

NP-Structure and the ECP
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0. Introduction

The study of the Empty Category Principle (ECP) has enjoyed a lot of attention within the Extended Standard Theory tradition. Since the Pisa workshop of April 1979, a number of modifications have been proposed and the principle, in one or another form, has been brought to bear on a considerable range of phenomena. See particularly Kayne (1981) and Jaeggli (1980). In 1984, Lasnik and Saito (L&S) propose their formulation of the ECP. Their ECP applies not only at LF, but also at S-structure. The purpose of this article is to show that their ECP also applies at NP-structure, hence at all syntactic levels apart from D-structure.

1. L&S's (1984) ECP

Their ECP has two parts. First, it indicates under what circumstances proper government obtains. Second, it filters out representations containing traces for which proper government did not obtain. The first part is regarded as the assignment of a feature, [+ γ], under certain circumstances, and the assignment of [- γ] otherwise.

(1) $t \rightarrow$ [+ γ] when lexically governed or antecedent-governed.

$t \rightarrow$ [- γ] otherwise.

The second part is regarded as the following filter:

(2) * t
[- γ]

They formulate the notion "antecedent government" as follows:

(3) α antecedent-governs β if

a. α and β are coindexed

b. α c-commands β

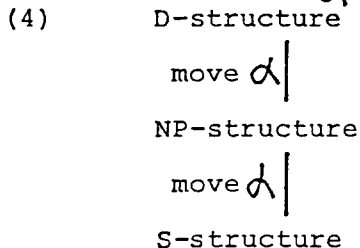
c. there is no γ (γ an NP or S') such that α c-commands γ and γ dominates β , unless β is the head of γ .

Turning to the nature of "lexical government", it involves government by a lexical category X^0 . It obtains only when there is a relationship between the governor and the governee, namely, the relation of θ -role assignment and that of Case assignment.

2. NP-Structure

Riemsdijk and Williams (1981) and Tanaka (1983) argue for the existence of a level of representation called NP-struct-

ture. NP-structure is derived from D-structure by means of move α , and S-structure is derived from NP-structure by another round of move α .



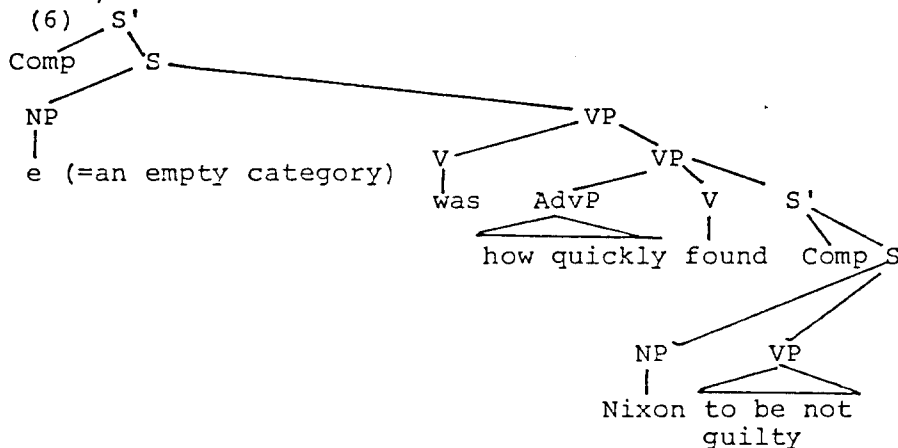
3. NP-Structure and L&S's ECP

In this section, I will demonstrate that L&S's ECP must apply at NP-structure.

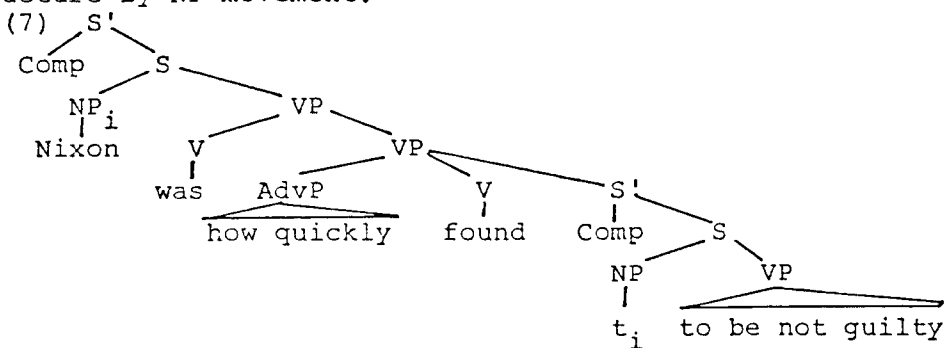
Consider first the following sentence:

(5) How quickly found to be not guilty Nixon was!

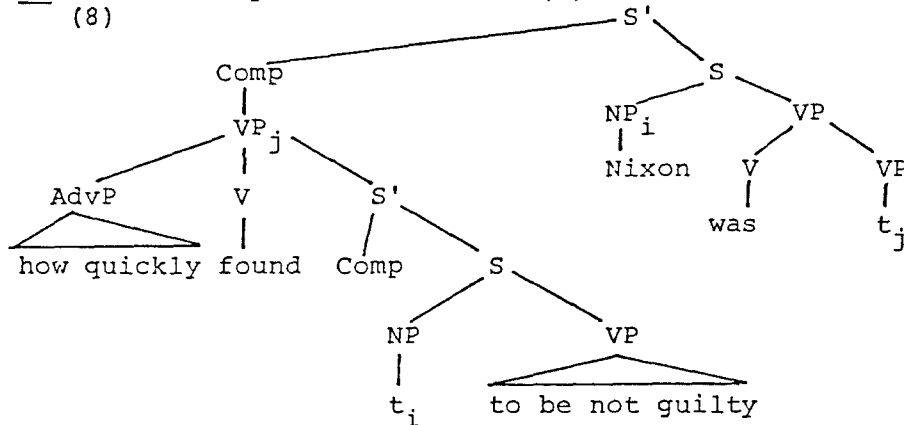
The D-structure underlying (5) is (6) (irrelevant details omitted):



NP-structure as in (7) derives from the underlying D-structure by NP-movement.



Wh-movement maps the structure (7) to S-structure (8).
(8)



L&S argued that γ -assignment obligatorily take place at S-structure and at LF. At each level, $[+\gamma]$ is assigned to a trace that is properly governed, and $[-\gamma]$ is assigned to a trace that is not properly governed. The one exception, for both $[+\gamma]$ - and $[-\gamma]$ -assignment, is the trace of nonargument. They showed that such a trace is not a target of γ -assignment at all at S-structure, but only at LF.

In (7), the trace of Nixon is an argument trace and hence must receive the γ -feature at S-structure. Consider the S-structure in (8). Here, the trace of Nixon is not antecedent-governed, since the c-command requirement, (3b), is not satisfied. It is not lexically governed, either. Recall now that L&S's lexical government obtains only when there is a relationship between the governor and the governee, namely, the relation of θ -role assignment or that of Case assignment. The trace of Nixon is not Case-marked by the higher predicate, since a passive participle does not assign Case. It is not θ -marked by the higher predicate, either, since it receives a θ -role from the lower VP. Hence, the trace of Nixon is necessarily marked $[-\gamma]$. Thus, the trace violates the ECP, and (5) is incorrectly ruled out.

Consider now the NP-structure representation of sentence (5), namely (7). The trace of NP-movement of Nixon in (7) can not be lexically governed, since lexical government obtains only when there is a relationship between the governor and the governee, namely, the relation of θ -role assignment or that of Case assignment. However, this trace is antecedent-governed. The verb found triggers S'-transparency. Thus, at NP-structure no S'-node intervenes between Nixon and the trace in the embedded subject position. Both of the requirements (3a) and (3b) are also satisfied in (7).

Consequently, the trace of Nixon can receive the feature [+Y] from its antecedent, as desired. This leads us to the hypothesis that Y-assignment must apply at NP-structure. If not, the ECP incorrectly rules out the grammatical sentence (5).

Consider next the following sentence:

(9) How likely to win is he?

The D-structure is (10).

(10) [_{NP} e] is how likely [he to win]

(11) derives from the D-structure by NP-movement.

(11) he_i is how likely [t_i to win]

(11) is the NP-structure underlying (9). Wh-movement maps the NP-structure (11) to (12).

(12) [how likely [t_i to win]]_j is he_i t_j

(12) is the S-structure underlying (9).

In the NP-structure (11), t_i is not lexically governed, since in this case the embedded subject position is neither Case-marked nor θ-marked by the higher predicate. Note that an adjective is not a Case-assigner. But t_i is antecedent-governed. The adjective likely triggers S'_i-transparency. Thus, at NP-structure no S'-node intervenes between he and the trace in the embedded subject position. The requirements (a) and (b) in (5) are also satisfied, since he and the trace are coindexed and the former c-commands the latter.

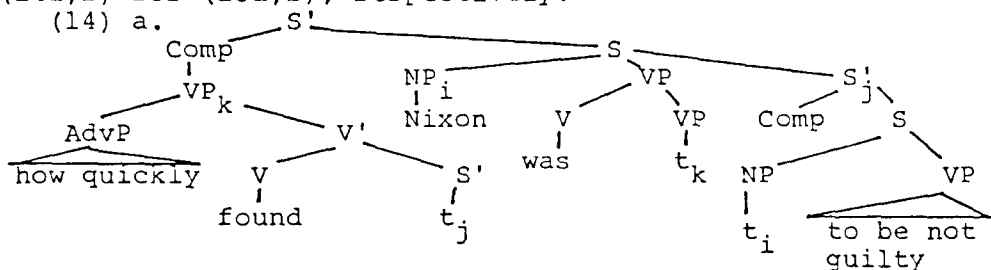
In the S-structure (12), on the other hand, t_i is neither lexically governed nor antecedent-governed. t_i is not antecedent-governed, since he does not c-command it. t_i is not lexically governed, since it is neither Case-marked nor θ-marked by the higher predicate. Hence, t_i will be marked [-Y] and the grammatical sentence (9) will ultimately be filtered out. This leads us to conclude that an argument trace receives a Y-feature at NP-structure.

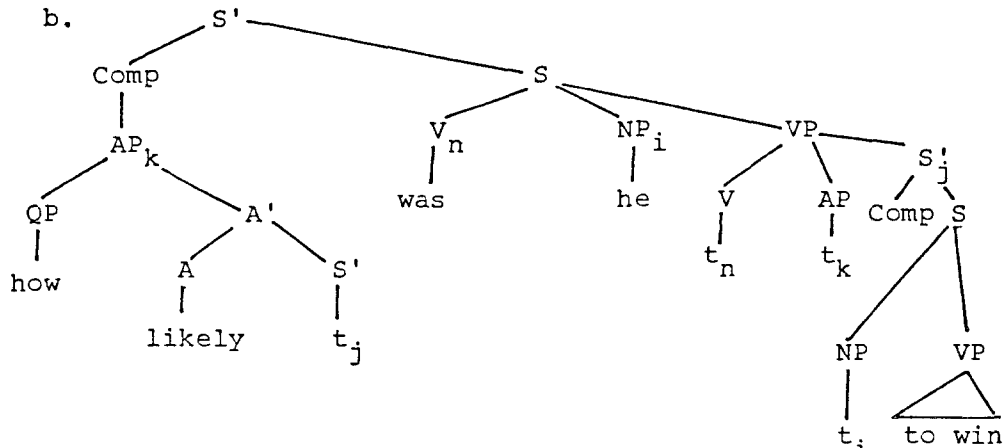
Consider now the following sentences:

(13)a. How quickly found Nixon was to be not guilty!

b. How likely is he to win?

At the level of S-structure, we have the representations (14a,b) for (13a,b), respectively:





(Whether the extraposed S' is adjoined to S or VP is irrelevant here.)

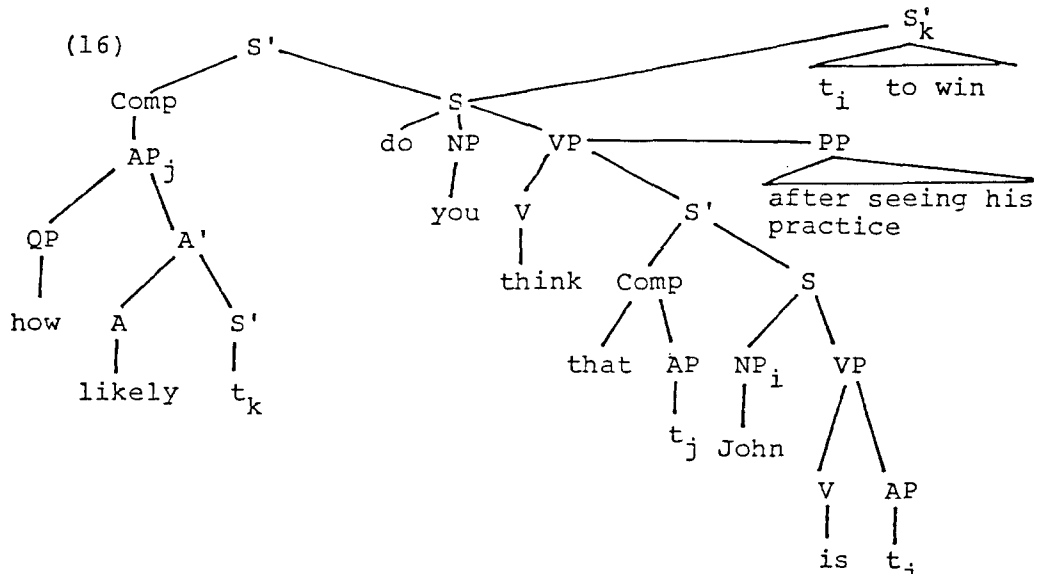
In (14b), the trace of he is not lexically governed by likely. Hence, it needs to be antecedent-governed. Is it antecedent-governed? As already noted, S' is an absolute barrier to antecedent government in the sense that only the head of S' can be antecedent-governed by an element outside this S'. S'-transparency is not available in (14b), since S' is outside the domain of likely; hence t_i is not antecedent-governed, yielding the false prediction that (13b) is ungrammatical. Turning to (14a), here again, t_i is not lexically governed nor antecedent-governed, for the reasons just discussed.

Let us now look at NP-structure. The NP-structure of (13a,b) are (7) and (11), respectively. We have already established that both in (7) and (11), t_i is antecedent-governed. Hence, we have to conclude that the ECP applies at NP-structure.

Consider finally the following sentence:

(15) How likely do you think that John is after seeing his practice to win?

(15) has the S-structure representation (16).



Since the trace t_i in (16) is an argument trace, it must be properly governedⁱ at S-structure, because the sentence (15) is grammatical. However, t_i is neither lexically governed nor antecedent-governed in (16). t_i is not lexically governed, since likely neither assignsⁱ Case nor θ -marks t_i . t_i is not antecedent-governed, since the c-command requirement is not satisfied and S' intervenes between the governor and the governee. Thus, the grammatical sentence (15) is ruled out as a violation of the ECP.

Let us now turn to NP-structure. The NP-structure representation of (15) is identical to (11) in relevant respects. We have already established that in (11) t_i is antecedent-governed. Hence, if we assume that L&S's ECP applies at NP-structure, we can explain the grammaticality of (15).

4. Conclusion

Our concern has been L&S's ECP. We concluded that L&S's ECP must apply not only at S-structure and at LF, but also at NP-structure. Thus, schematically, the organization of the grammar should be as follows:

- (17) D-structure
 Affect ϕ
 Assign γ
- NP-structure
 Affect ϕ
 Assign γ
- S-structure
 Affect ϕ
 Assign γ
- LF

References

- Chomsky, N. (1981) Lectures on Government and Binding, Foris, Dordrecht.
- Jaeggli, O. (1980) On Some Phonologically-Null Elements in Syntax, Doctoral dissertation, MIT, Cambridge, Massachusetts.
- Kayne, R. (1981) "ECP Extensions", Linguistic Inquiry 12, 93-133.
- Lasnik, H. and M. Saito (1984) "On the Nature of Proper Government," Linguistic Inquiry 15, 235-289.
- Tanaka, S. (1983) "NP-Structure and Principles", Linguistic Analysis 11, 1-26.
- Van Riemsdijk, H. and E. Williams (1981) "NP-Structure", Linguistic Review 1, 171-218.