactic head-
movement, we can correctly rule (16) out by the ECP (or the HMC). For this reason, we may abandon the view that Verb+Infl complex in English is derived by an obscure Affix movement at PF, as speculated in Pollock (1989).

Now let us consider an alternative account for the facts discussed above. In Chomsky (1989), Affix Hopping is treated as a subcase of syntactic X²-movement. Chomsky suggests that I-lowering to V in English apparently gives rise to an improper chain, hence a potential ECP violation. However, he argues that the potential ECP violation can be circumvented by the subsequent raising of V+I complex back to I at LF. Thus, the simple affirmative sentence has the following S-structure and LF:

(17) a. John arrives.

b. \[TP t [Agr t' [VP V+Agtr+T]]\]

S-structure

c. \[TP V+Agtr+T [Agr t' [VP t]]\]

LF

Chomsky further suggests that whenever V-raising is possible, I-lowering is blocked because there is a condition on derivations he refers to as the "Principle of Economy." This principle basically says that shorter derivations are always chosen over longer ones. Given the fact that overt I-lowering with subsequent V+I-raising at LF always involves more number of steps of derivations than overt V-to-I raising, Affix-lowering does not take place in French for verbs, and in English for auxiliaries.

Let us now turn to the contrasts in negative clauses repeated below:

(18) a. * John not leaves.

b. John has not left.

Chomsky suggests that (18a) violates the ECP, while (18b) does not. His argument runs as follows: To derive (18a), at least three main steps are involved. First, T is lowered to Agr, and T+Agtr to V. Then, the trace in Agr² is deleted. Finally, the complex V+Infl is moved to vacant Agr⁵, and raises further to T⁶ over Neg. To derive (18b), V first moves to Agr⁷, and V+Agtr moves to T⁶ crossing over Neg⁸. Chomsky departs from Pollock in that NegP is an inherent barrier (and ignoring I-marking mechanism of Pollock), thus, nothing can cross over it unless the trace left by the moved elements can be deleted. Note that under his proposal, (18a) and (18b) involve the following derivations—(19a) at S-structure and (19b) at LF, respectively.

(19) a. \[TP \]

\[V , NegP \]

\[Neg AgrP \]

\[tV \]

b. \[TP \]

\[V+Agtr NegP \]

\[Neg AgrP \]

\[tAgr \]

Chomsky further stipulates that Agreement plays no role at LF, hence it can be deleted at LF. Thus (19b) can obviate the ECP violation. By contrast, he
assumes, the trace of verb in (19a) must play a role at LF, hence it cannot be deleted. Then, the ECP violation results. Chomsky further proposes that the ill-formed sentence like (18a) can be rescued by the language particular device called "do-support" as a last resort. This yields the following sentence:

(20) John does not leave.

Note, in particular, that Chomsky departs from Pollock for obligatory nature of V-raising or I-lowering. Chomsky suggests that the morphemes Tense and Agr are morphological affixes, hence these items cannot stand alone, and must be supported by S-structure—the idea essentially originates from Lasnik (1981, 162) filter;

"A morphologically realized affix must be realized as a syntactic dependent at surface structure."

Now, let us ask why do-support is the only way to salvage the ill-formed representation of (18a). Suppose T₀ is lowered onto V₀ along with Neg₀ and Agr₀ at S-structure and the whole complex moves back to T₀ at LF to eliminate the improper chain. This derivation seems to observe the ECP on a par with (17), and significantly this operation is less "cost" than inserting do, a language particular device according to Chomsky. Then, (18a) can be erroneously ruled in without do-support. This is of course not a desirable consequence for Chomsky's approach. In §3.2, I will explore an alternative way to account for the ungrammaticality in (18a).

3.1.5 Summary

Up to now, we have observed several problems concerning the scope of verb-movement in relation to the distribution of VP-adverbs and negation in English and French. We have mainly focused on Pollock's (1989) proposal which crucially relies on splitting Infl into T₀ and Agr₀, postulating NegP between them. Among some of Pollock's proposals, I have tried to weaken the following premises:

(i) main verbs in English do not move (to Agr₀)
(ii) short have/be movement to Agr₀ in English infinitives
(iii) null-do raising at S-structure in conjunction with Affix-lowering at PF for simple affirmatives.

Essentially, I have shown that (i) main verbs must move over VP-adverbs unless Adjacency requirement is imposed, and (ii) have/be may move in English infinitives, perhaps not onto Agr₀, but higher position where main verbs cannot reach (iii) the complex V+I must be achieved by syntactic movement. I have also pointed out the problems in Affix-lowering put forward in Chomsky (1989) in that this movement cannot be properly restricted (see also Johnson (1990b)). In the next section, I will offer alternative accounts for the facts we have observed.
3.2 Toward a solution

3.2.1 Two types of not

There seem to be numerous ways to express negation across languages superficially. In English, various terms can be employed to express negative meaning—e.g., hardly, never, seldom and a typical negator not, to mention a few. Interestingly, this class of terms cannot be positioned sentence initially:

(21) a. *Hardly John solved the problem.
    b. *Never John solved the problem.
    c. *Seldom John solved the problem.
    d. *Not John solved the problem.

More interestingly to our purposes, these terms can occur between the subject and inflected verbs, except for not:

(22) a. John hardly solved the problem.
    b. John never solved the problem.
    c. John seldom solved the problem.
    d. *John not solved the problem.

If these terms are analyzed as a class of adverbs, not is "truly" an exceptional adverb.5 Pending the explanation for the ill-formedness in (22d) for a

5 Presumably, the terms so and too behave as not in this respect:

(1) a. *John so solved the problem.
    b. *John too solved the problem.

Here, I will limit my discussion solely on not. But see Chomsky (1957), Johnson (1989),

moment, let us examine another peculiar property of not which distinguishes from other adverbs. Not must be adjacent to (immediately follow) the dummy do as in (23d), while it can be separated from other modals/auxiliaries as in (23a-c):

(23) a. John was probably not talking to Bill
    b. John has probably not talked to Bill
    c. John will probably not talk to Bill
    d. *John did probably not talk to Bill

Another peculiar property of not contra other adverbs is that it has a widely used phonologically reduced variant n't. Interestingly not all not's can be replaced by n't:

(24) a. John didn't go (= John didn't go)
    b. John wouldn't go (= John wouldn't go)
    c. John hasn't arrived (= John hasn't arrived)
    d. *John would haven't arrived (= John would haven't arrived)

(25) a. *John would haven't arrived (= John would haven't arrived)
    b. *I want ton't go (= I want to not go)
    c. *I will probablyn't go (= I will probably not go)

Why can only some instances of not 's be substituted by n't? Note that the characteristic paradigm in (24) and (25) cannot be accommodated under a peculiar phonological rule being sensitive to syntactic features, say, Tense.

Kayne (1989), Pollock (1989), and Laka (1990) for treating them together.
One might possibly postulate the following phonological rule for the
distribution of n't:

(26) not \rightarrow n't / verb [+Tense] \_\_\_ (optional)

This rule may correctly capture the contrasts in (25) and (26). However, it is
not difficult to find counter examples to this rule. First, consider (27):

(27) a. *I wantn't to go
    b. I want not to go

not in (27b) is exactly located at the environment to undergo contraction in
(26), yet contraction is not possible. Further observe the following contrast
from Green (1970):

(28) a. Punch is more responsible than Judy is NOT responsible.
    b. *Punch is more responsible than Judy isn't responsible.

Green (1970) observes that not in a certain frozen expression like "more often
than not" cannot undergo contraction. Note that not in (28a) is also in the
possible environment to undergo contraction into n't, but the result is not
acceptable as in (28b). Thus, I conclude that not/n't alternation does not
hinge on phonological conditions—that is, "string" sensitive.

Based on the facts we have observed, I wish to claim that there are two
different lexical entries for not which are categorically distinct for each
other. Let us call not for the interchangeable counterpart of n't, and NOT for
noninterchangeable one, for the purposes of exposition. That is, not and n't
form one class, and NOT for the other. In this section, I will argue that not
and n't are parts of the maximal projection NegP, while NOT belongs to a
class of adverbs adjoined to only lexical projections such as VP, AP, AdvP,
etc.

Now, let us examine further differences between not in NegP and an
adverbial NOT. Not sharply contrasts with not with respect to stranding
facts. Based on Ernst's (1990) observation, I suggest that only not but not
NOT may be stranded after VP-Ellipsis. First consider the following
contrasts: (Ernst 1990, 6)

(29) Ken said he could have heard the news, but George
    a. said that he could not (have) ____.
    b.* said that he could have not ____.
    c. said that he could have not heard the news.

(30) Ken said that he might be doing his homework, but
    a. George said he might not (be) ____.
    b.* George said he might be not ____.
    c. George said he might be not doing his homework.

Based on n't-substitution test, (29b) and (30b) involve NOT, while (29a) and
(30a) involve not. Observe:

(31) a. Ken couldn't have heard the news.
    b.*Ken could haven't heard the news.
c. George mightn’t be doing his homework.
d.*George mightn’t be doing his homework.

The precise nature of VP-Ellipsis is far from clear, however, by the contrasts in (29) and (30), I wish to simply note that NOT behaves on a par with regular adverbs, while not does not, since adverbs in English cannot be stranded with VP-Ellipsis: (Ernst 1990, 7)

(32) Ken said he could sing, and he could obviously ___.

Observe further difference between not and NOT. Consider the following examples as discussed in Iatridou (1990, due to H. Lasnik):

(33) a. John has not been playing football for many years.
    b. John has been NOT playing football for many years.

Iatridou observes that (33a) is ambiguous with respect to the relative scope of not and many. That is, the following two readings can be obtained according to Iatridou:

(34) a. John used to play football and he hasn’t played in the last fifteen years
    (many has scope over not)
    b. John started playing football only one year ago
    (not has scope over many)

By contrast, (33b) is not ambiguous but only the narrow scope reading of NOT (as in (34a)) is possible. If not takes sentence scope in contrast to NOT whose scope is restricted only to XP which it modifies, this contrast can correctly result. Note, particularly, that this implies NOT in (33b) is, by no means, analyzed as a part of NegP. Again if this is the case then replacing NOT with n’t is should be impossible in (33b) unlike (33a), as is consistent with my proposal. This is correctly borne out:

(35) a. John hasn’t been playing football for many years.
    b. * John has beenn’t playing football for many years.

Note, however, that if has and not are separated by an adverb as in (36), the wide scope reading of not over many cannot be obtained.

(36) John has usually NOT been playing football for many years.

Thus, here we can find another evidence to confirm our supposition that not, an element in NegP, must be adjacent to the preceding (auxiliary) verb. Now, let us consider “not” in infinitives. “Not” in infinitives may either precede or follow the infinitive marker to:

(37) a. I want not to go.
    b. I want to NOT go.

NOT in (37b) behaves as other adverbs with respect to stranding facts:
Summarizing up to this point, we have seen numerous compelling evidences to support the existence of two kinds of not's (*not* and *NOT*). The simple way of distinguishing one from the other is by substituting the reduced form *n’t*. I have suggested that only *not*, a member of NegP, can be replaced by *n’t*. This diagnostic may further imply that the morphosyntactic nature of *not* and *n’t* can be in fact identical.

The following section will pursue the analysis of *not* and *n’t* toward this direction.

3.2.2 *Not* as an affix

In this section, I will essentially show that *not* and *n’t* "head" the maximal projection NegP. Further, following Kayne's (1989) observation in part, I will take the view that these two negators are "bound" morphemes which must be supported by the lexical material at S-structure. Given this assumption, the deviance in (22d) and (23d), repeated here, can be parallel to the ungrammatical sentences in (41):

(22)  d. *John not solved the problem.

(23)  d. *John did probably not talk to Bill

(41) a. *John n’t solved the problem.

    d. *John did probably n’t talk to Bill.

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6 For some people, *NOT* > *many* interpretation seems to be possible in (39a). I speculate that for those people, the phrase for *many* people is generated under VP to which *NOT* is adjoined. For (39b), on the other hand, no one gets the wide scope reading of *NOT* over *many*.

7 Ernst (1990, 15) notes that "not" in (37a) should also be an adverb due to the ill-formedness of the following sentence:

(i)  "He tried to be loud, but I tried not ___."

This example is, however, far from clear for determining the status of "not" since the following examples like (i) is also unacceptable without "not."

(ii)  a? He didn't try to be loud, but I tried ___.

b. He didn't try to be loud, but I tried to ___.

(Ernst 1990, 14)
Assuming not/n’t as an affix, the examples above can be uniformly ruled out due to Lasnik’s (1981) filter. That is, affixal not in (22d)/(23d) fails to be lexically supported at S-structure, hence the ill-formedness results.\(^8\) Recall, however, that (23a-c) repeated here is acceptable (presumably with somewhat contrastive stress on NOT) in contrast with (23d).

(23) a. John was probably NOT talking to Bill.
    b. John has probably NOT talked to Bill.
    c. John will probably NOT talk to Bill.

NOT in (23a-c) is undoubtedly an adverb under our proposal since it can’t be replaced by n’t. There is an indirect evidence to distinguish non-contrastive not (the head of NegP) from the adverbial contrastive NOT with respect to modals. Observe the following contrast discussed in Zwicky and Pullum (1983, 509):

(42) a. You CANnot go home. (= You can’t go home.)
    b. You canNOT go home.
    b’. You can simply not go home.

Zwicky and Pullum note that (42a) means NOT(CAN(P))—it refuses permission (or denies possibility)—when not is not stressed. By contrast, when a stress is given to NOT, the order of operators is reversed, hence the meaning of (42b) is CAN(NOT(P))—permitting the addressee not to go home (or admitting that possibility). (42b’) yields only CAN(NOT(P)) reading whether not gets a contrastive stress or not. This fact is, in part, predictable under our proposal since NOT in (42b’), being a VP-adverb, does not c-command anything outside the VP, hence NOT cannot take scope over the modal can, given that the scope interpretation reflects S-structure relation.

Returning to the ill-formedness in (22d) and (23d), I wish to further consider the following examples where an adverbial NOT replaces not.

(22’) d.*John NOT solved the problem.
(23’) d.*John did probably NOT talk to Bill. (contrastive do aside)

(22’d) and (23’d) are equally bad as (22d) and (23d). Why is it so? Consider

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\(^8\) The following sentences may cast doubt on the validity of the Affixal status of not:

(i) a. Did John not read the book?
    b. John insisted that Mary not leave

These examples, however, can also comfort well with our proposal if not’s in (i) are uniformly treated as adverbial NOT. Note that the pleonastic do in (i) can be seen inserted, independent of the appearance of not in a question sentence (contra (25d)). However, there seem to exist genuine counterexamples for the treatment of not as an affix.

Observe:

(ii) a. ?* Have not John left?
    b. ?* Is not she going?
    c. ?* Could not you go home?
    d. ?* Does he know that?

In fact, examples in (ii) are not totally unacceptable for some speakers. Particularly, when the subject is heavy enough, not can easily be pied-piped along with the auxiliaries.

Witness:

(iii) a. Will not the electorate of this country consider that they have a right to know these facts?
    b. Could not this group of sixteen energetic youngsters travel down the Colorado in a bare canoe?

These examples are cited in Zwicky and Pullum (1983). One might want to relate the cases in (iii) to some kind of Heavy NP Shift. Interestingly, however, the (emphatic) adverbial NOT can not raise (involve) with the auxiliary verb, as noted in Zwicky and Pullum; the observation due to Richard Kayne.

(iv) a. *Couldn’t NOT this group of sixteen energetic youngster travel down the Colorado in a bare canoe?
    b. Couldn’t this group of sixteen energetic youngsters NOT travel down the Colorado in a bare canoe?

The ill-formedness of (iv-a) presumably shows that the heaviness of the subject may not be solely responsible for Aux+not raising in (iii). I think the contrast hinges on the fact not is affixal, whereas NOT is not. Yet, the deviance in (ii) will still remain problematic.
(23d)/(23'd) first. Note that the pleonastic do cannot appear in the absence of NegP, a projection of not (ignoring inversion structures and emphatic structures). Thus, (23'd) is correctly ruled out. Recall that (23d) is deviant since the head of NegP—affixal not—is not properly supported. Now, consider the most problematic case; (22d) and (22d'). Under our account, (22d) is ruled out due to Lasnik’s filter since not is not supported. However, at first glance, nothing goes wrong in (22'd)—that is, NOT, being a VP-adverb, which seems to be properly adjoined to VP headed by the verb solved. Moreover, either Pollock’s (1989) null-do movement or Chomsky’s (1989) “round-trip” Affix-movement (namely, I-lowering at S-structure with subsequent V+I raising at LF) fails to rule (22'd) out. According to their proposals, (22'd) should be nondistinct from the (22a-c), repeated below:

(22)

a. John hardly solved the problem.

b. John never solved the problem.

c. John seldom solved the problem.

d. John not solved the problem.

If verbal inflection is assumed to be mediated by Verb Raising, the ill-formedness in (22'd) can directly follow. More specifically, assume a Verb Raising in (22'd) roughly shown below:

Given (22’d), "NOT solved NP" order can be hardly obtained. Note further that the following "solved NOT NP" order is also illicit due to Case Adjacency Requirement:

(43) * John solved NOT the problem.

However, there arises an apparent problem for our proposal. Consider the following ill-formed example:

(44) * John solved the problem NOT.

Under the proposal where the lexical verb solve raises onto Infl, followed by the Object-Shift (see chapter 2), the following derivation would result:

(45)
Note that nothing seems to be wrong in the derivation of (45), hence (44) must be incorrectly predicted to be grammatical.

However, observe the following contrasts:

(46) a. * John arrives NOT.
    a'. ? John arrives NOT late.
    b. * John hit Mary NOT.
    b'. ? John hit Mary NOT in the theater.

Notice that none of these examples would involve any illicit derivation under our proposal. Take (46a) and (46b) for example:

(47) a. IP
    / \     
    John / I
    /     
    I VP
    / / \ arrives NOT VP
    \ \ 
    tv

b. IP
    / \     
    John / I
    /     
    I VP
    / / \ arrives NOT VP
    \ \ 
    late VP
    / \ 
    tv

Both derivations seem to conform any principle of the grammar under the assumption that lexical verbs can move to Infl in English.

Then, what factors are involved in ruling out (46a) and (46c)?

If the contrast seen in (46) is real, we may postulate the following descriptive condition on the placement of NOT:

(48) **Emphatic** NOT cannot sit in the sentence final position.

The condition (48) is also intended to rule out the following sentence where NOT is placed at the end of the relative clause.

(49) * The man [who arrives NOT] should be killed.

It seems that similar constraint like (48) can be found in other cases in English. Observe the following Quantifier Stranding Contrasts (I assume that QPs are base-generated in NP-initial position following Sportiche (1988, 427)):

(50) a. The teachers have [[all t] arrived]
    b.* The teachers have arrived [all t]

(51) a. I consider the teachers [[all t] (to be) a fool]
    b.* I met the teachers [all t]

Given the assumption that Quantifiers do not float to the right in English (Sportiche (1988)), (50a) and (51a) strengthen the object-shift hypothesis in English (Johnson (1990a)). (50b) and (51b), however, may give rise to the evidence against the object-shift.
Sportiche (1988, 444) conjectures:

"Recall ... VP has a VP-initial specifier position. We can therefore transpose this treatment of passive nominals to VPs and reestablish the lost parallelism: in passives, a theta-role otherwise assigned to an object is assigned to the (Spec, VP) position. Similarly, we can claim that the object theta-role of an ergative verb is assigned directly to the (Spec, VP) position: clause-internal NP Movement does not involve a postverbal trace."

Johnson (1989, class lectures), however, points out that unless Stranded Quantifiers are placed at the dead end of the sentence, the grammaticality is improved saliently. Compare.9

(52)  a. *The teachers have arrived [all t].
     b. ?The teachers have arrived [all t] at Chomsky's class.

(53)  a. *I met the teachers [all t].
     b. ?I met the teachers [all t] on Sundays.

The contrasts in (52) and (53) are not expected under Sportiche's account, and the fact will substantially weaken the argument that the objects get theta-roles in the Specifier of VP. To be specific, (52a) and (53a) are essentially compatible with the Object-Shift approach as put forward in Johnson (1989, 1990a) wherefrom the object is argued to move to the SPEC of VP to get Case from the verb. Then, why aren't (52a) and (53a) well-formed as they are?

Let us postulate the following descriptive condition on Stranding

Quantifiers:

(54) **Stranding Quantifiers** cannot sit in the sentence final position.

The condition (54) is obviously reminiscent of the condition on the placement of NOT, as we repeat below:

(48) **Emphatic NOT** cannot sit in the sentence final position.

If we replace the common parts of (54) and (48) with a variable X, we may get the following condition:

(55) X cannot sit in the sentence final position

Now, we must ask what are the essential features involved in X. I conjecture that the common property of Emphatic NOT and Stranding Quantifiers are the high ratio of the prosodic prominent—namely, Contrastive Stress. Thus, (55) can be now rewritten as the following general prosodic constraint in English:

(provisional for our purposes)

(56) The most prominent stressed element cannot close the clause in English.

Since (56) is an overriding phonological constraint in English, the

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9 Here are some more examples due to Kyle Johnson (p.c.), which he says almost perfect in acceptability:

(1)  a. Mary put the dishes all on the table.
     b. ?Sam gave the bikes each to a child.
problematic ill-formedness of the examples that we have observed so far are not in fact "syntactically" ill-formed. Thus, the following sentences are "syntactically" well-formed but "phonologically" ill-formed: (© means phonologically ill-formed.)

(57)  a. © John arrives NOT.
      b. © The teacher have arrived ALL.

Therefore, the (phonological) ill-formedness of (57) will not affect the validity of our proposal that lexical verbs raise in English and NOT is a VP-modifying adverb.

I would like to summarize my main points in this subsection by highlighting the following examples again:

(58)  a. * John not arrives early in the morning.
      b. * John NOT arrives early in the morning.

For (58a), my proposal crucially departs from Pollock and Chomsky in that the deviance is due to a violation of Lasnik's morphological filter—namely, the affix not is not lexically supported. Both Pollock and Chomsky would further fail to give a satisfactory account for the deviance in (58b), if we are correct in that NOT is a VP-adverb. (58b), incidentally, also strongly weakens the Affix-lowering approach advocated in Chomsky (1989) and partially in Pollock (1989). (Lexical) Verb Raising approach, on the contrary, can properly account for the deviance in (58b) due to the fact that obligatory V-

raising fails to take place there. Furthermore, in this fashion we can correctly rule in (58'), and rule out (58):

(58') ? John arrives NOT early in the morning.

3.2.3 The structure of the English sentence

At this juncture, let us consider the four main questions that arise in Pollock (1989) one by one.

(A) Why is Verb Movement to Infl lexically restricted in Modern English? Here is my answer to this question. It is true that Auxiliary verbs move more freely and higher than the main verbs, but the main verbs also do move up to the functional node F in English. The fact that Auxiliary verbs move farther than the main verbs can be supported by the following paradigms (an emphatic NOT aside):

(59)  a. John has not left. (= John hasn't left)
      b. * John left not. (= *John leftn't)

Concerning the treatment of the auxiliary verbs such as have and be, I will basically follow the proposal advanced in Akmajian, Steele, and Wasow (1977, henceforth ASW). Following ASW, I will assume that have/be head their own verb projections but inherently marked as [+AUX]. Thus, have/be
bear ambivalent nature in that they behave like main verbs for picking
Inflection, while the scope of moving action is more liberal than the main
verbs. Let us exploit some arbitrary features for expository purposes. I
take the view that lexical (main) verbs are inherently [+V, -AUX], while
have/be are [+V, +AUX], and modals are presumably [-V, +AUX].

Viewed this way, let us now turn to the contrast in (59). As I have
shown in the last two sections, not / n't are affixal in nature, more precisely
put, they are (bound) suffixes. Interestingly, negators in many languages are
affixes. Here, I illustrate some of them based on superficial facts:

(i) Suffix group: not / n't in English, me in Turkish
(ii) Prefix group: an in Korean, ne in French, non in Italian,
no in Spanish, ur in Berber, na in Japanese

Mainland Scandinavian languages and Basque seem to have rather clearly
non-affixal Neg. I wish to further suggest that unlike Neg in other
languages, Neg in English inherently bears a peculiar property in that not / n't
are morphologically subcategorized for [+AUX] verbs. Consequently, only
[AUX] verbs, such as have/be or modals can adjoin to Neg\(^*\) in English. In
other languages, for example, Spanish Neg no does not have this
requirement, hence any verb [±AUX] can support it. The "restrictive"
nature of Neg\(^*\) in English correctly captures the contrast in (59) since lexical
[AUX] verb leave cannot support not / n't, while [+AUX] verb like have will do.

Now, let us answer the other half of the question (A): namely, do main verbs
move in English? The answer is YES. Witness the following examples
from Pesetsky (1989, 55):\(^{12}\)

(60) a. Bill knocked\(_1\) [vp recently t\(_1\) on it]
b. Sue looked\(_1\) [vp carefully t\(_1\) at him]

Note, incidentally, that the position where the lexical verb moves in (60)
does not necessarily be T\(^*\) or Agr\(^*\), since as seen in (61) below, the lexical
verbs also move to Tenseless or non-Agreement position:

(61) a. Bill will knock\(_1\) recently t\(_1\) on it.
b. Sue cannot look\(_1\) carefully t\(_1\) at him.

Let us dub this position \(\mu\), following Pesetsky (1989). (60) and (61)
convincingly show that main verbs in English can move at least upto \(\mu\).

Then, now let us consider Pollock's second question:

(B) Why does UG allow for Affix Movement, a lowering rule?

Consider the following pair of sentences:

b. *Jean probablement aime la linguistique.

\(^{12}\) At least superficially, the deviance of (62b) seems to be a very marked fact, since most
other Romance languages such as Italian and Spanish, for example, do not pattern with
French in this respect. For alternative explanations for the deviance in (62b), see Kayne
(1989) and Belletti (1990), among others.
Pollock argues, following Emonds (1978), that Affix-lowering takes place in (62a) (perhaps at PF), while this option is not possible in French, thus (62b). Note, however, that the adverb probably can be used as a sentential adverb, hence it can also precede the auxiliary verbs in English:

(63) John probably has made several mistakes.

Thus, this fact shows that (62a) does not ensure Affix lowering in English. So far we haven't seen any convincing evidence for Affix-lowering in English. (Instead, we have seen some counterevidence before.) Therefore, we may completely abandon the Affix-lowering approach to verbal Inflection in English. Instead, I will follow Johnson (1989, 1990b) in that verbal Inflection is necessarily syntactic, and Verb Inflection is always mediated by Verb Raising. I will further adopt the Johnson's (1990b) view that in addition to TenseP, AgrP must be split into the NumberP and PersonP. Johnson (1990b) observes the placement of Neg with respect to the complex V+I and the presence or absence of Per/Num/Tense morphology on verbs in Scandinavian languages. He concludes that a simple embedded clause in Icelandic should have the following structure (Johnson (ibid., 6)):

(64) a. ...ad hann keypti ekki bokina. (Icelandic)
    that he bought not the book

b.

\[
\begin{array}{c}
\text{CP} \\
\wedge \\
\text{C} \\
\wedge \\
\text{C} & \text{PerP} \\
\backslash & \wedge \\
\text{ad} & \text{NP} & \text{Per'} \\
\backslash & \wedge \\
\text{hann} & \text{per} & \text{NegP} \\
\wedge & \wedge & \wedge \\
\text{V} & \text{NP} & \text{Neg'} \\
\backslash & \wedge & \wedge \\
\text{keypti} & \text{t} & \text{Neg} & \text{NumP} \\
\wedge & \wedge & \wedge & \wedge \\
\text{ekki} & \text{NP} & \text{Num'} \\
\backslash & \wedge & \wedge & \wedge & \wedge \\
\text{t} & \text{Num} & \text{TP} \\
\wedge & \wedge & \wedge & \wedge & \wedge \\
\text{NP} & \text{T} \\
\wedge & \wedge & \wedge & \wedge & \wedge \\
\text{T} & \text{VP} \\
\wedge & \wedge & \wedge & \wedge & \wedge \\
\text{tv} & \text{V'} \\
\wedge & \wedge & \wedge & \wedge & \wedge \\
\text{V} & \text{NP} \\
\wedge & \wedge & \wedge & \wedge & \wedge \\
\text{tv} & \text{bokina}
\end{array}
\]

He notes that the mainland dialects employ shortened versions of this representation; the standard dialects have only TP while the Hallingdal dialect only lacks PerP. Thus, the following contrasts can be correctly captured under this scenario (Johnson (ibid., 2-5)):

(65) a. ...ad hann keypti ekki bokina. (Icelandic)
    that he bought not the book

\[13\] At least superficially, the deviance of (62b) seems to be a very marked fact, since most other Romance languages such as Italian and Spanish, for example, do not pattern with French in this respect. For alternative explanations for the deviance in (62b), see Kayne (1989) and Belletti (1990), among others.

\[14\] Here, I will sidestep the feature Gender in Agr. See Shlonsky (1989) for arguing for the necessity of GenderP in conjunction with NumP and PerP.
b. ... at me ikke kjøpe bokje. (Hallingdal)
    that we not buy book-the

c. ... at han ikke købe bogen. (Danish)
    that he not bought the book

He further extends the clausal structure like (64b) to English and German to
account for the various Inflectional paradigm. I will essentially adopt
Johnson's structure for English without getting into details. I wish to,
however, add at least two more functional projections in addition to
Johnson’s; AspectP and μP.¹⁵ Now, following Johnson (ibid.), we are poised
to draw the structure for the simple negative sentence in English: (irrelevant
details are ignored.)

(66) PerP
    /
   /\ NegP
   /\ NumP
   /\ TP
   /\ AspP
   /\ μP
   /\ VP
   /\ V

At this juncture, let's consider Pollock's third question;

(C) Why does the negative particle block Affix Movement whereas other

¹⁵ From Pesetsky (1989) may be understood as roughly equivalent to empty V° in Larson
and Belletti (1990) for Italian.

(negative) adverbs do not?

A minimal pair is:

(67) a. * John not arrives.
    a'. * John NOT arrives.
    b. John never arrives.

Under our proposal, the minimal difference between (67a) and (67b) is that
the former involves affixal not while the later employs an adverb never, a
full standing word. Thus, (67a) violates Lasnik's morphological filter,
whereas nothing goes wrong in (67b), hence the contrast results. The
minimal contrast between (67a') and (67b), on the other hand, hinges on
some different grounds. I wish to claim that NOT is always a VP-adverb,
while the term never can be either a VP or sentential adverb. Then, this
contrast can follow.

Now consider the last question of Pollock:

(D) Why is Verb Movement obligatory whenever it can apply?

Our answer will be purely based on morphological grounds. Following
Johnson's (1989) conjecture, I assume that all the functional heads (Per°,
Neg°, Num°, T°, Asp°, μ°) in clausal structure including V° are all affixes,
herein they all must be lexically supported at S-structure. For this reason,
verb movement must take place at S-structure. I further surmise that
Person is "opaque" in English to transmit the adjoining head's theta-assigning ability to its trace. This assumption may be well-motivated on a par with Pollock's "transparency" parameter of Agr, since as a matter of fact, Person feature does not appear on Verbal Inflection in English except for the verb be. Therefore, V+T+Num to Per is blocked in English with theta-assigning lexical verbs, while non-theta assigning Aux verbs may raise to support Per, although Aux verbs do not inflect for Person except for be. Exactly this "opaque" property of Person node in English yields the following contrast:

(68) a. Has John left?
    b. *Leaves John?

Assuming [+Q] morpheme as an affix (Chomsky (1989)), a lexical material must support it. If [+Q] sits in Comp, the supporting verbs must pass through Person node. Since thematic verbs do not move onto Per due to the "opaque" nature of it, subsequent movement onto Comp is blocked in (68b). Hence, (68b) is ungrammatical. Non theta-assigning verb have, on the other hand, can freely move up to Comp [+Q] through Per. Following Chomsky’s (1989) Last Resort guidelines, the pleonastic do is inserted (presumably under TP) and move all the way through Comp [+Q]. Finally consider the following simple sentence:

(69) John leaves.

Since main verb cannot raise up to Per, there must be other fashion to support Per affix. Inserting the pleonastic do yields unacceptable sentence in English, as shown below:

(70) a. *John does leave. (contrastive do aside)
    b. *John do leaves.

Perhaps, Per can be lowered onto Num. Alternatively, we may plausibly assume that English lacks Per. Then, the contrast in (68) remains problematic. I would rather speculate, in that case, that the affix [+Q] is subcategorized for [+AUX] elements like Neg, then the contrast can result. I leave possibility for the presence or absence of Per in English for future research.

3.3 Negation in Korean

3.3.1 Preliminaries on sentence projections in Korean

In his pioneering work, Choe (1928, 197-205) has observed that the characteristics of Case markers and delimiters in Korean share nontrivial number of properties with determiners (or articles) in other languages.\(^{17}\)

\(^{17}\) In Ahn (1988b), it is suggested that the categorial nature of the so called "particles" such as Case markers and delimiters in Korean may not differ from that of determiners in English. Based upon the proposals in Fukui and Speas (1986), and Abney (1987), which treat the head of an NP as (determiners) rather N.\(^{18}\)
To mention a few among his observations, he first notes that both of them are affixes which cannot stand alone in Syntax. Another common property pointed out in Choe (1928) is that like English and French articles as illustrated in (71a), a large number of particles in Korean have morphophonemic variants, as listed in (71b).

(71) a. the, a/an, le/la/l', un/une
   b. nun/un, kwa/wa, lul/ul
   Topic marker Conjunctives Accusative marker

Based on the parallel distribution of "particles" in Korean and "articles/determiners" in other languages, Choe (1928) suggests that the particles such as Case markers and delimiters are entitled to have its own (independent) part of speech which he named thassi 'helper'.

He further suggests that the suffixes in the verb complex such as Tense, Honorific, Aspect, Mood markers, etc. cannot form an independent part of speech in Korean since they are absolutely not detachable. The suffixes such as Case markers and delimiters does not seem to be detachable either, however, he claims that the degree of detachability of verbal endings and that of nominal endings are saliently different; that is, for instance, the bare nouns na 'T and pap 'a meal' in the sentence like:

na pap mek-ess-ta

I meal eat-Pst-Decl 'I had a meal'
can stand alone without Case markers, and can be recognized as possible words in the colloquial context. However, he points out that the bare verb stem mek 'eat' or verb+ense marker mekess 'eat (past)' can never stand alone, stranding Declarative Sentence Ender ta, and cannot be recognized as possible words for native speakers since Korean verbs must always be closed off by the so-called sentence enders (I will dub these morphemes "Mood" markers later).

The treatment of Verbal Inflection that I will provide for Korean, therefore, clearly departs from the traditional grammar. In this section I will demonstrate how Verbal Inflection in Korean can be parsed into several distinct layers, and I will further argue that the parsed Inflections must head their own independent maximal projections. Of course, my treatment of Verbal Inflection in Korean will exactly parallel that of English/French Inflection, as put forward in Pollock (1989).

Take a simple embedded sentence in Korean:

(72) sensayngnim-i cip-ey ka-si-ess-ta-ko ...
    teacher-N home go-Hon-Pst-Decl-Comp
    (that the teacher went home ...)

Focusing on the part of Verbal Inflection, ka is a verb stem which is itself morphologically marked as prefix, and must be supported prior to or at S-structure. The rest of other morphemes attached to the verb are all
designated as suffixes; the class of this portion may include the so-called (Subject) Hon(onorific) indicator si (C. Lee (1989), W. Lee (1991)), the (Past) Tense marker ess, the (Declarative) Mood morpheme (or sentence type indicator) ta, and finally the ([WHI] Complementizer) ko. I will further follow, in part, Baker's (1985, 375) Mirror Principle which states:

Morphological derivations must directly reflect syntactic derivations (and vice versa)

in order to determine the geographical relations among these inflectional heads. Particularly, I will take the view that the morphological ordering manifested via the morpheme order must match and reflect its syntax (or perhaps vice versa).

Then, for example, consider the Verb Inflectional order in Turkish and Berber, taken from Ouhalla (1989, his (9)):

(73) a. Kimse-nin gec gel-me-sin-i iste-me-dı-lër (Turkish)
    Nobody-GEN late come-MA-3sg-ACC want-NEG-Past(TNS)-3pl(AGR)
    (They didn't want that anybody should come late.)

b. ur-ad-y-xdhr dudsha (Berber)
    NEG-will(TNS)-3ms(AGR)-arrive tomorrow
    (He will not arrive tomorrow.)

Following Baker (1985) and Ouhalla (1989), the surface order of functional categories reflects their (D-structure) government relations. In other words, in Turkish in (73) for example, it would be claimed that the syntactic process associated with the Neg⁰ affix must take place before the syntactic process associated with the Tense affix or Agr affix. Now let us turn to Korean Verbal Inflection in (72). Given this assumption along with the fact that those Inflections in Korean are categories in its own right, we can now suggest the following D-structure representation for the verbal complex in (72):

(irrelevant details aside such as intermediate projections and SPEC positions)

(74)

```
CP
  /
  MP C
  / \  
  TP M ko
  / \  |
   HP T ta
  / \  |
   VP Hon ess
  / \  |
   V si
   ka
```

Given (74), I will further follow Lasnik's (1981) conjecture that what attracts the verb to combine with Hon⁰, T⁰, M⁰, and C⁰ is morphological requirements; namely, the status of these morphemes is that of a bound affix which needs to be supported by lexical items at S-structure. Note also that I assume verbal head as a prefix, hence Verb Raising is not only required for affixal Inflections, but also for the verb stem itself. Now, the verbal complex in (72) can be derived by the following successive X⁰-movements, from V⁰ to C⁰:¹⁸

¹⁸ I wish to sidestep the exact formulation of this successive head raising with respect to the HMC or ECP. For a formal characterization of this process for Inflectional paradigms in English and German, see Johnson (1990b).
A brief description of these functional morphemes is in order. Observe the various types of COMP below depending on the choice of the matrix verbs in Korean. Four types of COMP are illustrated:

    I -I linguistics-N interesting-Prs-Comp believe-Pst-Decl
    (I believed that linguistics was interesting.)

    I -I -N test fail-past-Comp-A know-Pst-Decl
    (I knew that John failed in the test.)

    I -I -N go not-Comp-Acc wish-Prs-Decl
    (I wish John would not go.)

    I -I -N test fail-Pst-Comp-Acc not-know-Pst-Decl
    (I did not know that John failed in the test.)

    Top teacher-N genius-be-Decl-Comp believe
    (John believes that the teacher is a genius.)

The typical properties of COMP discussed in Muysken and Riemsdijk (1985) can be also observed in Korean. For example, complementizers in Korean introduce the embedded clauses so that they show the boundary between the matrix and complement clauses. The choice of COMP is also sensitive to the property of the matrix verb. That is, as is shown in (5a-d), the performative verb mit 'to believe' licences the COMP ko, the factive verb al 'to know' takes the COMP ki, and the factive verb molu 'not to know' chooses the COMP kеs. This fact may suffice to our purposes to assume that the category COMP may play an independent role in Korean.

The appearance of Tense morphemes in verbal morphology indicates that a tense node can be a good candidate for a functional projection in Korean like in English although the syntactic role of TP in Korean is not so clear. I suggest that Tense plays at least two significant roles in Korean. Morphologically, TI is subcategorized for the particular class of verbs, say V1. For example, Past Tense morpheme ass selects A-stem verbs, yess for ha-stem verbs, and ess elsewhere.19 Syntactically, I suggest that Tense assigns Nominative Case in Korean (see Takezawa (1987) for Japanese). Consider the following examples in Korean:

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19 This selectional process is often referred to as "Vowel Harmony" in the school grammar. That is, ass follows verb stems including the so-called "bright" vowels such as /а/, /о/, while ess takes verb stems involving the so-called "dark" vowels like /а/, /у/, /и/, etc. (see Choi (1928) for full description.) I am strongly doubtful whether this selectional process is purely phonologically conditioned. The exact formulation of this rule is not our direct concern here.
   - A

(John believes the teacher to be a genius.)

(77b) resembles the ECM constructions in English except for the appearance of COMP ko in Korean. There have been mainly two trends of the analysis of the ECM constructions in Korean (of course, same is true for English ECMs, too); namely,
   i) Raising-type: the embedded subject is raised to the position where Acc Case is assigned. (Ahn and Yoon (1989))
   ii) Deletion-type: the ECM verbs are optionally subcategorized for C (instead of CP). (Lee (1990), Yoon (1990))

I will not attempt to make a particular choice in this thesis. However, I wish to note one important fact; that is, in the presence of Tense in embedded clauses, ECM is not possible. Witness:

    Top teacher-N genius-be-Pst-Comp believe
    (John believes that the teacher was a genius.)

   - A

(intended reading: 'John believes the teacher was a genius.')

As seen in (78b), ECM is inhibited; this naturally follows if Tense is a (Nom) Case assigner in Korean. Note this fact may further imply that the embedded clause (77a) may involve null present Tense while it is tenseless or [-Finite] in (77b); not an implausible assumption. In fact, under my Tense interpretation of those sentences, this prediction is borne out. That is, to my ear, the event of the teacher's "being a genius" is temporarily independent of the matrix tense in (77a) but it is temporarily subordinate to the matrix Tense in (77b). Put another way, in (77a), the interpretation goes like; John believe that the teacher was/is/will be a genius. (77b), by contrast, may only imply the speaker's belief of the teacher's being a genius at speech time only. Note, however, that the seeming Agr si (subject honorific marker) does not give rise to the contrast that Tense does. This is shown in the following:

    Top teacher-N genius-be-hon-Decl-Comp believe
    'John believes the teacher is a genius.'

   - A

   'John believes the teacher to be a genius.'

Thus, this gives an independent support for the claim that Tense, but not Agr (contra Han (1987), Choe (1988)), is the Nominative Case assigner in Korean.20

Now let us briefly consider the status of the subject honorific marker si. C. Lee (1990) convincingly shows that Hon si is sensitive to the person distinction in Korean. Lee suggests the following constraint in si (C. Lee (1990, 17)):

20 I thank Dong-In Cho for reminding me of this fact.
Unlike English, there are proto-typical verbal suffixes which tell us the types of mood in the embedded and root sentences in Korean. Observe the following:


Nom come-past-decl-Comp think past

(John think that Mary came.)


interro asked

(John asked if Mary came.)


to eat imper ordered

(John ordered Mary [PRO to eat, ])


Top to eat-propo proposed

(John proposed Mary to eat.)


I -Top meal-Acc eat-pres-decl

(I am eating a meal.)

b. Ne-nun mwues-ul mek-nunya ?

You what interr

(What do you eat ?)

c. pap-ul mani mek-ela.

meal a lot eat imper

(Eat a lot (of meal)).
d. pap-ul mek-ca.
   Acc eat-propo
   (Let's have a meal.)

Note that mood-types are explicitly shown by the morpheme ta for the declarative in (82a)/(83a), nunya for the interrogative in (82b)/(83b), ula/ela for the imperative in (82c)/(83c), and ca for the propositive in (82d)/(83d).

In English, however, as shown in (84) the syntactic form varies in accordance with the mood-types in root sentences; for example, Subject-Aux-Inversion for the interrogative, the bare verb form with no overt subject for the imperative, and the like.

(84) a. What do you see now?
   b. Eat some more.
   c. Let's eat this.

The crucial difference of mood-expressing mechanism between two languages is that one is "implicit" in English and the other is "explicit" in Korean. More specifically, the projection of the mood node is unnecessary in English since the selection of COMP's can normally distinguish the mood-types. In Korean, however, the mood-value of COMP is neutral in the sense that COMP does not determine the mood of the sentence but the explicit mood marker does this job. For this reason, I speculate that the existence of MP can be parametrized; that is, MP exists in Korean whereas English lacks it. The parameter of this sort may yield some interesting consequences in the theory of grammar. Consider the theory of Control, and the relevant examples in the following.

(85) a. John promised Mary [PRO to go].
   b. John persuaded Mary [PRO to go].
   c. John asked Mary [whether [PRO to go]].

   T-to eat-past-decl-Comp did
   (Mary said to Mary that he(or someone else) ate.)
      interr did
   (John asked Mary if she(or someone else) ate.)
      imper
   (John ordered Mary to eat.)
      propo
   (John proposed to Mary to eat.)

The identifying mechanism of PRO heavily depends on the lexical property of the matrix verbs in English, while no such property is expressed by the matrix verbs in Korean. Notice that the matrix verbs in (86) are all identical, however, the controller of PRO in (86c,d) can be properly identified by the appearance of the mood nodes.

In brief, this section explores several candidates for the functional projections of the sentence. There seem to exist at least four functional categories heading their own projections in Korean; they are Comp\(^{6}\), Mood\(^{6}\), Tense\(^{6}\), and Hon\(^{6}\). I may add two more in Korean without strong evidence, Aspect\(^{6}\) and \(\mu\). By doing this, now a simple root clause may involve the following structure (ignoring CP in Korean root clause):
Following Yang (1972), I will call the form in (88b) "short-form" negation, and (88c) "long-form" negation—the terms by no means necessarily imply the significant importance, but are adopted as simply expository purposes. The formation of short-form negation in (81b) seems to be straightforward; namely, by putting the negator an before the verb ka. For a moment, I will only deal with short-form negation focusing on the behavior of the negator an. I will postpone the discussion concerning long-form negation until § 3.3.3. There are three negative morphemes in Korean. They are an, ani, and mot. An 'not' is traditionally referred to as a reduced form of the more archaic style ani 'not'. The meaning of mot can be roughly equivalent to 'cannot', and its distribution is basically identical to an/ani.

3.3.2.1 Two an's

From here, I will mainly focus on the nature of an. The behavior of an is very similar to that of not or n't in English. First of all, like not /n't, an must be adjacent to the verb, as seen in (89).

(89) a. *John-i an pap-ul mek-ess-ta
    -N not-meal-A eat-Pst-Decl
    (Intended reading. John didn't have meal.)

b. *John-i an ka-ss-ta
    -N not-Pst-Decl
    (John didn't go.)

c. John-i ka-cl an-h-ass-ta
    -N go-Pst-Decl
    (John didn't go.)

a. John-i ka-ss-ta
    -N go-Pst-Decl
    (John went.)

3.3.2 Short-form negation in Korean

At least superficially, there are two types of negative formation in Korean. (88b) and (88c) can both be negated counterparts for (88a).

(88) a. John-i ka-ss-ta
    -N go-Pst-Decl
    (John went.)

b. John-i an ka-ss-ta
    -N not go-Pst-Decl
    (John didn't go.)

c. John-i ka-cl an-h-ass-ta
    -N go-Pst-Decl
    (John didn't go.)
If an is positioned adjacent to the verb, these examples are perfectly grammatical:

(90) a. John-i pap-ul an mekessta
    -N meal-A not eat-Pst-Decl
    (John didn’t have meal.)

b. John-i ecey an cwukessta
    -N yesterday not die-Pst-Decl
    (John didn’t die yesterday.)

This adjacency requirement has led some researchers to think that an is a bound morpheme (cf. Han (1987), No (1988)). I think these authors are correct in this regard. However, as seen in (91), an can be divorced from the verb by adverbial expressions only if it carries a heavy stress.

(91) a. John-i AN ppali kassta
    -N NOT fast went
    (John went NOT fast.)

b. Mary-ka AN yeyppukey wusessta
    -N NOT prettily smiled
    (Mary smiled NOT prettily.)

c. Mary-ka AN ilcök ilenassta
    -N NOT early get up
    (Mary got up NOT early.)

I suggest that stressed an (henceforth AN) is an emphatic negative adverb which is crucially distinct from the non-emphatic negator an.

In § 3.2.1, we have seen similar contrasts with respect to not in English. There, we have observed that emphatic NOT need not satisfy the adjacency requirement contrary to non-emphatic not, as in (92):23

(92) a. John will probably NOT talk to Bill.

b. * John did probably not talk to Bill.

Thus, there is a parallelism between an/not and emphatic AN/NOT. Putting aside the further differences between two an’s, I wish to highlight one important piece of evidence displaying that an is indeed an affix rather than a full standing word. Owing to No’s (1988) observation, parallel to the affix hi in passive, the morpheme an cannot be absent in the second portion when Verb Reduplication occurs. Witness this in (93) and (94) below.

(93) a. John-i [v cap-hil]-ki-n [v cap-hil]-ess-ta
    -N capture-pass-2-T capture-pass-Pst-Decl
    ((I don’t deny that) John got captured.)

23 Murvet Eng (p.c.) points out that the heaviness of stress may not be a determining factor for distinguishing not from NOT. For example in (89a), NOT may get normal stress there. If this is true, then the only reliable diagnostic for identifying the two would be from syntactic considerations.
b. *John-i ʃ cv cap-hl]-ki-n [v cap-ə]-ess-ta

(94) a. John-i cenyek-ul [v an mek]-ki-n [v an mek]-ess-ta
   -N dinner-A not eat?-T not eat-Pst-Decl
   ((I don't deny that) John has not had dinner.)

b. *John-i cenyek-ul [v an mek]-ki-n [v ø mek]-ess-ta

In most cases, if the whole VP (or presumably V) is reduplicated, the resulting sentences are marginal, as seen in (95).

(95) a. John-i ʃ [vp cenyek-ul mek]-ki-n [vp (?cenyek-ul) mek]-ess-ta
   -N dinner-acc eat?-top dinner-acc eat-Pst-Decl
   ((I don't deny that John had dinner.)

b. John-i ʃ [vp Seoul-ey tochakhal]-ki-n [vp (?Seoul-ey) tochakhal]-yss-ta
   -N in arrive?-top in arrive-Pst-Decl
   ((I don't deny that) John has arrived in Seoul.)

Thus, (94a) and (95) might show the tightness between the verb and its preceding elements. (94a) alone, however, cannot successfully give rise to direct evidence for the affixal status of an, since some adverbs closely tight to verbs can be easily pied-piped by VP reduplication as shown in (96).

   -N dinner-A well/less/more eat?-top well/less/more eat-Pst-Decl
   ((I don't deny that) John has had dinner well/less/more.)

b. John-i cenyek-ul [vp manhi mek]-ki-n [vp manhi mek]-ess-ta
   -N dinner-A much eat-N-T much eat-Pst-Decl
   ((I don't deny that) John has had dinner a lot/avariciously.)

Adverbs involved in (96), sharply contrast with the morpheme an in that these adverbs can be freely omitted in the second slot as seen in (97).24

(97) a. John-i cenyek-ul [vp [cal/tel/te] mek]-ki-n [vp ø mek]-ess-ta

b. John-i cenyek-ul [vp manhi mek]-ki-n [vp ø mek]-ess-ta

In any event, (93-97) show that either V or V(VP) can be reduplicated. Particularly, the deviance in (93b) displays that the part of a word cannot be stranded via Reduplication. Then the ill-formedness in (94b) crucially exhibits the affixal nature of an. Thus, the observed evidence amounts to the claim that the status of morpheme an is bound, hence an+verb sequence is a single word unit, while tel+verb sequence, for example, is composed of two independent words. Contrary to No (1988), however, the parallelism between (93) and (94) does not yet reveal any critical confirmation for the derivational status of an. Instead, all we have obtained from the foregoing

24 The grammaticality judgements of sentences involving tel, such as (97b) seem to vary among native speakers. The relevant portion of the example is repeated here.

(i) John-i cenyek-ul tel mek-ki-n ø mek-ess-ta
No (1988) has starred a similar sentence, and some of my informants are reluctant to accept this sentence. To my ear, as well as many other native speakers, (i) is perfect. For those who reject (i), I surmise that some sort of polarity concord constraint involving idiosyncratic pragmatic preference is at work: i.e. the polarity of the duplicated portion should agree with the main part. No (1988) rules out this possibility by observing the following case.

(ii) *John-i an ca-ki-n mot ca-ss-ta
    nom not sleep-N-top can't-past-decl
    (Intended reading. (I don't deny that) John didn't (or can't) sleep.)
The deviance in (ii) may show that both portions must agree with the modality of the sentence as well. I will not pursue any further possibilities here.
evidence is that the morpheme an is alluded to be “bound”. In what follows I will establish several pieces of evidence to confirm that an is “inflectional.” Therewith, an is akin to not/n’t, but not allied with the derivational affixes such as un-, in-, non-, dis-, etc.

3.3.2.2 Evidence for the existence of NegP in Korean
3.3.2.2.1 Negative Polarity Licensing

It is generally held that the distribution of Negative Polarity Items (NPI) can be constrained under well-defined conditions, although the controversies on the exact constraints are far from being settled (see Ladusaw (1979), Lineberger (1987) among others). It is well-known that NPIs in English must be in the syntactic scope of appropriate licenser (normally negation), as seen in the following minimal pair:

(98)  a. Mary did not meet anyone
      b. * Anyone did not meet Mary

Let us tentatively assume the following condition for universally licensing NPIs based on the minimal contrast found in (98):

(99) Negative Polarity Licensing Condition (NPLC)

A NPI must be c-commanded by a negator at S-structure.

Now compare (98b) with the corresponding counterparts from head-final language-type as diverse as Korean, Japanese, Basque (Laka (1990)) and Hindi (Mahajan (1990a)).

(100) a. amwuto an o-ass ta
      anybody not come past mood
      (Nobody came)
      b. daremo ik-ana-i
      anybody go-not-pres
      (Nobody goes.)
      c. Ez da inor etorri
      no has anybody come
      (Nobody came)
      d. kisii-ne bhii jOn-ko nahiiN dekhaa
      anyone emph. (SUB) John (DO) neg. saw
      (No one saw John)

Contrary to English, most head-final languages, to my knowledge, allow subject NPIs in this context (see also Davison (1978)). Mahajan (1990a) argues that NPIs in subject position are not in the domain of the negation in Hindi at S-structure, hence in order to rule in (100d), he puts forth the hypothesis that NPLC should be parametrized; namely, in Hindi NPLC applies at LF only, whereas in English NPLC may be applied at S-structure and LF. (A similar proposal is made in Kitagawa (1986) for Japanese.) Unlike Hindi, however, I will show that NPLC cannot hold only at LF in Korean. In § 1.5, I have suggested the locality requirement for NPIs in Korean, repeated here.
(56) Negative Polarity Licensing Condition (NPLC)

Negative Polarity Items (NPIs) must co-exist with their licensors at LF in their local domains.

I have shown that (56) must hold at LF in Korean. (56) is the first half of the full NPLC that I will ultimately formulate. The second half is the c-command requirement in (99) which must be met at S-structure.

Let us examine the validity of (99) in English. First of all, recall that NPLC in (99) is a strict S-structure requirement. This is borne out in English:

(101) a. *Anybody is not [struck \( t \) by the car] PASSIVE
b. *Anybody does not seem \( [t \ to be rich] \) RAISING
c. *Anybody did not \( [t \ arrived on time] \) UNACCUSATIVE
d. *Anybody did not \( [t \ hit Mary] \) RAISING

Assuming that (101a-d) all involve NP-movement, the deviance in (101) provides some evidence that "D-structure c-command" is not sufficient to license NPIs in English. Note, in (101), that negation does c-command the NPI at D-structure but not at S-structure. Thus, the fact that (101) is still ungrammatical indicates that the fulfillment of the licensing condition at D-structure is not sufficient. The same conclusion is further supported by the following contrast in English sentences, as discussed in Laka (1990, 47):

(102) a. Who doesn't anybody like?
    b. Who does anybody not like?

Laka observes that (102a) means 'who is the person such that nobody likes that person', whereas (102b) lacks this interpretation.²⁵

Let us now consider the following examples in Korean:

(103) a. amwuto an o-ass-ta
    anyone not come-Pst-Dec  \( \langle \text{Lit. Anyone did not come} \rangle \)
    b. John-un amwuto an po-ass-ta
       -T anyone not see-Pst-Dec  \( \langle \text{John did not see anyone} \rangle \)

If the NPLC is feasible in Korean, \( \text{an} \) must sit in the c-commanding position of \( \text{amwuto} \) in (25). Suppose that \( \text{an} \) raises at LF to take scope over NPIs and this operation guarantees the appearance of NPI in subject position. This approach, however, can hardly be maintained due to the following deviance in (104).²⁶

(104) a. *? amwuto AN ppali kassta
    anyone NOT fast ran  \( \langle \text{lit. Anyone ran NOT fast} \rangle \)

²⁵ (102b) is, however, grammatical since the term anyone is allowed in Question context. It is, however, unclear whether anyone in this context can be regarded as a true NPI. In any event, our claim is consistent with the fact that one of the reading given in the text for (102a), which we may call NPI-reading, is not available in (102b).

²⁶ The judgements for (104) are somewhat subtle, but the contrasts seen in (103) and (104) are clear.
b. *? John-un amwukesto AN ppali mekessta
   -T anything NOT fast ate
   (lit. John ate anything Not fast.)

The licensing of NPIs by raising the negator at LF is simply moot due to the ungrammaticality seen in (104). Recall that the behavior of the emphatic negation AN crucially differs from that of the non-emphatic negation an. I have suggested earlier that this contrast is due to a categorial distinction. Assuming that AN belongs to an adverbial category—presumably a VP-adverb—(104a) is predicted to be out since the negator AN does not c-command the subject NPI. The deviance of (104b) can be accounted for along the same vein.

Now I return to the problematic case in (103). In order to properly license NPIs in (103), the negator an must c-command NPIs at S-structure since I assume that HPLC cannot be met at either D-structure or LF. Then, one plausible assumption is that an is projected to NegP in Korean, parallel with not/n't in English and ne in French. Assuming this to be correct, let us see how subject NPIs in Korean can be licensed by negation. Let us first consider subject NPIs in English:

(105) * Anyone didn't meet Mary.

Assume that Nominative Case is assigned to the SPEC of PerP in English. Then, (105) would have the following representation in part:

Given (106), we can see that the NPI anyone is not within the scope of negation at S-structure; that is, n't cannot c-command anyone due to the intermediate projection Per', given Reinhart's (1976) "first-branching" definition of c-command (note, however, that the head Per⁰ should not be counted as the first branching node for the adjoined elements including Neg² for our purposes).

Now, let us turn to subject NPIs in Korean. I have suggested the following structure for the root sentence in Korean:
(Here, I omit AspP, μP and VP for simplifying our discussion, and leave the position of NegP undecided yet.)

(107)
Let us first ask where the subjects in Korean sit in. As I have suggested earlier in § 3.3.1, nominative Case is assigned by Tense in Korean. Then, the plausible candidate for the subjects in Korean is SPEC2 or possibly one projection lower than TP; namely, SPEC3. SPEC1, however, cannot house the subjects in Korean, since NPIs are allowed in the subject position in contrast to subject NPIs in English.

Now recall the fact that all functional morphemes in Korean, such as Mood, Tense, Hon, and Neg are affixes, hence Verb Raising is motivated to support them. Here I am assuming that an is a prefix, like ne in French non in Italian, and the rest of other functional categories are suffixes. Since Verb Raising along with the Neg an must be completed at Mood in Korean, all the Specifier positions under TP can be in the scopal domain of Neg in Korean. Therefore, subject NPIs are predicted to be allowed in Korean, as opposed to English. Note that in English the Person feature must be saturated to [Spec, PerP] by Spec-Head Agreement operation (Chomsky (1986b), Fukui and Speas (1986)), hence subjects must move up to [Spec, PerP] in English. By contrast, Mood node, lacking Agreement features, does not trigger subjects to move up to [Spec, MP] in Korean. This minimal difference in conjunction with the NegP hypothesis is, thus, responsible for the contrast in the distribution of subject NPIs in Korean and English.27

One final note before closing this section: If NegP is generated above MoodP in Korean, the relevant facts concerning subject NPIs can be easily explained. Laka (1990) suggests that NegP is the highest functional projection above TP in Basque contrary to English where, she takes the view that, NegP is positioned below TP. In § 3.3.2.2.3, I will suggest that NegP cannot be the highest projection; under MoodP but (immediately) above TP.

3.3.2.2 Scope Ambiguity

In Korean, the scope relations of QPs are generally determined at s-structure, as can be seen from following example:

\[(108)\] nwukwunka-ka nwukwuna-lul salanghanta someone-N everyone-A loves

(Someone loves everyone.) \(\{\text{some} > \text{every, } *\text{every} > \text{some}\}\)

Unlike English translation, (108) is unambiguous in Korean—the subject QP must take wide scope over the object QP. Let us assume the following scope principle from Huang (1982) for Korean:

\[(109)\] Isomorphic Principle

If A c-commands B at S-structure, A c-commands B at LF.

(Lit. Anything is extraordinary.)
Given (109) for Korean, the subject QP must take scope over the object QP at LF in (108) under the assumption that the subject asymmetrically c-commands the object at S-structure. Now, observe the following ambiguity that results in (110).

(110) a. ta an kasstta
    all not went
    (No one came. or Not all came.)

b. John-i ta an mekesstta
    -N all not ate
    (John ate nothing. or John ate not all.)

(110a-b) are ambiguous, in that either the QP or negation can take wide scope over the other. How is this ambiguity possibly obtained in (110)? Let us consider the following possibility which I will ultimately exclude. Suppose that ta 'all' and an 'not' mutually c-command each other there, and the ambiguity would result according to (109). If this is true, then (110) must be a real exceptional case in Korean, since as shown in (111), ta with other adverbs do not exhibit ambiguity.

(111) a. ta tel casstta
    all less slept
    (All slept less.)
    [all > less, * less > all]

b. John-i tel ta mekesstta
    -N less all eat
    (John ate less than all.)
    [* all > less, less > all]

c. nay-ka ta ppalli mekesstta.
    I-N all fast ate
    (I ate all fast.)
    [all > fast, * fast > all]

d. nay-ka ppalli ta mekesstta
    I-N fast all ate
    (I ate fast all.)
    [* all > fast, fast > all]

In conjunction with this fact, note the following sentence (112) where no ambiguity arises in contrast to (109) although same lexical items ta and an are involved:

(112) a. AN ta kasstta
    (not > all, *all > not)
    not all went
    (Not all went)

b. John-i AN ta mekesstta.
    -N NOT all ate
    (John ate not all.)

Notice that AN in (112) must be non-affixal, perhaps an adverb, since it is not adjacent to the verb. Assume that ta 'all' is also an adverbial category in Korean since it resists Case-markers on it:

(113) a. ?* ta-ka kasstta
    all-N went
    (Intended reading. All went.)
Based on the facts in (111) and (112) where no ambiguous reading arises with respect to the adverbs, it is plausible to say that when two adverbs are employed in Korean, one always "asymmetrically" c-commands the other. If adverbs are all adjoined to the left in Korean, the linearity of adverbs in (111) and (112) reflects their hierarchical order, hence the correct results follow from (109). This fact strongly excludes the possibility that an involved in (110) is an adverb unless we stipulate that this adverb behaves very strangely. Also, whatever the categorial nature may be for an, there is no independent evidence to show that ta and an in (110) mutually c-commands each other. Thus, I exclude this possibility. Then, how can we account for the ambiguity in (110)? I wish to suggest that (110) actually involves two different structures depending on the choice of two lexical entries of /an/, namely, an or AN. Then, "all > not" reading in (110a), for example, can be obtained in the following structure:

(114) a. ta AN kassta.
    all NOT went
    (No one went.)

Note that if AN is used as an emphatic adverb, AN must be generated below the adverb ta. Hence, "all > not" reading results, according to Isomorphic Principle. It becomes more clear if an adverb is inserted between AN and the verb. Observe the following fact:

(115) ta AN ppalli kassta.  [ all > not > fast]
    all NOT fast went (Not all went fast.)

The scope of reading among adverbs is fixed as "all > not > fast." At least it is clear that the wide scope reading of ta over an is forced in (115). This fact is predicted under our assumption that an is affixal, hence when this item is separated from the verb, it must be an emphatic adverb AN.28 Hence, given the following structural representation for (115), the relevant scope reading can follow:

28 Murvet Enc (p.c.) points out to me that the behavior of emphatic AN in Korean is reminiscent of the so-called meta-linguistic negation (Horn 1975). For example, unlike typical negation, meta-Neg cannot license NPs;
(i) John didn't manage to solve *any of the problem
    some
Although there appear to be striking similarities between Meta-Neg in English and Emphatic AN, I will leave this issue aside here.
"derivational" affix (No (1988)) since generally derivational negative prefixes such as *pwu-*, *plwul-*, *mwu-* in Korean do not induce the wide scope reading of Neg over other QPs in the sentence. Witness:

(118) a. ta pwu-totektata
    all not-moral (All are immoral.)
b. ta pwul-haynghata
    all not-happy (All are unhappy.)

c. ta mwu-sikhata
    all not-learned (All are ignorant.)

Without these two necessary assumptions, the S-structure representation of (117a) cannot be adequately distinguished from the derivations resulted from other two approaches, since *an*, a prefix, is ultimately realized onto the V+I complex via Verb Raising:29

(119)

I assume that there is no "inflectional" process of generating Neg° onto V° at D-structure (or in Lexicon). In other words, Inflection projections must always be outside the domain of Lexical projections. In this regard, I clearly depart from the so-called Strong Lexicalist view of Inflection advocated in Lapointe (1980), Kiparsky (1982), and Mohanan (1982), where Inflection is treated in the lexical module. I also exclude the possibility of treating *an* as a

29 There are two other possibilities that I will not consider here; one is to treat *an* as an "affixal adverb," and the other is to put an in [Spec, Neg°] like Rizzi's (1990) treatment of not and pas. This way, however, we have to assume that Spec of Neg° must be generated to the right. These two approaches seem to be conceptually possible, but lack the empirical evidence. But see Jung (1990) for discussion on the second possibility.
In brief, the wide scope reading of Neg in (110) gives another support for the existence of NegP in Korean. Furthermore, the ambiguity arising in (110) exhibits two types of _an_ in Korean on a par with English _not_'s.

3.3.2.2.3 Neg-Tense Cooccurrence Requirement

So far, I haven't discussed the exact position of NegP in relation to other functional projections in Korean. I have suggested in § 3.2.3 that NegP in English is positioned between PerP and NumP, following Johnson (1990b):

(120) PerP
     / \ NegP
     / \ NumP
     / \     

In this section, I will offer some evidence to show that NegP must be positioned above TP but below MoodP. I will elaborate the idea put forward in Zanuttini (1990). Based on the facts in Romance languages and English, Zanuttini (1990) suggests that the head of NegP takes TP as its obligatory complement. I will essentially follow her proposal, and here with the facts in Korean, I will further justify her claim that NegP is parasitic on TP. Of course, this fact can be hardly accommodated without postulating the functional category NegP in Korean.

The surface order of complements in lexical projection is generally assumed to be fixed by directionality of theta-/Case-assignment (Travis (1984), Koopman (1984)) together with the fundamental properties of X'-
theory (Chomsky (1981)). As I noted earlier, the surface order of functional morphemes in verbal morphology may directly reflect the hierarchical order of syntactic projections of them (Baker (1985), Ouhalla (1989)). In some languages, for example in Turkish, negative morpheme is realized in the verbal morphology together with other Inflections, hence parsing these morphemes may enable us to conjecture the relative hierarchical order of them. However, languages where Negative affixes (most likely prefixes) are not a part of verbal morphology, independent principles are required to determine the position of NegP. Suppose that the following principle is universal:

(121) Neg Selectional Requirement (henceforth NSR)

Neg* must select TP

NSR implies that TP is a complement of NegP. Suppose that the projection of negation has the peculiar property such that its presence is always determined by the presence of TP. (See Zanuttini (1990) for the similar spirits.) Thus, if Tense is not projected, negation cannot be projected either. This relation is reminiscent of the subcategorization process in a reverse way, that is, the appearance of complements is normally parasitic on their selector but not vice versa. Let us surmise that the reverse relation would hold between NegP and TP. This line of reasoning may give a clue to the adjacency requirement holding between these two projections and perhaps
the hierarchical order between these two functional projections as well.

Let me illustrate some evidence that points this proposal in a concrete
direction. First, non-emphatic an cannot occur in a tenseless clause.
Consider the contrasts in (122) and (123) below.

(122) a. ku salam-i tampay-lul an kkunh-ESS-ki-ka swuipta
that person-N cigarette-A not quit-PAST-N-nom easy
(It is easy for that person to have not quit smoking.)
b. *?ku salam-i tampay-lul an kkunh-ø-ki-ka swuipta
(It is easy for that person to not quit smoking.)

(123) a. na-nun ku salam-i cip-ey an ka-SS-ki-lul palayssta
I-top that person-N house-to not go-PAST-N-acc hoped
(I hoped that that person would not have gone home.)
b. *?na-nun ku salam-i cip-ey an ka-ø-ki-lul palanta
(I hope that that person would not go home.)

The judgement is subtle, but the contrasts are clear. The deviance in
(122b)/(123b) shows that an should be licensed by Tense. More specifically, if
the head of NegP takes TP as its complement, it is predicted that an cannot
appear in the absence of TP if an is Neg. Further evidence can be found in

30 The occurrence of an in the following, seemingly tenseless, constructions raises an
apparent problem.

(i) a. na-nun John-ul an ka-key hassta
I-top -acc not go? made
(b. na-nun cip-ey an ka-ko sipta
I-top home-to not go? want
(c. na-nun John-ul an mann-eya hanta
I-top -acc not meet? must
If we assume that (a-c) are not bi-clausal but rather mono-clausal, resulting from the
incorporation of the lower verbs to the upper verbs, the problem is alleviated and our claim
that NegP cannot be present in the absence of TP can be maintained. (cf. Choe (1998)).

imperative/propositional contexts. Lee (1978) has noted that the negator an
cannot cooccur with the imperative and propositional verb forms.

(124) a. *an hay-la
not do-imper (Intended reading: Don't go.)
b. *an mek-ca
not eat-propo (Intended reading: Let's not go.)

Imperatives/Propositives are, in general, said to be devoid of TP as since they
lack tense morphology in the verb forms. Therefore, the co-occurrence
restriction of an, i.e. NegP, in Imperatives/Propositives is predicted since
they lack TPs.31

3.3.3 Long - form Negation
3.3.3.1 An Overview of previous insights

The central issue in the transformational analysis of Korean negation

31 In early stages of acquisition, an is allowed in imperative and/or propositional contexts.
Chungmin Lee (p.c.) and Hahn (1981, 132) independently observe that their sons produced
the following ill-formed sentences when they were three years old:

(i) a. AN ka! (by Jun-Kyu)
   not go
   (Don't go.)
   b. AN-sa-clma, koman-twe
   not-buy don't stop-do
   (Don't buy, or perhaps Let's not buy)
   (bold-faced part by H.D.A)

I speculate that the children first acquire the emphatic use of AN in their earlier stages,
and learn the functional category an, i.e., NegP, later. This idea is consonant with the
proposals made by Lebeaux (1988) and Radford (1990) such that the acquisition of lexical
categories precedes that of functional categories.
has been how to relate the short-term negation and the long-term negation with respect to their affirmative counterpart as shown in (125).\footnote{\textit{anh} in (125c) is a reduced form of \textit{an ha} (\textit{not+do}). Reduced form is more natural, and full form is not generally used these days.}

(125) a. John-i ka-ss-ta
   -N go-Pst-Decl  (John went.)

b. John-i an ka-ss-ta
   -N not go-Pst-Decl (John didn't go.)

c. John-i ka-ci an-h-ass-ta
   -N go-? not-HA-Pst-Decl (John didn't go.)

Kim (1967), the seminal work of Korean negation in the generative-transformational framework, and Oh (1971) treat (125b) to be basic and assume that the verb \textit{ha} is inserted at Surface structure by their \textit{Ha} Supplement or \textit{Ha}-Addition rule in such sentences as (125c), whereas H. Lee (1970) treats (125c) to be basic and assumes that in sentences like (125b) \textit{ha} appears at D-structure but later is deleted by his \textit{Ha}-Deletion rule. I will call this line of approaches "Transformational Approach (T-Approach)" since all of these linguists postulate some kind of transformational rules to move the Negative morpheme \textit{an} from its Deep-structure position to the appropriate Surface-structure position; Neg-Placement (S. Kim (1967, 59)), Neg-Transformation (H. Lee (1970, 178)), Neg-Incorporation (Oh (1971, 58)). Our potential problem for T-Approach originates from the existence of the double negation, as pointed out in Song (1988):

(126) na-nun pap-ul \textbf{AN mek-ci anh-ass-ta}.
I-T rice-A not-eat-? not do-Pst-Decl
(It is not the case that I did not eat rice.)

Song (1967 and his subsequent works), on the other hand, takes the position that there are not two types of negations in Korean \textit{per se}. Instead, he argues there is only one way of negating a sentence and the rule is: place the negative morpheme immediately before a verb. He has claimed that only (125b) is a negative sentence corresponding to the affirmative sentence (125a). He further assumes that the affirmative counterpart of the so-called long-term negation in (125c) is the following sentence:

(127) John-i ka-ki-nun ha-yess-ta.
   -N go-?T do-Pst-Decl
   (John did go. Or John did the action of going.)

I will call the treatment like Song's (1988) "Base-generated Approach (B-Approach)." The essential arguments of B-Approach are as follows:

(128) (i) The verb \textit{ha} is not a dummy verb but is base-generated at Deep structure like normal transitive verbs.
(ii) The mysterious morpheme \textit{ci} in (125c) is an allomorph of the nominalized \textit{ki} in (127)

In what follows I will argue for T-approach and against B-Approach
3.3.3.2 Proposal

Superficially, long-form negation has the following schema:

(129) Verb stem \textit{+ci an} dummy do + Infl

Note that this formation mirrors the strategy of negating main verbs in English with \textit{do}-support. Compare:

(130) \hspace{1cm}
a. Korean \hspace{1cm} b. English
\hspace{1cm} / \hspace{1cm} / \hspace{1cm}
\hspace{1cm} / ha + Infl \hspace{1cm} / do + Infl \hspace{1cm}
\hspace{1cm} / \hspace{1cm} / \hspace{1cm}
\hspace{1cm} / an \hspace{1cm} / not \hspace{1cm}
\hspace{1cm} V \hspace{1cm} ci \hspace{1cm} V

Ignoring the appearance of the morpheme \textit{ci}, and relevant head-parameter, these two formations are superficially identical. In what follows, I will elaborate the fact that the striking similarities in (130a) and (130b) are not accidental but "underlyingly" related.

Let us first examine the difference underlying the two formations. I wish to suggest that the verb in Korean is an affix (presumably prefix) while that in English is a full standing word. Due to this minimal difference, I

surmise, the morpheme \textit{ci} is required in that structure, but not in English; where the verbs fail to move to support Neg\textsuperscript{c} in these languages. Note that there are many languages which have the (negative) constructions very similar to long-form negation in Korean. Here I illustrate some of them with schema of long-form negation in Korean:

(129) Verb stem \textit{+ci an} dummy do + Infl

\hspace{1cm} 1 \hspace{1cm} 2 \hspace{1cm} 3 \hspace{1cm} 4 \hspace{1cm} 5

(131) ez da etxea erori \hspace{1cm} Basque

\hspace{1cm} 3 \hspace{1cm} 5 \hspace{1cm} 1 \hspace{1cm} 2

not has house-the fallen
(The house didn't fall.)

(132) T-Tullaab-u lam ya-ðhab-uu yam \hspace{1cm} Standard Arabic

\hspace{1cm} Standard Arabic

\hspace{1cm} 3 \hspace{1cm} 5 \hspace{1cm} 2 \hspace{1cm} 1

the-students-N not-Pst Imp-go-Agr
(The students did not go.)

(133) Juma a-ta-kuwa a-me-pika chakula \hspace{1cm} Swahili

\hspace{1cm} Carstens and Kinyalolo

1agr-fut-be 1agr-perf-cook ?food \hspace{1cm} (1989, 2)
(Juma will have cooked food.)

With these data I wish to highlight two facts:

(i) There is a node 2 which blocks Verb Raising in these languages.

(ii) The node 2 denotes Aspectual property.

In Basque, Perfective aspect blocks V-raising, hence Tense must raise onto
Neg⁶ since Tense is an affix. Note, incidentally, that Neg ez in Basque is not affixal (see evidence therein), thus presumably do-support-like operation does not take place in (131). Basically same fact is detected in Standard Arabic—namely, Imperfective Aspect separates the verb (and Agr) from Tense+Neg⁶. The so-called Compound Tense construction in Swahili also, essentially exhibits same fact; content Verb Raising is blocked by Perfective Aspect, and the expletive verb kuwa is generated (inserted?) to support Tense. Relating these to Long-form negation in Korean, it is plausible to build the supposition that the morpheme ci heads Aspect Phrase. Further, if this is the case, then long-form negation structure in Korean must be monoclausal contra Song (1988), and previous T-Approaches were basically on the right track. Then, the only difference between the short-form and long-form negation in Korean comes from whether the Aspect⁶ is overtly realized or not. If Aspect⁶ ci appears, then it triggers the movement of the affixal verb onto it. Then, we assume that Verb affix can be supported by ci, hence further movement is prohibited. Since Tense and Mood are also affixal, the dummy ha is inserted to support them on a par with do-support in English. In brief, previous T-Approaches are well comfort with our new formulation of the facts, and they seem to be more consistent with the principles-and-parameters theory. Remainder of this subsection will reassemble the arguments, scattered in chapter 1, against B-Approach.

Let us first consider the validity of (128) repeated below.

(128) (i) The verb ha is not a dummy verb but is base-generated at Deep structure like normal transitive verbs.
(ii) The mysterious morpheme ci in (125c) is an allomorph of the nominalized ki in (127)

Song claims that (125c) and (127) repeated below are strongly related; one is derived from the other.

(125) c. John-i ka-ci anh-ass-ta
-N go-Asp not-do-past-Decl
(John didn't go.)

(127) John-i ka-ki-nun ha-yess-ta.
-N go-?-Top do-Pst-Decl
(John did go. or John did the action of going)

Note, however, that Song's argument is in many ways unmotivated.

First, the verb ha in (125c) and ha in (127) are inherently different.
A compelling evidence comes from the phonological contraction facts.
(I will not reproduce the full paradigms here. See concrete examples in
(20) and (21) in chapter 1). That is, Auxiliary ha in (125c) can be reduced
to Neg an, while main verb ha in (127) cannot. In fact, similar facts can
be found with English verbs—Auxiliaries can be contracted in (134),
while main verbs never do, as in (135).

(134) a. I'll go
   b. You'd done this
   c. She's not coming

(135) a. * I've a pen (cf. I have a pen.)
   b. * She's to go (cf. She has to go.)

Secondly, Topic marker nun can be optionally attached to ci in
(125c), whereas nun on ki cannot be deleted in (127). This contrast is
shown below:

(125) c. John-i ka-ci-nun anh-ass-ta
     -N go-Asp not-do-past-Decl
     (John didn't go.)

(127') * John -i ka-ki-o ha-yess-ta
     -N go-Top do-past-Decl
     (John did go. Or John did the action of going.)

Whatever reason might be responsible for this contrast, this fact clearly
weakens the possibility of deriving these two structures from a single
source.

The third difference results from the extraction facts. As I have
shown in § 1.6 in conjunction with § 2.8, Δ-ki in (125c) must be analyzed
as V', while Δ-ci in (127) should be bigger than VP—namely, AspP.

Finally, let us return to the apparent problem, repeated below,
originally raised by Song.

(126) na-nun pap-ul AN mek-ci anh-ass-ta.
     I-T rice-A not eat-? not do-Pst-Decl
     (It is not the case that I did not eat rice.)

As noted in Song, this seeming "mixture" of short-form and long-form
negation sentence cannot be accounted for under T-Approach where
either one is derived from the other. However, this double negation
example is only an apparent problem under our account if there exist two
kinds of an in Korean. That is, the first Neg can be an Emphatic AN (in
fact, it is forced) in (126). This way, (126) can be no longer problematic
instance for T-Approach. Our prediction is further borne out by the
following example where the embedded Neg AN cannot take wide scope
reading over the QP ta 'all'.

(# stands for impossible reading.)

(126') na-nun pap-ul ta AN mek-ci anh-ass-ta.
     I-T rice-A all not eat-? not do-Pst-Decl (ta > AN, * AN > ta)
     (It is not the case that I ate not all rice.)
     (# It is not the case that I ate nothing.)
Recall that only preceding adverb can take wide scope over the other in Korean. Given this, we can conclude that Neg close to verb in (126) cannot be the head of NegP, but must be the adverbial AN. Unless, the wide scope reading of inside Neg should be possible there.

In sum, there is no convincing evidence which divorces short-form negation from long-form negation in Korean. On the contrary, we have seen some empirical foundations to derive these two formations from a single source. I have also considered the core arguments of B-Approach, and have demonstrated the shortcomings of them. In particular, I have precisely examined Song’s (1988) proposals to relate long-form negation to VP focus constructions. I have shown that Song’s argument cannot be maintained due to several independent evidences. I have also observed Song’s apparent counterexample against T-Approach, and gave a proper treatment of it based on two an’s in Korean.

3.4 Conclusion

In this chapter, I have discussed several problems concerning the structure of English and Korean focusing on the nature of the functional category NegP. I have observed two recent proposals in Pollock (1989) and Chomsky (1989), and pointed out several problems in their approach. Particularly I cast doubt on the status of Affix-hopping. I’ve shown that Affix-hopping in their sense does not exist in English in conjunction with Agreement parameter as put forward in Pollock (1989). I’ve also shown that Verb Raising is not prohibited in this language since there are compelling evidences to motivate Verb Raising in English. I further suggested that there are two types of not in English—one is the affixal head of NegP, and the other, emphatic adverb. Then I proposed that Verb Raising in English is forced in part by the affixal nature of Neg". I also adopted a particular view of clausal structure of English given in Johnson (1990b) where the Agr phrase is further split into Person phrase and Number phrase. I further defended the claim that NegP separates the highest functional projection PerP from NumP. Finally, I examined the status of NegP in Korean. I have essentially demonstrated the parallel behavior of negator an in Korean on a par with not in English. I have shown that an is affixal in nature, and further established three independent motivations to support the existence of NegP headed by an in Korean. Further, I’ve discussed the nature of long-form negation in Korean. There, I’ve essentially shown that long-form negation is underlyingly related to short-form. I also observed one of the popular views of deriving long-form negation structure from VP focus constructions in Song (1988), and attempted to show that this approach is untenable.
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