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Eric Wehrli  
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ON THEMATIC ROLES AND EXCEPTIONAL CASE MARKING

ERIC WEHRLI

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In EST, sentences such as (1) and (2) are usually given different syntactic structures:

- (1) John persuaded Bill to leave.
- (2) John expected Bill to leave.

In (1), Bill is the direct object of persuade and the controller of the empty subject of the infinitival clause, whereas in (2) the matrix verb is intransitive and Bill is the subject of the embedded clause. This structural distinction, which is motivated by semantic considerations (i.e. the well-known difference in interpretation), also falls out from Chomsky's recent "theta"-criterion (henceforth TC), which is stated as follows:

"A reasonable condition on D-structures, implicit in the foregoing, is that every T-role determined ultimately by the lexical entries in the D-structure must be filled by some lexical expression, and that each lexical expression must fill exactly one T-role, where we take a "lexical expression" to be a major category (NP, S, etc.) that contains lexical elements and is not an "idiom chunk"."

(Chomsky, 1980c:14)

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In other words, according to the TC, lexical expressions and T-positions are in a one to one correspondance at D-structures, where T-positions are defined as positions that are assigned T-roles as specified by lexical information. Because thematic roles are assigned by verbs to their complements (including the subject of the predicate) as specified in their lexical entries, it follows from the TC that Bill in (2) must be generated in the subject position of the infinitival clause since it gets a thematic role from the infinitival verb. If it were generated in the object position of expect it would be in a non T-position (i.e. a position that is not assigned a T-role) at the level of D-structure and therefore the structure would be ruled out by the TC.

Prima facie, this analysis seems to be in contradiction with Case theory for the following reason: roughly, Case theory requires (i) that every lexical N bear a Case and (ii) that Case be assigned by verbs and prepositions to their direct object, and by INFL to the subject of a tensed sentence. It follows from Case theory that the subject of an infinitival clause does not get a Case, and therefore, cannot be lexical.

As a solution to this problem, Chomsky(1980a,b,c) introduced the Exceptional Case Marking (ECM), a marked device -- in the unmarked case an infinitival clause has no overt lexical subject -- that enables verbs such as expect or believe to assign a Case to the subject of an embedded infinitival clause. More precisely ECM is described as follows:  $\bar{S}$  but not  $S$  is a barrier for government. Some verbs are lexically marked for  $\bar{S}$  deletion, i.e. govern the embedded subject position. If such a verb is transitive it will assign objective Case to the subject of the infinitive. If the verb is not transitive, the embedded subject position does not get a Case. Since it is governed, it can't be a controlled position, and therefore, in order to get a grammatical sentence, this NP must move to a position where it can get a Case. This is typically the case with "raising"-verbs.

However, a closer examination of the ECM mechanism reveals certain conceptual problems as well as very unintuitive features that cast doubts on the plausibility of this approach. To give some examples:

1. The whole mechanism relies on the unappealing rule of  $\bar{S}$  deletion, a lexically governed rule that is sometimes optional (e.g. John expected (Bill) to leave), sometimes obligatory (e.g. John believed \*(Bill) to be a fool). But notice the following problem: if the lexical entry of believe is marked for obligatory  $\bar{S}$ -deletion then we would expect  $\bar{S}$  to get deleted in every case, including when  $S$  is tensed. This is obviously too strong, for at least two reasons: first, the complementizer that does appear in such structures (e.g. John believed that he is a fool) and second a case conflict would result from  $\bar{S}$ -deletion in a tensed clause, the embedded subject being governed both by INFL and by the matrix verb. Suppose now that the lexical entry of believe is marked for optional  $\bar{S}$ -deletion. Assuming that Case conflict makes a structure

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ungrammatical, we would get the right result when S is tensed: if  $\bar{S}$ -deletion applies, a Case conflict results and the sentence is ruled out. However, we now have a problem when S is infinitival. If  $\bar{S}$ -deletion is optional, we would expect to get structures where the embedded subject is PRO (i.e. ungoverned). Grammatical with verbs like expect, such sentences are impossible with believe (i.e. \*John believed to be a fool). Clearly, something more need be said. It is not enough to mark lexical entries for  $\bar{S}$ -deletion, it must be added that  $\bar{S}$ -deletion can only apply when S is infinitive.

2. It follows from ECM that Cases can be assigned over S, but not over  $\bar{S}$ . Why should it be so? Notice that according to the government-binding theory, S and not  $\bar{S}$  is governing category, which means that a governing category is not a barrier to Case assignment. Although this may turn out to be correct, we would like to see some independent evidence. In the ideal case, we would like properties like "governing category", "barrier to Case assignment", "maximal projection", etc. to converge. One might think that this is indeed the case here, since the barrier to Case assignment is  $\bar{S}$ , i.e. the maximal projection of S. However, a closer examination reveals that the main reason to postulate S rather than  $\bar{S}$  as governing category is in fact ECM. It is easy to see why: if  $\bar{S}$  were the governing category, structures containing one embedded clause would have two governing categories if  $\bar{S}$ -deletion does not apply, but only one if it applies. In other words, the theory would predict the grammaticality of \*John<sub>i</sub> believes Jane to love himself<sub>j</sub>.

3. Another prediction of the ECM mechanism, which incidentally contrasts sharply with earlier views, is that NP trace and PRO are different elements having very different properties (i.e. a trace is always governed, PRO is never governed). PRO is viewed as a pronoun lacking phonetic realization (i.e. it has the features for gender, number, etc.) whereas trace is an empty element. If this were the case, one would expect some empirical differences to follow from this contrast. For example, agreement should apply with PRO as it applies with other pronouns but not with trace (since trace does not have features for gender and number). As mentioned by Howard Lasnik, this is not the case. Agreement (a clause-bound phenomenon) appears in control, raising and wh constructions:

- (3)a. John tried to become a doctor (\*doctors).
- b. The men tried to become doctors (\*a doctor).
- (4)a. John seems to be a good doctor (\*doctors).
- b. The men seem to be good doctors (\*a doctor).
- (5)a. Which guy do you want to become a doctor (\*doctors).
- b. Which guys do you want to become doctors (\*a doctor).

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Thus, as far as agreement is concerned, there does not seem to be any reason to postulate two different abstract elements. As for the very few cases where PRO and NP trace seem to behave differently, we will see below that the contrast is in fact to be attributed to the different properties of the antecedent of PRO and NP trace, rather than to PRO and trace.

4. The principle that underlies and motivates the ECM -- i.e. the TC given above -- appears to be too strong. Thus, besides the fact that it is very unclear how idiomatic expressions should be treated, the one to one correspondance between lexical expressions and T-roles is plainly violated in several cases, including clitic doubling (in Spanish) and left dislocation in French, where two distinct lexical elements share the same T-role. More generally the TC is bound to be too strong in all cases where a lexical item is base generated in a non T-position. Tough-movement and topicalization are examples of constructions exhibiting this property. As an example, consider (6a), whose structure must be (at least) something like (6b):

- (6)a. John is easy to please.  
 b. [<sub>S</sub> John is easy [<sub>S</sub> PRO to please NP]]

The presence of both PRO and NP follows from the projection principle (i.e. roughly, from the lexical information that please takes a T-subject and a direct object). The problem with a structure like (6b) is the following: because of the Binding theory, the relation between John and NP cannot be move NP, i.e. NP cannot be a trace<sup>1</sup>. On the other hand, if John is base generated in its surface position, and this seems to be the only alternative, the D-structure will contain a lexical expression which is not in a T-position, in violation of the TC. The treatment of non thematic PROs as in (7) appears also to be somewhat problematic with regard to the TC:

- (7) Il pleut sans PRO neiger.  
 'it rains without snowing'

If D-structure is the level where only thematic NPs appear -- and this is a logical consequence of the TC -- then non thematic PROs should not be base generated, but rather be inserted by a later rule, just like pleonastic (i.e. expletive it, there, etc.). This amounts to making a division between two different kinds of PROs. On the one hand, PRO in T-position and therefore base generated, on the other hand, PRO in a non T-position inserted later. One fact seems to argue against such a division: if there are expletive PROs then why do we not have sentences like (8):

- (8)a. \*PRO to rain would be awful.  
 b. \*PRO pleuvoir est nécessaire.

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Notice that if we assume that there is no inherent expletive PRO, that is to say that PRO is genuinely a lexical expression and therefore must be base generated but that it loses its lexical expression status when controlled by an expletive element, then (8) is no longer a problem. In both cases PRO is not controlled, therefore it still has its lexical expression status and should violate the TC. Notice, however, that this explanation supposes that some PRO appear in non T-position at the level of D-structure, which plainly contradicts Chomsky's TC. This explanation also requires that the TC applies after control, which means that the TC cannot be viewed primarily as a well-formedness condition on D-structures.

5. Our last example concerns the scope of quantifiers. The problem is the following: in both (9) and (10) there is a contrast between a and b with respect to the scope of the quantifier:

- (9)a. John believes a spy to be here.  
 b. John believes a spy is here.

- (10)a. John expected someone to ask a question.  
 b. John expected someone would ask a question.

Clearly, (9a) but not (9b) can have the wide scope interpretation (i.e. [Ex, x a spy] John believes x is in the room). To illustrate this contrast, suppose the following situation, where John knows that Bill is a spy and furthermore John believes that Bill is here. In order to describe such a situation, one can use (9a), but certainly not (9b). The same thing happens in (10). Again, the wide scope reading is only available with (10a). Under this reading, the sentence means that John expected a question from a particular person, let's say Bill. If we assume, following May (1977) and Higginbotham (class lecture), the existence of some rule of quantifier raising (henceforth QR) that adjoins a Q-phrase to S, what these contrasts mean is that in the a but not in the b sentences, the Q-phrase can be adjoined to the matrix S. Now, it is not clear at all how such facts can be accounted for in a ECM analysis. In fact, since it assigns exactly the same structure to all the above examples, an ECM analysis seems, without further stipulation, to be bound to make the wrong prediction that (9a) and (9b), as well as (10a) and (10b), should have the same behaviour with respect to QR. Moreover, it seems to be the case that the rule of quantifier raising is generally clause-bound; that is, a Q-phrase is adjoined to the first dominating S. Given this, if the Q-phrase were in the object position of the matrix verb when QR applies, as would predict a raising-to-object analysis or a variant of it such as the one we will suggest below, the problem would simply not arise. Contrasts such as the one above is exactly what such analyses would in fact predict. Notice furthermore that the narrow reading for (9a) and (10a) would still be available since QR is optional.

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It is our opinion that all these facts strongly suggest that the "theta" criterion and ECM should be carefully re-examined.

The "theta" criterion revisited. Intuitively, the TC is a condition on the relation between lexical expressions (restricted in this discussion to NPs) and T-roles. As we have seen above, Chomsky's version of the TC assumes a biunique relation between lexical expressions and T-roles at the level of D-structure. Our claim is that such a requirement is too strong: it seems reasonable to assume that every T-role must be assigned to an NP (this in fact follows from the projection principle), but it is certainly not true that every lexical expression must be in a T-position at the level of D-structure. As mentioned above, this is plainly false for topics, subjects of tough-movement constructions, idioms, pleonastic elements such as it and there in sentences like it rains and there seems to be some rain coming up. Also, we don't see any reason a priori why the TC should primarily be a condition on D-structures. We would rather think that such a condition should be satisfied at any level of the derivation.

Let's start with the following question: which NPs undergo the TC? It seems quite obvious that neither idiom chunks nor pleonastic elements do. Let us assume that this is due to inherent properties in the case of pleonastic elements, and to some idiom rules in the case of idioms (we can think of idioms as being listed as such in the lexicon, and as such are frozen: in kick the bucket, the NP does not refer to any "bucket", cannot be put in the plural, cannot have another determiner, etc.). As for other cases of NPs we have: lexical NPs, PROs and wh-traces. For reasons that will become clear below, we will assume that NP trace is not distinct from PRO. Since it can be shown that in most cases those three types of NPs do appear in T-position, our first hypothesis will be that exactly these NPs, referred to henceforth as l-expressions, are subject to the TC, rephrased as followed:

- (11) Revised "theta"-criterion (RTC):  
 an l-expression is (i) in a T-position or (ii) is  
 linked to a T-position via (a) control or (b)  
 operator-binding.

The first case of the RTC is trivial and corresponds roughly to the TC. The two subparts of (ii) appear as a relaxation of the TC, dealing with cases where an l-expression is not in a T-position, and is designed to overcome the difficulties noted earlier. Case (iib) says that an l-expression is well-formed with respect to the RTC if it operator-binds a T-position. Roughly, "operator-binding" is a more general term for wh-interpretation, including topics and perhaps also subjects of tough-movement constructions. Basically, what (iib) means is that a l-expression not in a T-position is nevertheless well-formed if it is coindexed with a variable. As a typical example of (iib) we can think of a sentence after wh-movement has applied, that has the following

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structure:

(12) Who<sub>i</sub> did Bill see [<sub>NP</sub>e]<sub>i</sub>.

In (12), the l-expression who is in COMP position, which is not a T-position. The sentence is nevertheless well-formed since who is coindexed to a T-position in the sense of (iib).

Let's turn now to subcase (iia) of (11). Like (iib), it concerns l-expressions that are not in a T-position and states that such l-expressions are well-formed if they are linked to a T-position via the rule of control, where control is taken in a broad sense including the case of a chain of control, i.e. a chain  $A_1, A_2, \dots, A_n$  of elements where  $A_1$  controls  $A_2$ ,  $A_2$  controls  $A_3$ , etc. and only  $A_n$  is in a T-position.<sup>1</sup> What are the motivations for (11iia)? The claim here is that an l-expression does not have to be in a T-position (at any level of the derivation) to satisfy the "theta" criterion, under the proviso that it controls a T-position. This is the kind of relaxation of the TC that enables us to account for the ECM phenomenon. Thus, given the clause (iia), we can now assign sentence (2) the following structure:

(13) [<sub>S</sub> John expected Bill [<sub>S</sub> PRO to leave]]

Notice that this structure is exactly parallel to the one we assign to a persuade type sentence:

(14) [<sub>S</sub> John persuaded Bill [<sub>S</sub> PRO to leave]]

In both cases, Bill is the direct object of the matrix verb and the controller of the embedded subject. The claim is that the difference of interpretation between the two sentences derives from the different patterns of T-roles. Bill gets a T-role from the matrix verb in (14) but not in (13). However, (13) is grammatical since Bill controls the subject position of the embedded clause, which is a thematic position.

Under this account, verbs such as expect and believe are still considered as exceptional, having the marked property of subcategorizing for a direct NP bereft of T-role.

If the analysis is correct, that is if the theory allows for some NP in object position to be deprived of T-roles as we suggest for handling the believe case, it would be very surprising if such a property were restricted to object position. Rather we would expect it to be a general (though marked) property. Thus, in a language that exhibits this property, like English, the prediction is that we should also find non T-controller in subject position and perhaps also in PPs (the latter is much less likely since control from PP is not very common). This prediction is in fact borne out. Non T-controllers in subject position are common in many languages. They correspond to the so-called "raising to subject" constructions. To illustrate this point, suppose that we assign



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raising constructions the structure given in (15), that is the structure of a control construction, as the one in (16) for instance:

(15) John tends [<sub>S</sub> PRO to fall asleep]

(16) John tries [<sub>S</sub> PRO to fall asleep]

In both sentences John obligatorily controls PRO. As in (13)-(14), the difference of interpretation between (15) and (16) comes to a difference in thematic patterns, i.e. try assigns a T-role to its subject, tend does not. Whereas (15) would be ungrammatical under Chomsky's TC, it is a perfectly well-formed structure under the RTC, since John, an I-expression in a non T-position, controls a T-position.

Thus, within our theory, raising to subject and raising to object constructions are treated in a completely parallel manner. Their common denominator is to contain a non T-element in subject, or in object position. That this element obligatorily controls a T-position is imposed by the RTC. Under such a view, raising is nothing but a particular case of control, where the controller is bereft of T-role. In other words, as foreseen by Koster(1978) and in a somewhat different framework Bresnan(1978) and Wehrli(1980), a theory assuming the RTC does not require a movement analysis for raising. It also follows from such an analysis that PRO and trace are identical. Their apparent dissimilarity comes from the fact that the antecedent of a trace is always in a non T-position, whereas the antecedent of PRO is typically in a T-position. If so, how can we account for the apparently different behaviour of PRO and trace?

Let's take an example: according to Chomsky (1980c:27) the contrast between (17) and (18) illustrates a fundamental distinction between NP trace and PRO that comes down to the distinction of movement versus control. Thus, the ungrammaticality of (18) is due to the fact that the movement of they from the subject position of the infinitival clause to the matrix subject position violates Subjacency. On the other hand, since the relation between they and NP in (17) is not via movement but via control, which does not obey subjacency, the sentence is fine.

(17) They thought that NP to help each other would be difficult.

(18) \*They seemed that NP to help each other would be difficult.

Notice first of all that Chomsky's argument crucially relies on the assumption that there is a control relation between they and NP in (17). However, there seem to be good reasons to think that this is in fact not the case. First, it should be noted that such a control relation would have to be optional, since parallel to (17) we have (19), at least in some appropriate contexts:

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- (19)a. They thought that to shave oneself once a week is not enough.  
 b. He thought that to help each other would be difficult for the kids.

In such examples, PRO is not related to the matrix subject, but interpreted as referring to a plural antecedent in (19a), to a non specified antecedent in (19a). This situation contrasts dramatically with other cases of control. Thus, in (20), PRO must be coindexed with they as shown by the following examples:

- (20)a. They tried to help each other.  
 b. \*They tried to help oneself.  
 c. \*He tried to help each other.

Clearly, in cases like the one exhibited in (20), the relation between the controller and PRO is a very strong and obligatory relation, in fact as strong as a "raising" relation. This strong relation contrast with other cases of relation between an NP and PRO, as in (17) and (19), where the antecedent can be any NP inside or even outside the sentence (given an appropriate discourse context). In other words, cases such as (17) and (19) correspond to what is sometimes referred to as "arbitrary control". Assuming that PRO is a pronoun lacking a phonetic realization, "arbitrary control" simply means that PRO is free; that is, like any ordinary pronoun it may or not be construed as referring to some NP (of course, the choice is restricted by conditions such as disjoint reference, etc.), and consequently there is no reason to call such cases control at all. Whether the distinction between occurrences of PRO in sentences like (17-18) and (20) is best accounted for by stipulating that there are two different types of control, as advocated by Bresnan (1979) or Williams (1980), or simply derives from a general constraint is left for further research. What matters here is that some PROs must be controlled by some appropriate antecedent, according to some lexical information and/or some general principle of minimal distance, and the other PROs are more or less freely coindexed with some NP in the sentence or get an arbitrary reference. Belonging to the first category are all cases previously analysed as raising (to subject or to object) as well as cases involving verbs of obligatory control (i.e. persuade, promise, try, etc.). Surely, this contrast does not correlate in any way with the alleged PRO/trace distinction. With this in mind, let's go back to (17)-(18). Both (17) and (18) are cases of "free" PRO. It means that PRO behaves like an ordinary pronoun, and therefore there is no control relation between they and PRO. If so, (18) violates the RTC since they is neither in a T-position nor does it control a T-position. This contrasts with the situation in (17), where they is in a T-position (it gets a T-role from think), and therefore (17) does not violate the RTC.

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Summarizing, we have shown in this paper that a treatment of sentences such as (2) based on the ECM mechanism runs into some serious problems, several of them suggesting that the postverbal NP should in fact be analyzed as a direct object rather than as the embedded subject, which incidentally corroborates the intuitions that lead to the rule of raising to object in earlier work. We have also pointed out that basically ECM follows from the "theta"-criterion as defined by Chomsky (1980c), but that such a condition on D-structures is bound to be too strong in many cases. We have suggested a reformulation of the "theta"-criterion liberal enough to take care of such cases, and have shown that by assuming such a reformulation, sentences like (2) appear like a particular case of control -- where the controller is bereft of a T-role -- and can therefore be derived as control sentences, and we can consequently dispense with the ECM mechanism. Not only does such an approach avoid the above mentioned problems, it also makes it possible to (re)capture the similarities exhibited by raising to subject and raising to object constructions.

## FOOTNOTES

\* I would like to thank Hagit Borer, Joan Bresnan, Robert May, Tim Stowell and Lisa Travis for their help at various stages of this paper.

<sup>1</sup>The Binding theory as defined in Chomsky (forthcoming) states that a trace must be bound in its minimal governing category (i.e. S), where bound means being c-commanded by a co-indexed NP. In (6) NP is not bound within the embedded S and therefore cannot be a trace.

<sup>2</sup>An example of such a chain is provided by raising constructions (which are considered here as special cases of control):

(i) [John seems [PRO to tend [PRO to fall asleep]]]

## REFERENCES

- Bresnan, J. 1978, "A Realistic Transformational Grammar" in M. Halle, J. Bresnan & G. Miller (eds) Linguistic Theory and Psychological reality.  
 Bresnan, J. 1979. Lecture notes.  
 Chomsky, N. 1980a, "On binding", Linguistic Inquiry 11.1.  
 Chomsky, N. 1980b, Principles and Parameters in Syntactic Theory, mimeo, MIT.  
 Chomsky, N. 1980c, A Rationalist Approach to Language and Cognition, mimeo, MIT.

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- Chomsky, N. forthcoming, Lectures on Binding and Government, Foris Publications.
- Koster, J. 1978, Locality Principles in Syntax, Foris Publications.
- May, R. 1977, The Grammar of Quantification, unpublished Ph.D. dissertation, MIT.
- Wehrli, E. 1980, "Constructions infinitives: complément VP et leurs implications théoriques" in Montreal Working Papers 14.
- Williams, E. 1980, "Predication", Linguistic Inquiry 11.1.