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## 1. Introduction\*

This paper deals with a construction which Milsark (1974) refers to as the Periphrastic Existential Sentence (henceforth, the Periphrastic ES). The Periphrastic ES is a class of existential sentences which have the surface form exemplified by (1).<sup>1</sup>

- (1) there be NP XP, where X is V, A and P.

Typical instances of this construction are provided in (2).<sup>2, 3</sup>

- (2) a. There is a man talking to Bill.  
b. There has been a man shot (by a maniac).  
c. There were many people sick.  
d. There were two guards on duty.

The syntax of the Periphrastic ES has been one of the issues of considerable debate in recent generative studies. A number of structural analyses of this construction have been proposed (cf. Milsark (1974), Jenkins (1975), Stowell (1978, 1981), Safir (1985), Williams (1984), Burzio (1986), Belletti (1988), etc.). In this paper, I will investigate structural properties of the Periphrastic ES within the recent framework of generative grammar developed in Chomsky (1981, 1986a, 1986b), focusing attention on the internal structure of the postverbal string (i. e. NP-XP) in (1), which, following Milsark, I refer to as the *coda*.

The aims of this paper are two. First, I will give support to the Small Clause analysis of the Periphrastic ES advocated in Stowell (1978, 1981), Safir (1985), Burzio (1986), etc. This analysis assumes that the Periphrastic ES has a structure parallel to that of a typical small clause construction, as in (3).

- (3) a. I consider [<sub>sc</sub> John intelligent].  
b. There is [<sub>sc</sub> a man sick].

I will offer empirical evidence which shows that the material following *be* in (3b) has properties characteristic of small clause complements. Second, I will argue that the Periphrastic ES does, indeed, involve the small clause structure, but that its internal structure differs crucially from that of a typical small clause construction. I will show that the present analysis of the Periphrastic ES yields desirable consequences for two peculiar restrictions on postnominal predicates (i. e. XP in the coda) noted in Milsark (1974): the NP restriction and the Predicate restriction.

## 2. Evidence for the Small Clause Analysis

In this section I present empirical arguments in favor of the Small Clause analysis of the Periphrastic ES. Recent works on existential sentences have offered at least three competing analyses of the syntax of the Periphrastic ES in which the internal structures they assign to the coda are crucially different from each other.<sup>4</sup> I will briefly summarize them in turn.

First, Jenkins (1975) and Willams (1986) propose that the Periphrastic ES has the syntactic structure shown in (4), where the material following *be* forms a single NP constituent; this is generally referred to as the Bare NP analysis.

- (4) there is [<sub>NP</sub> a man sick].

In this analysis, the postverbal NP and the predicate following it have a head-modifier relation which is typical of relative clause constructions.

Second, Belletti (1988) suggests that existential *be* selects the postverbal NP as its argument and that the predicate following it functions as a depictive secondary predicate, similar to the one italicized in (5).<sup>5</sup>

(5) I ate the meat *raw*.

It is generally assumed that a depictive secondary predicate like *raw* in (5) behaves syntactically as an adjunct, so that it does not form a constituent with its subject (cf. Rothstein (1983)). In this analysis, the Periphrastic ES has a constituent structure shown in (6).

(6) there is [<sub>NP</sub> a man] [<sub>AP</sub> sick].

We refer to this here as the Adjunct Predicate analysis.

Finally, as we have mentioned in Section 1, the Small Clause analysis (henceforth, the SC analysis) has been developed in Stowell (1978, 1981), Safir (1985), Burzio (1986), etc. This analysis crucially assumes that the material following *be* forms a small clause constituent as in (7).

(7) there is [<sub>sc</sub> a man sick].

This analysis is crucially different from the Bare NP analysis in that NP and XP in the coda have a subject-predicate, but not head-modifier, relation. It also differs from the Adjunct Predicate analysis with respect to whether or not the coda forms a single constituent.

There seem to be at least two pieces of empirical evidence in favor of the SC analysis and against the other two analyses. The first argument concerns the occurrence of nonarguments in the postverbal NP position. Consider the D-structure configurations assigned

by the three types of analysis mentioned above, concentrating on the postverbal material.

- (8) a. there is [<sub>SC</sub> a man sick] (the Small Clause analysis)  
b. there is [<sub>NP</sub> a man] [<sub>AP</sub> sick] (the Adjunct Predicate analysis)  
c. there is [<sub>NP</sub> a man sick] (the Bare NP analysis)

The SC analysis assumes that existential *be* takes an SC as its complement. As we can see from the following instances of typical SC structures, the subject of an SC complement may be a non-theta-position; nonarguments such as the impersonal *it* and idiom chunks can appear in this position.

- (9) a. I consider [<sub>SC</sub> it likely that he won't show up].  
b. I saw [<sub>SC</sub> tabs kept on Jane Fonda].

If the Periphrastic ES has a parallel SC structure, the postverbal NP position in this construction should have the same property as the SC subject position in (9); it need not be a theta-position and may be occupied by nonarguments. As we can see from (10), this is indeed the case.

- (10) a. There were tabs kept on Jane Fonda by the FBI.  
b. There was advantage taken of the woman's ignorance.  
c. There was much made of the old men about 20 years ago.<sup>6</sup>

The non-SC-type analyses, on the other hand, make a wrong prediction on the occurrence of idiom chunks in the postverbal position in the coda. In the Adjunct Predicate analysis, the postverbal NP position is a position theta-marked by *be*, which must be filled with an argument at D-structure.<sup>7</sup> This analysis, therefore, wrongly predicts that nonarguments such as idiom chunks would never appear in this position. In the Bare NP analysis, the postverbal NP is the head of an NP

argument of *be*. Since nonarguments cannot be the heads of NP arguments in normal cases, this analysis also prevents idiom chunks from occurring in the postverbal position.<sup>8</sup> The fact that this position allows the occurrence of idiom chunks as in (10) thus strongly supports the SC analysis as opposed to the alternative analyses.

The second argument for the SC analysis is concerned with extractability of an *wh*-phrase out of the predicate in the coda. The Bare NP analysis assumes that the coda is a single NP constituted of a head and a postmodifier. In this analysis, as Milsark (1974) notes, the coda forms a complex NP, similar to the bracketed phrases in (11).

- (11) a. I have found [<sub>NP</sub> someone who would speak to John].  
b. There are [<sub>NP</sub> many people who are interested in the problem].

As (12) shows, extraction of a *wh*-phrase out of such an NP results in a Complex NP Constraint violation.

- (12) a. \*To whom have you found [<sub>NP</sub> someone who would speak t]?  
b. \*a problem which there are [<sub>NP</sub> many people who are interested in t]

The Bare NP analysis thus predicts that *wh*-extraction out of the coda should not be allowed because of the Complex NP Constraint.<sup>9</sup>

The Adjunct Predicate analysis assumes that the predicate in the coda functions as an adjunct predicate. It is generally the case that we cannot extract a *wh*-phrase from an adjunct because it violates the Adjunct Condition.<sup>10</sup>

- (13) \*To whom did you leave [without speaking t]?

It is clear from (14) that adjunct predicates also show adjunct island effects.

The question I try to answer in this section is what structural properties do SC complements of existential *be* have; to be more spe-

### 3. Two Types of Small Clause Structure

I have shown in this section that the facts about the occurrence of nonarguments in a postverbal NP position and wh-extractability out of a postnominal predicate provide empirical support for the SC analysis as opposed to the two alternative analyses: the Bare NP analysis and the Adjunct Predicate analysis.

- d. a problem there are many people interested in t<sup>11</sup>
- c. Which chair was there a cat sleeping on t?

- t?
- b. ?To what sorts of colleges are there many students applying
- (16) a. ?Towards which park are there a lot of girls running t?

As shown in (16), wh-extraction is indeed possible from a complement position of a postnominal predicate, which verifies the SC analysis and falsifies the other two analyses.

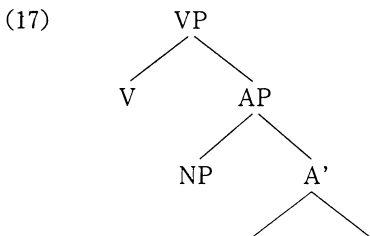
- b. Which premises did the guard see [<sub>SC</sub> John leaving t]?
- (15) a. Who do you consider [<sub>SC</sub> Bill angry at t]?

we can freely extract a wh-phrase from a SC complement. coda is assumed to be an SC complement of *be*. As illustrated in (15), tract an element out of the predicate in the coda. In this analysis, the that wh-movement should apply to the Periphrastic ES so as to ex-The SC analysis, on the other hand, makes the opposite prediction possible out of the predicate in the coda. Therefore, this analysis also predicts that wh-extraction would be im-

- b. ??Towards which park did you meet John [running t]?
- (14) a. \*Who did you meet John [angry at t]?

cific, are they identical in their internal structures with other typical SC complements or not? Although there are several classes of verb which can select SC complements, I take here an epistemic verb like *consider* as a typical instance, and compare SC complements of existential *be* with those of verbs of this type, focusing attention upon their internal structures.

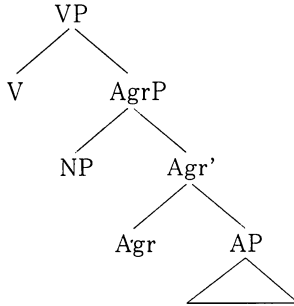
There have been various proposals for the internal structure of an SC. A recent issue of much controversy has been concerned with the categorial status of an SC; more precisely, it is the issue of whether an SC is a projection of the head of its predicate or a projection of some functional category. Previous analyses of SCs seem to be classified into two types in this respect. The analysis developed in Stowell (1981, 1983) is representative of the former type of analysis. He assumes that an SC is a projection of the head of its predicate, with the subject being in a position internal to the projection. In this analysis, an SC has an internal structure as indicated in (17).<sup>12</sup>



A recent version of the latter type of analysis can be seen in Raposo and Uriagereka (1990), Nakajima (1991), Kikuchi and Takahashi (1991), Suzuki (1991), etc.<sup>13</sup> They claim that an SC has a more complex hierarchical structure than that in (17) and is a projection of a functional category, Agr, rather than that of a predicative head. The internal structure of an SC they assume is roughly as follows :



(18)



These analyses are crucially different in the position of an SC subject. In the former analysis, an SC subject is in a position internal to a maximal projection of its predicate, while, in the latter, it occupies a position external to that projection (at least at S-structure).<sup>14</sup> Let us refer to (17) as the Predicate Internal Subject (PIS) structure and (18) as the Predicate External Subject (PES) structure. I will show below that both types of SC structure are available in English and that an SC complement of existential *be* has a PIS structure, while that of an epistemic verb has a PES structure.

We have shown in Section 2 that existential *be*, like an epistemic verb, can take an SC as its complement, as in (19).

- (19) a. I consider [<sub>sc</sub> John foolish].  
b. There is [<sub>sc</sub> a man sick].

The Periphrastic ES, however, shows a sharp contrast with a typical SC construction like (19a) with respect to the possibility of preposing an SC predicate. Compare the following pair.

- (20) a. How foolish do you consider [John t]?  
b. \*How sick is there [a man t]?

As shown in (20), *wh*-movement can apply to SC predicates of epistemic verbs, but it results in ungrammaticality with those of existential *be*. We can find the same contrast with regard to the possibility of

predicate topicalization.

- (21) a. Foolish I consider [John t], but intelligent I consider [his brother t].  
b. \*Drunk there were [boys t], but sober there were [girls t].

The contrasts in (20) and (21) can be explained in terms of a condition on movement postulated in Chomsky (1986a), if we assume that these two types of SC complement are different in their internal structures.

Chomsky (1986a) assumes (22) as one of the general conditions on movement.

- (22) Only minimal and maximal projections ( $X^0$  and XP) are “visible” for Move  $\alpha$ .

Given (22), movement operations only apply to heads and maximal projections, but not to  $X'$ -level projections. Note that the PES analysis and the PIS analysis make different assumptions with regard to the bar-level status of a node dominating an SC predicate; in the former analysis, an SC predicate is an  $X''$ -level (i.e. maximal) projection, while it is  $X'$ -level in the latter. It then follows from the requirement (22) that movement of an SC predicate is only possible with the PES structure; an SC predicate in the PIS structure cannot undergo Move  $\alpha$ , since it is an  $X'$ -level projection.

The fact that SC predicates of epistemic verbs can undergo movement operations such as wh-movement and topicalization indicates that their SC complements must have a PES structure (23a) rather than a PIS structure (23b); if they had an internal structure as shown in (23b), the SC predicate, *foolish*, would not be able to undergo Move  $\alpha$  because of the requirement (22).<sup>15</sup>

- (23) a. I consider [<sub>Agr</sub> John Agr [<sub>AP</sub> foolish]].  
b. I consider [<sub>AP</sub> John [<sub>A'</sub> foolish]].

As (20b) and (21b) show, movement of an SC predicate of existential *be* results in ungrammaticality. The contrasts shown in (20) and (21) would be surprising if an SC complement of *be* had an internal structure parallel to that of an SC complement of an epistemic verb, because there seems to be no independent reason to block Move  $\alpha$  from applying only in the former. We can account quite straightforwardly for the ungrammaticality of (20b) and (21b) by assuming that an SC of existential *be*, unlike that of an epistemic verb, has a PIS structure. If it has a PIS structure, the D-structure representation of (20b), for instance, will be (24).

(24) There is [<sub>AP</sub> a man [<sub>A'</sub> how sick]].

Move  $\alpha$  is only applicable to minimal and maximal projections. Since the SC predicate, *how sick*, is dominated by a single-bar level projection (X'), it is prohibited from undergoing movement operations because of the requirement (22). Hence, we correctly predict that wh-movement and topicalization cannot apply to an SC predicate of the Periphrastic ES.

I have shown in this section that an SC complement of existential *be* has an internal structure distinct from that of an SC complement of an epistemic verb; the former has a PIS structure and the latter a PES structure. In the following sections, I will explore consequences of this structural analysis of the Periphrastic ES.

#### 4. The NP restriction

The Periphrastic ES places a categorial restriction on its SC predicate. As we can see from (25), predicate nominals cannot occur as SC predicates of the Periphrastic ES, although they are possible in typical SC complements.

- (25) a. \*There was a girl an occasional painter at the party.  
b. \*There will be a man John's teacher.

- c. We consider John a fool.
- d. We consider John Mary's best friend.

This categorial restriction was originally observed in Milsark (1974) as the NP restriction. Milsark argues that the NP restriction is derivable from a semantic restriction (i.e. the Predicate restriction in his term) to the effect that postnominal predicates of the Periphrastic ES must denote a temporary state rather than a property. Most nominal predicates are property-denoting, so that they never occur in the Periphrastic ES without violating the Predicate restriction. Stowell (1978), however, claims that the NP restriction cannot be completely reduced to the Predicate restriction. He notes that there are a number of nominal predicates which describe temporary states. Predicate nominals in (26) are clearly temporary-state-denoting, because, unlike property-denoting predicates, they can be predicated of indefinites and cooccur with time adverbial expressions.

- (26) a. Two long-haired groupies were real nuisances at the concert yesterday.
- b. A Mexican woman was a contestant on Concentration last week.

If they describe a temporary state, they should be able to occur as postnominal predicates in the Periphrastic ES without violating the Predicate restriction. The existential sentences corresponding to those in (26) are, however, unacceptable.

- (27) a. \*There are two long-haired groupies real nuisances at the party last night.
- b. \*There is a Mexican woman a contestant on Concentration (last Monday).

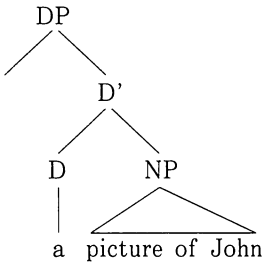
Since these nominal predicates are temporary-state-denoting ones, the deviation in (27) cannot be attributed to the Predicate restriction.

On the basis of this observation, Stowell claims that the categorial restriction on postnominal predicates is necessary as an independent restriction on the Periphrastic ES.

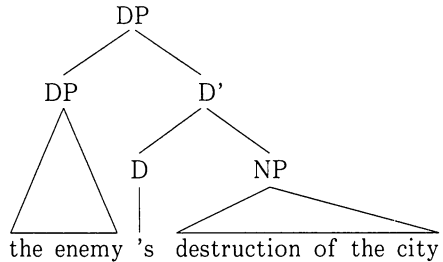
Assuming that Stowell's arguments are basically correct, I next discuss the issue of how this construction-specific restriction could be derived from general principles of Universal Grammar (UG). In the following discussion, I will show that the analysis of SC structures proposed in Section 3 provides the basis for a principle-based account for the effects of the NP restriction.

Before directly entering into this issue, let us consider the categorial status of predicate nominals. Recent works on the syntax of noun phrases have provided much evidence, both conceptual and empirical, for the view that a noun phrase is not a projection of a nominal head as has been traditionally assumed, but is headed by a functional category, D(eterminer). We refer to this as the DP hypothesis (cf. Fukui & Speas (1986), Abney (1987), Stowell (1989)). It is assumed in the literature that a determiner, a demonstrative, and 's (or an Agr element which licenses a possessor) occupy the position D in English. Under the DP hypothesis, noun phrases such as *a picture of John* and *the enemy's destruction of the city*, for example, have the following internal structures.

(28) a.



b.



It is well known that a noun phrase has a dual nature in that it may function either as an argument or as a predicate. Although a lot of arguments have been offered in favor of the DP hypothesis with

regard to argument noun phrases, the categorial status of predicate nominals seems to have remained controversial: are they of category NP or DP? Stowell (1989) offers evidence which suggests that predicate nominals as well as argument noun phrases must have the categorial status DP. The DP hypothesis crucially assumes that a determiner obligatorily occupies the head position of DP (i.e. D). Thus, as Stowell notes, the presence vs. absence of an overt determiner will be a test for DP vs. NP status of a predicate nominal. As (29) shows, determiners, in most cases, cannot be omitted even if the noun phrases containing them function predicatively.

- (29) a. John is \*(a) doctor.  
 b. Mary considers Bill ?(the) guardian of her children.

Stowell therefore claims that noun phrases, even when they function as predicates, must be of category DP.<sup>16</sup>

Assuming that predicate nominals are DPs, let us now consider the issue of why existential *be* may not take a nominal SC as its complement. I have shown in Section 3 that an SC complement of existential *be* must have a PIS structure; it is a projection of its predicate, with its SC subject occurring internal to that projection. The nominal SC complement in (30a) will then have the representation shown in (30b).

- (30) a. \*There is a Mexican woman a contestant.  
 b. There is [<sub>DP</sub> a Mexican woman [<sub>D'</sub> a [<sub>NP</sub> contestant]]].

The structural analysis of a nominal SC above enables us to provide a Case-theoretic account for the ungrammaticality of (30a). The Case filter has been proposed as a fundamental principle of the theory of abstract Case, which constrains the distribution of overt noun phrases. Assuming that the categorial status of a noun phrase is DP, the Case Filter can be formulated as follows:

(31) The Case Filter

Every phonetically realized DP must be assigned (abstract) Case.

Since the nominal SC complement in (30) is of category DP, it must be assigned Case to satisfy the Case Filter. Two alternative analyses have been proposed concerning Case-marking to postverbal noun phrases in existential sentences: Case transmission from the expletive element *there*, and direct Case-assignment by *be*. Shlonsky (1987) and Lasnik (1989) present a number of convincing arguments against the Case-transmission hypothesis, and claim that existential *be* assigns Case structurally to a postverbal noun phrase under government. Although I do not review their arguments here for lack of space, I assume, following them, that a postverbal DP is assigned Case directly by *be*, but not through Case transmission from *there*. The nominal SC in (30) is in a position governed by *is*, so that it successfully receives Case from this verb. But if it is assigned Case by *is*, a problem arises with respect to Case-marking to the SC subject *a Mexican woman*; it is also of category DP, so that it must satisfy the Case Filter to be licensed. The only possible Case-assigner for this DP is its governing verb *is*. Therefore, if it assigns its only Case to the nominal SC complement, the SC subject will be Caseless, violating the Case Filter. A nominal SC structure like (30b) thus always results in a Case Filter violation, because there are two DPs which need Case, but there is only one Case available for them. Therefore, if we assume that an SC complement of existential *be* has a PIS structure, the categorial restriction on SC predicates of the Phrasal ES can be reduced to the Case Filter.

Let us now ask why nominal SCs are possible with epistemic verbs. I have shown that an SC complement of an epistemic verb like *consider* has a PES structure. A nominal SC complement of this type of verb, thus, has a different internal structure from that in (30b). The example (32a) has the S-structure representation indicated in (32b).

- (32) a. I consider John a fool.  
 b. I consider [<sub>AgrP</sub> John [<sub>DP</sub> [<sub>D'</sub> a [<sub>NP</sub> fool]]]]

Note that the SC complement in (32b), unlike that in (30b), need not be assigned Case, because its category is AgrP, but not DP. Therefore, no problem arises concerning Case-marking to the SC subject in this case. It can be successfully assigned Accusative Case by *consider* in an "Exceptional-Case-marking" manner. One might wonder how the DP which dominates *a fool* in (32b) could satisfy the Case Filter. Chomsky (1986) argues that noun phrases are subject to the Case Filter only when they function as arguments. Non-argument DPs need not be Case-marked as shown in (33).

- (33) a. John is [a fine mathematician].  
 b. [John], I consider [a fine mathematician].  
 c. John did it [himself].

The DP dominating *a fool* is not an argument, but functions as a predicate. Consequently, it can be well-formed without Case.

I have shown in this section that we can derive the effects of the NP restriction from the Case Filter if we assume the PIS analysis of an SC complement of existential *be* proposed in Section 3. The contrast between two types of SC complement shown in (25) can also be provided with a Case-theoretic account by assuming that they are different in their internal structures.

## 5. The Predicate restriction and Diesing-Kratzer generalization

In this section, I am concerned with another restriction on SC predicates of the Periphrastic ES which is referred to as the Predicate restriction in Milsark (1974). Milsark observes that there is a semantic restriction on postnominal predicates of the Periphrastic ES. As (35) shows, the predicates in the list (34a) are tolerated in this construction, but those in (34b) are not permitted.



- (34) a. sick, drunk, hungry, stoned, tired, closed, open, etc.  
b. intelligent, beautiful, boring, crazy, colors, shapes, etc.

- (35) a. There is a man sick / drunk.  
b. \*There is a man intelligent / beautiful.

The distinction between the predicates in (34a) and those in (34b) can be best captured by the notions introduced in Carlson (1977). Carlson distinguishes between two types of predicate on semantic grounds: stage-level predicates and individual-level predicates. Stage-level predicates denote actions or temporary states (e.g. *speak*, *drunk*), while individual-level predicates describe properties that are constant across time (e.g. *know*, *intelligent*). The predicates in the list (34a) are instances of stage-level predicates, and those in (34b) are among individual-level predicates. If we adopt Carlson's terminology, Milsark's observation can be described in the present context as follows:

- (36) SC predicates of the Periphrastic ES must be stage-level predicates rather than individual-level predicates.

Note that SC predicates of epistemic verbs are not constrained in this way. (37) shows that they can be either stage-level or individual-level predicates.

- (37) a. We consider him ready.  
b. We consider him intelligent.

I show below that given the present analysis of SC structures, the contrast concerning predicate selection between these two types of SC complement naturally falls within the generalization hypothesized in Diesing (1988) and Kratzer (1988).

Diesing (1988) and Kratzer (1988) claim that the semantic distinction on the type of predicates mentioned above (i.e. stage-level vs. individual-level) is syntactically reflected by a constraint on the posi-

tion of subjects. Their generalization can be described roughly as follows :

- (38) The subject of a stage-level predicate is base-generated in a predicate-internal position, while the subject of an individual-level predicate must be in a predicate-external position at every level of representation.<sup>17</sup>

Assuming that the generalization (38) is basically correct, let us consider the paradigms below.

- (39) Individual-level predicates
- a. I consider him intelligent.
  - b. I consider John foolish.
  - c. \*There is a man intelligent.
  - d. \*There are some men tall.

- (40) Stage-level predicates
- a. I consider him ready.
  - b. I consider her singing.
  - c. There is a man sick.
  - d. There are firemen available

I have been assuming that an SC complement of an epistemic verb and that of existential *be* are different in their internal structures ; the former has a PES structure, while the latter has a PIS structure. These SC structures crucially differ in the positions which their subjects can potentially occupy. As indicated in (41), a PES-type SC contains two potential subject positions, a predicate-external SPEC1 position and a predicate-internal SPEC2 position, while a PIS-type SC contains only a predicate-internal subject position.

- (41) a. consider [<sub>AGR</sub>P SPEC1 [<sub>XP</sub> SPEC2 [<sub>X'</sub>...]]  
b. be [<sub>XP</sub> SPEC [<sub>X'</sub>...]]

According to the generalization (38), the subject of an individual-level predicate must be projected into a predicate-external position at D-structure. While such a position is available for an SC of the PES type (i.e. the SPEC of Agr' = SPEC1), there is no predicate-external position within a PIS-type SC. The generalization (38) thus makes a strong prediction that an individual-level predicate may appear in a PES-type SC, but will never occur in an SC of the PIS-type. Since an SC of epistemic verbs is of the PES-type and that of existential *be* is of the PIS-type, the contrast concerning predicate selection in (39) exactly conforms to the prediction of this generalization.

The subject of a stage-level predicate, on the other hand, is base-generated in a predicate-internal position. A predicate-internal position is available for both types of SC. Given the generalization (38), the sentences (40a) and (40c) above have the respective D-structure representations, (42a) and (42b).

- (42) a. I consider [<sub>Agr</sub> SPEC1 [<sub>AP</sub> him [<sub>A'</sub> ready]]]  
 b. There is [<sub>AP</sub> a man [<sub>A'</sub> sick]]

In (40a), the SC subject, *him*, is base-generated in an AP-internal subject position as indicated in (42a), and moves to the SPEC of Agr' (i.e. SPEC1) at S-structure, where it receives Accusative Case from *consider*. In (40c), the SC subject, *a man*, is base-generated in the SPEC of A' as in (42b), and is assigned Case by *is* in this position. Thus, a stage-level predicate can freely occur in both types of SC complement.

I have shown in this section that given the present analysis of SC structures, the contrast in predicate selection between two types of SC complement falls within Diesing-Kratzer generalization. This result in turn supports our contention that an SC complement of existential *be* has an internal structure distinct from that of an SC complement of an epistemic verb.

## 6. Summary

In this paper, I have provided support for the SC analysis of the Periphrastic ES and have explored some consequences of this analysis. In Section 2, I have presented two arguments which support the SC analysis as opposed to the Bare NP analysis and the Adjunct Predicate analysis. In Section 3, I have argued, on the basis of the facts about preposing of SC predicates, that an SC complement of existential *be* has an internal structure different from that of a typical SC complement. In Section 4 and Section 5, I have shown that given the analysis of SC structures proposed in Section 3, we can provide natural accounts for categorial and semantic restrictions on postnominal predicates of the Periphrastic ES observed in Milsark (1974).

### Notes

\*An earlier version of this paper was presented at the 45th meeting of the Sapporo Linguistics Circle (SLC) held on February 1st, 1992. I would like to thank all the members of the SLC for their invaluable comments. I am also grateful to Willie Jones, who read an earlier draft and provided me with helpful suggestions for stylistic improvements.

1. Milsark (1974) claims that from a semantic perspective, the Periphrastic ES is not an existential statement of a postverbal NP, but is a naked description of events. Bresnan (1982) makes a similar claim that (i) has an evocative reading which can be crudely paraphrased as (ii).

(i) There is a pig running through the garden.

(ii) Behold: a pig is running through the garden.

For semantic considerations of this construction, see also Kuroda (1972), Kuno (1973), Maruta (1982).

2. Following Rothstein (1987), I assume here that existential *be* is a 'true' verb which theta-marks its complement. As Rothstein suggests, this assumption is motivated by the fact that existential *be*, unlike

predicational *be*, cannot be omitted in the complement of *believe* as shown in (i).

- (i) a. I believe John to be a fool.
- b. I believe John a fool.
- c. I believe there to be three cows in the garden.
- d. \*I believe there three cows in the garden.

If *be* is omitted as in (id), *three cows* cannot receive a theta-role from it, resulting in a Theta-criterion violation.

3. Existential sentences which have the surface form in (2) are potentially ambiguous between the periphrastic reading and the ontological / locational reading. Milsark observes that (i) is ambiguous “between a reading where someone was engaged in the rather odd activity of studying Gothic at the party and a reading where a person is claimed to have been at the party who is engaged in the study of Gothic as a profession or avocation.”

- (i) There was a man studying Gothic at the party.

The former is the periphrastic reading relevant in this paper. In the latter reading, (i) should be classified as the Locational ES in Milsark’s sense, but not as the Periphrastic ES.

4. In the classical transformational analysis, it is assumed that the Periphrastic ES is derived from an ordinary subject–predicate structure via a transformation, *There*-insertion (cf. Milsark (1974), etc.). This transformation involves rightward movement of the subject to the complement position of *be*, and the insertion of the expletive *there*. This analysis is, however, untenable on conceptual grounds within the theoretical framework I have adopted here, because movement to the complement of a theta-marking head is always barred because of the Projection Principle and the Theta-criterion. Cf. Chomsky (1981).
5. See Kawasaki (1983), Uriagereka and Raposo (1990) and Hoekstra and Mulder (1990) for similar approaches.

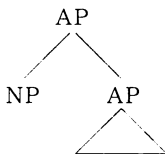
6. (10a) is cited from Bresnan (1982), and (10b, c) from Maruta (1982).
7. Cf. Chomsky (1981, 1986b)
8. The argument here might be weakened by the fact that an idiom chunk can appear as the head of a relative clause in some cases.

- (i) a. The headway which John made was fantastic.  
(Nakau(1976))
- b. The aspirations that Bill cast on my character are unfounded.  
(MacCawley(1981))

One might claim that the material following *be* in (10) is a reduced counterpart of a relative clause like (i). A relative clause of this kind, however, seems to be limited in the distribution. It is awkward in the complement position of existential *be*.

- (ii)\* There were (the) tabs which were kept on Jane Fonda by the FBI.

9. The argument against the Bare NP analysis here is originally due to Milsark (1974). See Safir (1987), Shlonsky (1987), and Lasnik (1989) for similar arguments. For further arguments against the Bare NP analysis, see Milsark (1974), Safir (1987), Lumdsen (1988), etc.
10. Cf. Huang (1982), Chomsky (1986a), etc.
11. (16b) is from Safir (1987), and (16c,d) from Milsark (1974).
12. There is another type of analysis in the literature which assumes that an SC is a maximal projection of its predicate. Manzini (1983) claims that an SC has a base-adjunction structure where a subject is adjoined to its predicate as shown in (i).



I assume in this paper that base–adjunction is limited to modifiers, and that a subject must occupy the SPEC of X', whether X is lexical or functional. Thus, I will not discuss consequences of this type of analysis here. See also Koopman and Sportiche (1988).

13. Hornstein and Lightfoot (1987) propose that the category of an SC is an S (= IP). Kitagawa (1988) claims that it is an S' (= CP). See Nakajima (1991) for potential arguments against these analyses.
14. Raposo and Uriagereka (1990) and Kikuchi and Takahashi (1991) assume that an SC subject is base-generated in a predicate-internal position and moves to the SPEC of Agr' at S-structure to receive Case from its governing verb. As I will argue in Section 5, whether an SC subject is base-generated in a predicate-internal position or in an Agr-SPEC position is dependent on semantic properties of an SC predicate.
15. If an SC subject is base-generated in an AP-SPEC position and moves to an Agr-SPEC at S-structure, the S-structure representation of (20a) is as follows :

(i) [<sub>AP</sub> t<sub>i</sub> how foolish]<sub>j</sub> do you consider [<sub>AgrP</sub> John<sub>i</sub> t<sub>j</sub>]

A problem, then, arises about licensing of the trace in the SPEC position of the preposed AP. See Kikuchi and Takahashi (1991) for a possible solution.

16. Predicate nominals belonging to a semantic class of “profession-denoting” predicates are exceptional in this context. They must occur without their determiners, as in the following examples.

- (ii) a. We elected John (\*the) president of the class.
- b. The queen appointed her lover (\*the) treasurer of the realm.

See Stowell (1989) for discussion of this construction.

17. They actually assume that the subject of a stage-level predicate is base-generated *inside VP* and that of an individual-level predicate is base-generated *outside VP*. However, what is crucial for their gene-

realization seems to be the notion “predicate–internal vs. predicate–external,” but not “VP–internal vs. VP–external.” Consider the following SC structure.

(i) We consider [<sub>SC</sub> firemen [<sub>AP</sub> intelligent]].

The chief motivation for their generalization concerns interpretation of bare plural subject NPs. They claim that a bare plural subject NP has a generic interpretation only if it is in an “outer” subject position at S–structure (or at LF). Since *firemen* in (i) has (indeed, must have) a generic interpretation, it must be treated as an “outer” subject in their analysis. They assume that an “outer” subject is in a VP–external position. The SC complement in (i), however, lacks a VP projection, so that their assumption should be somehow modified so as to cover such cases as (i). If their generalization is formulated in category neutral terms as in (38), *firemen* can be regarded as an “outer” subject in that it is in a predicate–external (i. e. AP–external) position. See Stowell (1991b) for a similar assumption.

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