REVIEW ARTICLE


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1. INTRODUCTION. This book consists of seven chapters of which essential ideas already appeared in its author's earlier papers, though each chapter includes various revisions or novel proposals. The central thesis is the radical autonomy of syntax. According to the thesis, basic syntactic properties are all entirely construction-independent; there are no fixed correspondences between individual constructions and grammatical principles at least in core grammar. Thus it is not different in its spirit from Chomsky's 1981 government-binding (GB) theory; in fact, we might say that it is a result of putting Chomsky's spirit to its ultimate consequences. But the resultant theory is rather different from standard GB theory. In addition, it seems to me that Koster's theory is influenced in some crucial respects by lexical-functional grammar as proposed by Bresnan 1982a or 1982b, though he only mentions the latter in passing. As we can guess from the main title, Domains and Dynasties, this book is largely concerned with locality conditions on the relation between antecedents and anaphoric items, including so-called empty categories, and on the determination of scope of quantifiers and wh-phrases. Since there is a sense in which we can say that the history of transformational generative grammar is a history of investigation of locality conditions, it seems to me that Koster's research agenda is extremely intriguing and will prove to be very fruitful.

In this review article, I will outline Koster's fundamental proposals and raise several problems for them, though I cannot present my own solutions here. Then I will make an overall evaluation of Koster's theory; it will be investigated whether or not his theory is sustainable as a theory of universal grammar.

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2. **Fundamental Proposals.** Koster first states that most basic anaphoric relations in natural language are the dependency relation (R) between a dependent element $\delta$ and an antecedent $\alpha$, as in 1.

\[ \ldots \alpha, \ldots, \delta \ldots \]

\[ R \]

He further states that all the dependency relations of type R have the effect of 2 and the four properties of 3 (p. 9).

(2) share property

(3) a. obligatoriness
   b. uniqueness of the antecedent
   c. c-command of the antecedent\(^1\)
   d. locality

Koster notes that all the relations given in 4 below are dependency relations of type R, and fall within the limits of the configurational matrix characterized by the four properties of 3 (pp. 13–4).

(4) a. licensing relations
   government
   subcategorization
   $\theta$-marking
   Case assignment
   b. agreement
   subject-verb
   COMP-verb
   c. anaphor binding
   d. movement
   NP-movement
   Wh-movement
   e. obligatory control
   f. predication
   g. gapping

His discussion is mainly organized around the relations of 4c, 4d, and 4e. Arguing against Chomsky 1981 and 1982, Koster notes that it is a mistake to postulate different modules or subtheories for most of the dependency relations of 4.

\(^1\) Koster adopts the definition of c-command by Aoun and Sportiche 1983, which requires that the minimal $X^{\text{max}}$ containing the antecedent also contain the anaphor. He reinterprets the requirement of c-command as a principle of locality (p. 11).
The four properties of 3 are exemplified in the following:

(5) a. *I hate himself.
    b. John hates himself.
    c. John thinks that Mary likes him.

(6) a. *John confronted Mary with each other.
    b. John told Mary that they had to leave.

(7) a. *[NP the father of John] hates himself
    b. [NP the father of John] thinks he is happy

(8) *John thinks that Mary hates himself.

The examples of 5a and 5b illustrate the first property, obligatoriness: the reflexive pronoun himself, an instance of dependent element, cannot occur without an antecedent. 5c indicates that the pronoun him is not a dependent element; usually a non-reflexive pronoun is associated only optionally with a possible antecedent. The example of 6a is an illustration of the second property, uniqueness of the antecedent. This example shows that the anaphor each other cannot have a split antecedent. By contrast, the pronoun they of 6b, which is not a dependent element in the sense of 1, does not show this property and may have a split antecedent. In 7a, we can see the third property of 3, c-command of the antecedent: it is ungrammatical because himself is not c-commanded by the antecedent John. Again the non-reflexive pronoun he fails to show this dependency property. Lastly, the grammaticality contrast between 5b and 8 illustrates the fourth property, locality. This property is of special importance in Koster's theory and receives much more attention than the other three properties of 3. This is because the controversial problem of markedness arises rather conspicuously in the case of the fourth property. Notice again that the occurrence of pronouns is not constrained by the locality principle, as shown in 5c.

In order to treat the problem of locality, Koster proposes the Bounding Condition of 9 and the notion of dynasty of 10, whose essence was presented by Koster 1978 and 1984, respectively.

(9) The Bounding Condition (p. 10)
    A dependent element \( \delta \) cannot be free in:

\[ \text{2 Here himself is intended to be coreferential with John rather than the whole subject NP.} \]
\[ \text{3 According to Koster (Chap. 6), principle A of binding theory falls under the Bounding Condition, principle B is derived from other conditions, and principle C is reinterpreted as a discourse principle.} \]
... $[\beta \ldots \delta \ldots] \ldots$

where $\beta$ is the minimal $X^{\text{max}}$ containig $\delta$ (and the governor of $\delta$).

(10) The Dynasty (p. 19)
A dynasty is a chain of governors such that each governor (except the last one) governs the minimal domain containing the next governor.

The Bounding Condition defines the unmarked (core) local domain in which a dependent element is bound, and the dynasty defines marked extensions of the unmarked local domain. Koster emphasizes that the theories of bounding and binding should not be distinguished, and in core cases both the phenomena are constrained by the same locality principle of one-$X^{\text{max}}$ minimal domain, i.e. the Bounding Condition of 9.

The essential insight of the dynasty, i.e. the idea of domain extension, was provided by Kayne 1983, who claims that the path from a dependent element to a possible antecedent must meet a condition on the direction of government. Koster argues that Kayne's idea of the path condition (the domain extension condition) can be generalized for other types of long distance dependencies than Wh-movement, on which Kayne concentrates his discussion. Hence, in addition to wh-traces, empty or lexical categories such as NP-traces, governed PRO, pro as a resumptive pronoun, reflexive pronouns, and the reciprocal pronoun each other are all dependent elements in the sense of 1. With this much in mind, let us now compare the example of 11 with that of 5b.

(11) John depended $[\text{pp on himself}]$

As opposed to 5b, 11 does not fall under the Bounding Condition of 9, since the anaphor himself is not bound in the minimal $X^{\text{max}}$, PP, in which it is governed. But 11 is accepted as an instance of the marked domain extension in terms of the dynasty of 10. Since English verbs and prepositions uniformly govern to the right, on and depended are structural governors which govern in the same direction, permitting the marked domain extension up to the main clause. Thus himself can be bound within the domain containing the possible antecedent John.

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4 For a more formal definition of dynasty, see page 150 of Koster's book.
5 Koster claims that besides the dynasty, opacity factors such as subject and AGR, i.e. SUBJECT of Chomsky 1981, and COMP also trigger domain extension.
6 It might be claimed that in the example of 11 depended and on are reanalyzed as a complex verb, and then 11 has nothing to do with the dynasty and should be treated by the Bounding Condition as an unmarked case. But, as we will see in section 5, Koster does not admit reanalysis.
Koster's proposals are interesting in that they can correctly characterize some marked syntactic phenomena in English, a typical SVO language, including preposition stranding, parasitic gaps, and extraction from within embedded clauses, and they have some significant empirical consequences for SOV languages like Dutch and German: for instance, the well-known (near) absence of such marked phenomena in the latter languages.

3. THE DYNASTY AND EMPTY CATEGORIES

3.1. DEGREES OF PERFECTION OF DYNASTIES. Under Koster's assumption, the connections of empty categories such as traces, governed PRO, and pro to their antecedents are constrained by basically the same principles, i.e. the Bounding Condition and the dynasty. In fact, however, the empty categories are subject to rather different dynasty-controlled domain extension conditions. Thus Koster distinguishes the following four types of dynasties (p. 161).

(12) \ldots V \[ \ldots V \[ \ldots V \[ \ldots V \ldots ]] \ldots \\
(13) \ldots V \[ \ldots P \[ \ldots V \[ \ldots P \ldots V \ldots ]] \ldots \\
(14) \ldots V \[ \ldots N \[ \ldots A \[ \ldots P \ldots V \ldots ]] \ldots \\
(15) \ldots V \[ \ldots NP \[ \ldots V \[ \ldots VP \[ \ldots V \ldots ]] \ldots \\

He characterizes 12 as a perfect dynasty: a set of governors of the same syntactic category. Here the dynasty consists of only Vs. The dynasty of 13 consists of different lexical categories, but both V and P are structural governors. Koster refers to this type of dynasty as a less perfect dynasty. 14 exhibits an even less perfect dynasty, which involves non-structural lexical governors. 15 is the least perfect, almost decadent dynasty. It requires neither the similarity of categories nor the structural or lexical government, but only the uniformity of directions of government, as indicated by the arrows.7

The dynasty of 12 is exemplified by long distance reflexivization in Icelandic. This reflexivization is possible if all Vs intervening between a reflexive pronoun and its antecedent are in the subjunctive mood. An example of 13 can be seen in the preposition stranding in English.

(16) a. [s Mary was looked [pp at e]]
    b. [s' what [are you talking [pp about e]]]

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7 This does not necessarily imply that the uniformity of government is not required in the other types of dynasties.
The empty category of 16 is connected to the antecedent in exactly the same way that the reflexive pronoun of 11 is connected to John. Turning to the dynasty of 14, let us consider the example of 17.

(17) who did you see [\text{a picture} [\text{of e}]]

Here picture is only a lexical governor, though of and see are structural governors. A possible example of 15 is extraction from within a relative clause, but usually this results in a high degree of ungrammaticality.

(18) *Which race did you express a desire to meet the man who won e?

We might say that the idea that there are degrees of perfection among the dynasties is very interesting and provides us with a revealing insight into the relations between dependent elements and antecedents. But it seems to me that the idea involves serious problems with respect to the theoretical or empirical characterization of or discrimination among empty dependent categories such as traces, pro and PRO.

3.2. Traces and Pro. Koster notes that the domain extension for a trace depends on the dynasty consisting of only Vs, as in the case of long distance reflexivization in Icelandic. He also notes that a trace cannot be bound in extended domains yielded by the dynasties of 13 and 14, and thus an empty category which occurs in those marked domains must be the empty resumptive pronoun pro (p. 156). It follows then that the empty category of examples like 16 and 17 is not a trace but the resumptive pro.

However, I find first of all that Koster's terminology is too vague to construct a sound argument. In his framework, "Move-\alpha" has no theoretical status in universal grammar and is only a descriptive device reduced to the general rule of 2, as we will see in section 4. Thus it would be inappropriate for him to use the term "trace" in the usual sense. Of course, it might be possible to interpret his use of the term as meaning a certain empty category generated in the base, e.g. the resumptive pro. But it seems to me that it is virtually impossible to assimilate a "trace" to pro in Koster's framework. Consider the following:

(19) \text{who}_i \text{ do you think } [t_i \text{ that he said } [t_i \text{ that he saw } t_j]]

(20) \text{who}_i \text{ do you believe } [\text{NP the claim } [S' t_i \text{ that Bill saw } t_j]]

With respect to 19, Koster notes that the traces in COMP are governed by each higher verb across S', and each trace is bound by t_i or \text{who}_i in COMP in its minimal domain S' (p. 159). Here the rightmost empty category (as well as the intermediate ones) is supposed to be a trace, since there is a
dynasty consisting of only V$s$. As for 20, Koster notes that whether or not the N $claim$ can govern across $S'$, the set of elements ($who_i$, $t_i$, $t_i$) does not form a chain because of the intervening NP node, and the only way to connect the rightmost $t_i$ to $who_i$ is to interpret it as $pro$. It seems to me, however, that this argument is possible only when one presupposes the existence of a trace which has a different syntactic property from $pro$.

The next problem is concerned with the theoretical or empirical status of the resumptive $pro$. I point out here that Koster's argument for the existence of $pro$ is untenable because of its circularity. If we ask why the rightmost $t_i$ is interpreted as $pro$ in 20, the answer will be that it is because the $t_i$ is connected to $who_i$ by the imperfect dynasty of 14. But the imperfect dynasty is just stipulated to connect $pro$ to its antecedent. Incidentally, the same will hold for traces. If we ask why the rightmost $t_i$ of 19 is a trace, the answer will be that it is because the $t_i$ is connected to $who_i$ by the perfect dynasty of 12. But the perfect dynasty is just stipulated to license traces. Even if we admit that the imperfect dynasty is unable to license a trace, there seems to be no reason to assume that the perfect dynasty, which has the ability to license a trace, cannot connect $pro$ to its antecedent.

In order to see a further spurious character of $pro$, let us now turn to the following examples.

(21) a. King Kong is a movie which you'll laugh yourself sick if you see it.
    b. the man who didn't know who had invited him
    c. All the students who the papers which they submitted were lousy I'm not going to allow to register next term.
    d. Palmer is a guy who for him to stay in school would be stupid.

In each example of 21, a lexical resumptive pronoun appears in a syntactic context which has been called an island. If the empty resumptive pronoun really exists in English, we will predict, as a first approximation, that it will be possible to replace each relevant pronoun of 21 with the resumptive $pro$, permitting to form constructions freely violating the island conditions. Usually, however, such replacement is impossible. With re-

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8 The parasitic gap is also supposed to be the resumptive $pro$ rather than a trace.
9 All the examples below, except 21b, are cited from Ross 1986: 261, and 21b is from page 155 of Koster's book.
spect to 21c and 21d, we might account for the impossibility by appealing to Koster's condition that besides being a member of an appropriate dynasty, the governor of an empty category must be a structural governor (pp. 151-2). In order for this account to be tenable, it is necessary to assume that Infl of 21c and for of 21d are not structural governors, though I am doubtful about this assumption. In the case of 21a and 21b, however, we cannot appeal to the same condition that would account for 21c and 21d. In these examples, the verbs see and invited undoubtedly can serve as structural governors. Although some possible accounts suggest themselves, it seems to me that it is impossible to solve this problem without recourse to an ad hoc stipulation.

3.3. Traces and PRO. As mentioned earlier, Koster admits PRO to be governed, contrary to what is claimed in Chomsky 1981. Thus it becomes difficult in Koster's theory to discriminate between a trace and PRO, since both of them appear in governed positions. Turning now to this problem, let us begin by considering the following examples (p. 110)

(22) a. John seems [e to go]  
b. John tries [e to go]

In Chomsky's 1981 theory, while the e of 22a is a properly governed trace, that of 22b is an ungoverned PRO. However, Koster argues that just like a trace, the e of 22b is bound in accord with the four properties of 3, and thus it is required to be governed by the matrix verb across S and S' in the structure of 23.

(23) John tries [s' [s e to go]]

Then he distinguishes two types of infinitival clauses: full clauses and reduced clauses.

(24) Full clauses

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S'  
COMP  S
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(25) Reduced clauses

```
S'  
S
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The difference between 24 and 25 is that while the former has the COMP node, the latter lacks it. Koster claims that the phenomenon of S'-deletion is in fact reduced to the absence of the COMP node, and the reduced

10 Since both Infl and for can assign structural Case, I can see no reason for excluding them from a class of structural governors. Incidentally, Koster suggests that for will be a proper governor of a trace (p. 241-2), and English will have a strong INFL which governs the subject position (p. 266).
clauses of type 25 are transparent for government from matrix verbs. In addition to control verbs of the *try*-type, raising predicates and *believe*-type verbs are also supposed to take reduced infinitival clauses as their complements. As examples of 24, Koster presents the following:

(26)  a. it is impossible [e to help Bill]
     b. John proposes to Mary [e to go to the movies]
     c. it is difficult for Mary [e to help Bill]
     d. John thinks [s it is impossible [s to shave himself]]

The empty category e of 26 does not exhibit the four properties of 3. This means that it is not governed by the matrix predicates because of the COMP node contained in the infinitival clauses.\(^\text{11}\) Then Koster concludes that the absence of the COMP node allows the four properties of 3 to appear not only in the antecedent-trace relation but also in the antecedent-PRO relation.

It is indeed true that PRO sometimes behaves just like a trace, as Koster claims. But it seems to me that his argument leaves some important problems unsolved. First, if the matrix verb *tries* governs the e in 22b, how can he account for the fact that a lexical NP or a wh-trace cannot appear in the subject position of the complement clause?

(27)  a. *John tried [Bill to go]
     b. *who did John try [t to go]

Since *try* is a transitive verb, it should be possible for it to assign Case to *Bill* or the trace in 27, just as in an exceptional Case-marking construction. Second, if PRO can be governed, how can Koster exclude it from the embedded subject position of 22a? One possible answer would be that since *seem* is not a control verb, PRO cannot have a controller in this position, in violation of a condition contained in control theory. But this will be no better than a stipulation that *seem* does not select PRO in its infinitival complement. Third, how can he preclude the possibility that PRO appears as an object of a transitive verb? It seems to me that these

\(^{11}\) That the infinitival complements of 26 contain the COMP node is demonstrated by the fact that the complementizer *for* can appear in the analogous constructions below.

(i)  a. it is impossible [for Mary to help Bill]
     b. John proposed to Mary [for Bill to go to the movies]
     c. it is difficult for Mary [for John to help Bill]
     d. John thinks it is impossible [for him to shave himself]

By contrast, *for* never appears in infinitival complements to *try*-type verbs, *believe*-type verbs, and raising predicates.
difficulties cannot be avoided without adding some complications to grammar, indicating that Koster fails to discriminate between a trace and PRO.

4. "Move-α" and syntactic representations

4.1. Syntactic movement. Koster states repeatedly that "Move-α" in fact does not exist and has no theoretical status in his framework. He claims that movement is more generally treated by the rule of 2 as a process of property sharing, together with binding and control. This rule makes it possible for an antecedent and dependent element to share properties such as Case, θ-role, referential index, or lexical material. Consider now the following (p. 70):

(28) a. John saw himself  b. John was arrested

Koster holds that many construals between related categories are essentially identification strategies. The anaphor himself of 28a is only incompletely identified because it lacks inherent referential index. Likewise, the passive subject John of 28b is insufficiently identified because it is in a position from which it cannot receive a θ-role. 28a and 28b are intended to show that these categories are fully identified by sharing the lacking properties with the categories having the relevant properties.

In a sense, movement might be seen as a mechanism for connecting a category to its D-structure position and transferring the properties of the position to the moved category. But Koster argues that movement is not the only transferring mechanism in grammar (p. 3).

(29) That book, I won't read it.

As for 29, he observes that it indicates that a pronoun like it can transfer a θ-role to an NP in a non-θ-position. Based on this observation, he claims that the transferring mechanism involved in 29 renders "Move-α" superfluous. Consider now the following:

(30) Which book did you read?

He notes that the trace of 30 behaves like the pronoun it of 29 in that it transfers properties to an NP which lacks them, and thus the burden of proof lies on those who argue for the necessity of "Move-α" in addition to the transferring mechanism involved in an example like 29.

Although Koster's argument is attractive, it seems to me that it is only half of the whole story about movement phenomena. Most of his argument is only concerned with movement of maximal projections, and he
practically neglects recent extensive investigation on head-movement by many linguists. Travis 1984, Koopman 1984, Emonds 1985, Chomsky 1986, Kemenade 1987, Baker 1988, and many others argue for the existence of head-movement. In particular, Chomsky 1986: 4 distinguishes two types of movement, i.e. substitution and adjunction, and claims that substitution has the following general properties.

(31) a. There is no movement to complement position.
    b. Only X0 can move to the head position.
    c. Only a maximal projection can move to the specifier position.
    d. Only minimal and maximal projections (X0 and X") are “visible” for the rule Move-α.

Assuming 31, he argues that a verb can move optionally from its base position to the position of I(nfl) and further to that of C(omp). While in present-day English V-movement is a marked phenomenon restricted to modals and auxiliary verbs have and be,12 it is a very general phenomenon in Germanic or Romanic languages; almost all verbs are subject to V-movement in the latter languages. I do not claim that it constitutes an argument against Koster's claim. However, I hold that those who deny movement cannot be exempted from the obligation to show how V-movement is accommodated in their framework.

Furthermore, it seems to me that Koster leaves unsolved many important problems which arise in connection with movement of maximal projections. Consider the following, for instance.

(32) a. Johni says that [it is clear that [[pictures of himselfi] are for sale]]
    b. *John says that it is clear that [[pictures of t] are for sale]
    c. *who does Mary say that it is clear that [pictures of t] are for sale]

It should be recalled that the empty category of 32b is not a trace but the resumptive pro under Koster's assumption, and its connection to a possible antecedent is subject to essentially the same domain extension condition as the anaphor himself of 32a. Thus some extra device is required to account for the difference of grammaticality between 32a and 32b. Koster accounts for the ungrammaticality of 32b by assuming that an

12 It seems to me that apart from modals, auxiliary have and be are usually classified as verbs in the literature. For arguments, see Akmajian et al. 1979.
empty category in a Case-marked position must not be A-bound locally or nonlocally (p. 240). But examples like 32c are inexplicable by his assumption, since the empty category is A-bar-bound in this case. If we assume the existence of Move-α and Subjacency, we can straightforwardly account for the ungrammaticality of 32c. It would be relevant here to point out that whenever a difference between an empty category and a lexical anaphor emerges, Koster almost always must have recourse to an extra grammatical device.

4.2. LF MOVEMENT. As opposed to many recent works, Koster denies the existence of LF movement as well as overt syntactic movement. He suggests that if LF movement really exists, we can make two predictions (p. 85). One is that it has the properties of "Move-α"; in particular, it is subject to the constraint of Subjacency. The other is that a gap created by LF movement has the same syntactic properties as a gap created by overt syntactic movement.

With respect to the first prediction, Huang 1982, among others, demonstrated that LF movement is different from overt Move-α in that the former is not constrained by Subjacency. Koster regards the difference as an indication of the fact that LF movement does not really exist in natural language. It seems to me, however, that we cannot deny the possibility that LF movement is subject to a condition different from that on an overt syntactic movement. It has very often been pointed out in the literature that a stylistic rule of PF component is not constrained by at least some general conditions on a purely syntactic rule. But no one denies the existence of stylistic rules. Given this possibility, it would not be unreasonable to conclude that the availability of LF movement is not undermined if it does not obey Subjacency. Turning now to the second prediction, let us consider the following examples (p. 235).

(33) a. who, left [despite which warning]
   b. *which warning, did he leave [despite ti]
Koster notes that the examples of 33 show the clearest difference between a gap and a wh-element in situ. He claims that the domain extension for a wh-element in situ is triggered by a weaker type of government than that for a gap: while the former is triggered by a lexical governor, the

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13 May 1977 originally argued that LF movement is subject to Subjacency, though he denies it in later works.
latter is triggered by a structural governor. It follows then that *despite* of 33 cannot serve as a structural governor, though it can serve as a lexical governor.\(^{14}\) I admit that Koster’s argument concerning examples like 33 has something to be taken into account by those who argue for the existence of LF movement. But why is it impossible to impose a condition on a gap at S-structure different from a condition on a gap at LF, just as Koster himself imposes the government condition on a gap different from that on a wh-element *in-situ*? I would like to claim that it is a rough-and-ready method to preclude this possibility *a priori*.

4.3. SYNTACTIC REPRESENTATIONS. In standard GB theory, at least three levels of syntactic representation have been distinguished: D-structure, S-structure (SS), and Logical Form (LF). To the three levels, some linguists have added NP-structure. However, Koster suggests that D-structure has lost its significance since the advent of trace theory. Needless to say, this suggestion has a close relation to his view that “Move-\(a\)” is merely a descriptive term. He is also critical about LF as a syntactic representation. This in turn is closely related to his view that LF movement does not exist. In addition, NP-structure also is rejected as spurious. Thus S-structure is directly generated from Lexical Structure (LS), without passing through D-structure or NP-structure. Since Koster presumes that phonetic form (PF) is uncontroversial, the following picture of syntactic derivation emerges (p. 371).

\[
\begin{array}{c}
\text{LS} \\
\Downarrow \\
\text{SS} \\
\Downarrow \\
\text{PF}
\end{array}
\]

It would be in order here to notice that 34 is similar to the theoretical framework of lexical-functional grammar in some respects. First, S-structure is the only level of syntactic representation. Second, it is directly generated from Lexical Structure without mediation of transformational rules. Third, both Koster’s theory and lexical-functional grammar are under the critical influence of Chomsky’s GB theory. Now I

\(^{14}\) Since *despite* functions as a preposition, I cannot see why it is not a structural governor. As mentioned earlier, other prepositions are structural governors in Koster’s theory.
admit that Koster's arguments against D-structure and LF are very interesting and suggestive. But I will show below that they are also not free from criticism.

First of all, I would like to emphasize that if we do not deny the existence of head movement, it will never be possible to dispense with a level of syntactic representation akin to D-structure. Since Germanic and Romanic verbs and English auxiliaries appear in positions variable according to sentence types such as negatives, interrogatives and declaratives, we need an abstract level of representation, i.e. D-structure, where we can capture a generalization bearing on conditions on lexical insertions of the verbs and auxiliaries.

Koster summarizes Chomsky's 1981 arguments for D-structure (p. 47) and argues against each of them. Here I will take up his argument against Chomsky's proposal bearing on tough-constructions.

(35)  
(a) John is easy to please.  
(b) It is easy to please John.

(36)  
(a) John is easy [PRO₁ [PRO to please t₁]]  
(b) John is [[ADJ easy to please] t₁]

In Chomsky's GB framework, 35a is required to have the structure of 36a, with the matrix subject John base-generated in that position. He first assumes that in 36a easy assigns a θ-role to John. But this is at variance with the fact that the pleonastic it can appear as a subject of easy, as in 35b. To overcome this paradox, Chomsky suggests that the adjective easy and the portion of the complement to the left of the trace should be reanalyzed as a complex adjective, as in 36b. The trace of 36b is in a θ-position, and thus it can transmit its θ-role to the antecedent John. Given this, it is no longer required to assume that the matrix subject position is a θ-position, permitting it to appear there. This means that 35a is analogous to a construction formed by Move-α in the way that the θ-role is assigned to the matrix subject, but different in the way that it is generated. Thus an idiom chunk cannot appear in the matrix subject position of a tough-construction, as it can appear in the corresponding position of a construction formed by Move-α.

(37)  
(a) *Good care is hard to take t of the orphans.  
(b) Good care seems t to have been taken t of the orphans.

But a second paradox arises here: if the matrix subject position is not a θ-position, the θ-criterion will not allow John of 35a to be inserted in that position at D-structure. Chomsky suggests that the only way to avoid this paradox is to assume that the lexical insertion of John takes place at
S-structure. Koster interprets this as an argument for D-structure (and S-structure), since it confirms that D-structure is needed as the structure where at least part of lexical insertions takes place.

Arguing against Chomsky, Koster claims that 35a does not lend support to D-structure, and it is unproblematic for his approach. In his approach, John is inserted at S-structure like all other lexical items and assigned a $\theta$-role by the predicate, and the $\theta$-role is shared with the trace of 36a since there is a chain of construal between the trace and John. However, I find that Koster’s approach raise more problems than it is supposed to solve. First, if the predicate assigns a $\theta$-role to John in 36a, how can he account for the fact that the pleonastic it can appear in the matrix subject position. It is unclear whether Koster adopts the reanalysis that Chomsky proposes with 36b. If it is adopted, it is also unclear how the reanalysis is incorporated into his framework. Second, why is it necessary for the trace of 36a to share the $\theta$-role with John despite the fact that both of them are in $\theta$-positions? Third, how can Koster account for the difference of grammaticality between 37a and 37b? It should be recalled that both the examples of 37 are generated in the given forms by lexical insertions at S-structure without movement rules.

Let us now turn to Koster’s arguments against LF. He first notes that he is criticizing LF as a notion of syntax and saying nothing about logic or semantics in the sense of logicians. It seems to me, however, that he is virtually making use of LF as a syntactic representation when he states that the Bounding Condition plays a role in the grammar of wh-elements in situ. He further states that the Bounding Condition can have either S or S' as a bounding node, and in English S' is the bounding node for a moved wh-phrase, while S is the bounding node for a wh-phrase in situ.15 If the rule of scope assignment applies to S-structure, the resultant representation of scope will have to include syntactic categories such as S or S', since the scope is represented on the basis of such syntactic categories. It seems to me that Koster cannot do without a level of logical form which has much similarity to S-structure.

I will now make a brief comment on Koster’s arguments against the level of NP-structure proposed by Riemsdijk and Williams 1981. Arguing

15 Koster argues that this difference of scope constitutes an argument against the identification of overt Wh-movement with the process for determining the scope of wh-elements in situ.
against them, he states that all the arguments for NP-structure provided by Riemsdijk and Williams are of 'elegance' type: certain facts are explained in the most elegant and revealing way if one assumes the existence of NP-structure. I cannot see why such type of arguments should be rejected in an empirical study of language. If Koster's objection is sustained, it will become very difficult to establish the existence of any kind of syntactic representations. It will be relevant here to note that S-structure, the level accepted in his theory, has been established at least partially by what he calls the 'elegance' type of arguments.

5. PSEUDO-PASSIVES WITHOUT REANALYSIS. Koster argues that a pseudo-passive like 38 is derived without the rule of reanalysis which has been discussed extensively in many recent studies, including Hornstein and Weinberg 1981 especially.

(38) [s' Mary was looked [pp at t]] (=16a)

As we saw in the examples of 16, there are two types of preposition stranding in present-day English, and under Koster's hypothesis both of them are dealt with in essentially the same way, i.e. in terms of the dynasty of 13.

But a problem arises in connection with the contrast of grammaticality between examples like 39 and 40.16

(39) a. *Everything was paid twice for.
   b. *Your books were gone most thoroughly over.
   c. *Her bag was always being rummaged around so slowly in.

(40) a. That's something that I would have paid twice for.
   b. These are the books that we have gone most thoroughly over.
   c. That's the bag that I saw her rummaging around so slowly in.

The examples of 40 indicate that a preposition can be stranded even if reanalysis is not allowed; since there occurs an adverb between a verb and a preposition in each example of 40, it will prevent them from being reanalyzed into a complex verb. Given this, it will be possible to regard the ungrammaticality of 39 as an indication of the fact that a pseudo-passive cannot be formed without reanalysis, contrary to what Koster claims. Thus I would like to claim here that even if Koster's theory of

16 The examples of 39 and 40 are cited from Bresnan 1982b.
dynasty-controlled domain extension is correct, some kind of reanalysis is required at least in the case of pseudo-passives.\(^{17}\)

6. **Summary.** Although the fundamental ideas provided in this book are very suggestive, I have shown that it is necessary to overcome several serious problems if they are to be sustained as general principles of universal grammar. I showed in section 3 that it is necessary to make a more careful definition of empty categories, contextual or not. In particular, the demarcation between a trace and *pro* involves circularity, and the discrimination between a trace and PRO is made vague in a misleading way. In addition, there is no way to exclude the possibility that the domain for *pro* is extended by the dynasty condition for a trace. I next claimed in section 4 that whether or not Move-\(a\) really exists depends not only on the availability of movement of maximal projections but also on that of movement of minimal projections, but Koster practically neglects the latter movement. Correspondingly, I also claimed that if we cannot abolish Move-\(a\) entirely, we will inevitably be committed to the assumption of standard GB theory that D-structure in fact exists as a separate level of syntactic representation. With respect to LF and NP-structure, I pointed out that Koster’s arguments against them are not so complete as he claims. Lastly, I showed in section 5 that pseudo-passives cannot be derived without postulating a reanalysis rule. I consider that whether Koster’s theory is sustainable as a whole depends at least partially on what solutions he gives to these problems.

I hold that the Bounding Condition and the dynasty enable us to gain a significant insight into various linguistic phenomena in natural languages, regardless of SVO or SOV languages. Insofar as I can see, these principles are on the right track of searching for a real theory of universal grammar. I venture to speculate here that their essentials are sustainable, regardless of what answers Koster gives to the problems summarized just above.

\(^{17}\) It will be relevant here to recall that certain linguists, including Riemsdijk 1978, have proposed to restrict the rule of reanalysis to sequences of items which could have been realized as possible semantic words. For instance, *talk about, take advantage of,* and *keep tabs on* mean ‘discuss’, ‘exploit’, and ‘watch (closely)’, respectively. While pseudo-passives are formed only from these kinds of sequences, preposition stranding by Wh-movement is possible beyond the sequences which could have been realized as single words.
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