

# On Deriving the Extraposition Construction and Its Implications for Syntactic Theory

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On Deriving the Extraposition Construction  
and Its Implications for Syntactic Theory\*

Joe Morita

0 Introduction

Whether the current direction the syntactic approach called generative grammar in general, or the minimalist program in particular, takes is right or not, some of the topics which were intensively discussed have no longer been taken up, or are simply left open. Even though I agree with the view that the concept of construction has no place in generative grammar, and is regarded as being derivable from interaction of more primitive concepts, in reality we can have a deeper understanding of each construction, or more precisely, what has been regarded as one construction yet would turn out to be a rather heterogeneous set of constructions.

One of the constructions which have been treated in such a way is the extraposition construction. I pointed out in Morita (1995, 1996) that so called expletive *it* should fall into three subtypes and, of the constructions which have been taken generally as extraposition constructions, the one with a raising verb and the other with a non-raising verb should be distinguished from each other. Restricting the term "extraposition" to the latter case, I proposed that, while the expletive *it* that appears in the former construction (impersonal construction) is regarded as RsV-*it* (the *it* which goes with raising verbs), the extraposition construction has Ext-*it* (extraposition *it*), which should be associated with the extraposed clause.<sup>1</sup>

This paper is a substantial revision of what I have proposed in the works mentioned, along the lines of the minimalist assumptions that are being revealed in Chomsky (1995). In particular, I am concerned with the extraposition construction in this paper. In what follows, I will examine several sorts of evidence which exhibit the local relationship that Ext-*it* and the extraposed clause have, and seek the licensing mechanism for the construction. This paper is organized as follows: in the first section I present the arguments against the idea that the extraposed CP is in the complement position of the predicate, and then,

I argue against the view that *it* and CP should hold a certain configurational relation parallel to predication, namely, mutual c-command. In section 2, I will argue that the extraposition construction is generated as a result of the interaction of some conditions which have been independently motivated in the literature. Some concluding remarks follow, in which I discuss several implications that this paper would have for syntactic theory.

## 1 Some previous studies

### 1.1 *The extraposed clause as a non-complement*

Let us begin by reviewing the discussion made in Rothstein (1995) with respect to the extraposition construction and the position that the extraposed clause occupies. She claims that in the following examples the extraposed clauses "are not external arguments of the adjective that have been extraposed" (p. 501) :

- (1) a. It is likely that I'll be on time.
- b. It is possible that I'll pass the course.
- c. It is certain/obvious that he will win.

Her claim goes so far as to say that though the example in (2) "is ambiguous between the reading that asserts the certainty of our being late and the reading that asserts that some individual denoted by *it*--the dog, for example--was certain that we'd be late for dinner", the structure for this example is invariant, and the ambiguity stems from the optionality of the external theta-role of *certain*:

- (2) It was certain that we'd be late for dinner.

(Rothstein 1995:509)

In other words she is claiming that irrespective of whether the construction has expletive *it* as the matrix subject or not, the embedded clause in (2) is in complement position, and when an external theta-role is assigned *it* in subject position is thematic, and otherwise, it is interpreted as an expletive.

However, there are several kinds of evidence showing that the extraposed clause is not generated in the complement position of the predicate. First, observe the following examples, which are drawn from Quirk *et al.* (1985:1225):

- (3) a. It was unclear [what they would do]  
 b. It was unclear of/about [what they would do]  
 (4) I was unsure (of/about) [what I should say about MP]

The example in (3a) is two ways ambiguous (as (2) is) as to whether *it* in the matrix subject position is expletive or thematic. By contrast, with a preposition (*of* or *about*) intervening as in (3b), only the thematic reading is permitted. If (3a) has an invariant structure irrespective of either reading, a question will arise concerning the optionality of the preposition. To be compared is the fact that when an adjective takes a thematic subject and an interrogative complement clause, a preposition appears optionally between the adjective and the embedded clause, as in (4). It is concluded then that, contrary to Rothstein's claim, the surface form in (3a) indeed has a structural ambiguity: one structure has a thematic subject, and optionally permits an intervening preposition before the complement clause; the other, which has an expletive subject (thus being the extraposition construction), does not have an embedded clause in the complement position of the adjective.

The fact that the extraposition construction does not have an embedded clause in complement position would be made clearer when compared with the impersonal construction, which has a raising verb and *RsV-it*. It seems that there is little reason to doubt that the embedded clause is generated in the complement position of the raising verb, and is assigned a theta-role there.<sup>2</sup> The following contrast given in Langendoen and Pullum (1977:65) confirms this idea:

- (5) a. \* Who does it appear [to \_\_ ] [that you're a spy]?  
 b. Who is it apparent [to \_\_ ] [that you're a spy]?

The contrast between (5a,b) accords with what would be predicted from the discussion above. In this connection, remember that the unacceptability of (5a) is supposed to be due to some "stylistic" rule that is responsible for deriving the surface order from its underlying "V CP PP" sequence (see Stowell 1981, among others), the same rule that is involved in the following examples:

- (6) a. \* Who did you promise [to \_\_ ] [PRO to be quiet]?  
 b. \* Who will Andrew disclose [to \_\_ ] [that he is married]?

In short, this stylistic rule yields what is called a crossing path structure,

as in (7), which is not qualified as an acceptable configuration:

(7) wh ... t<sub>CP</sub> ... t<sub>wh</sub> ... CP

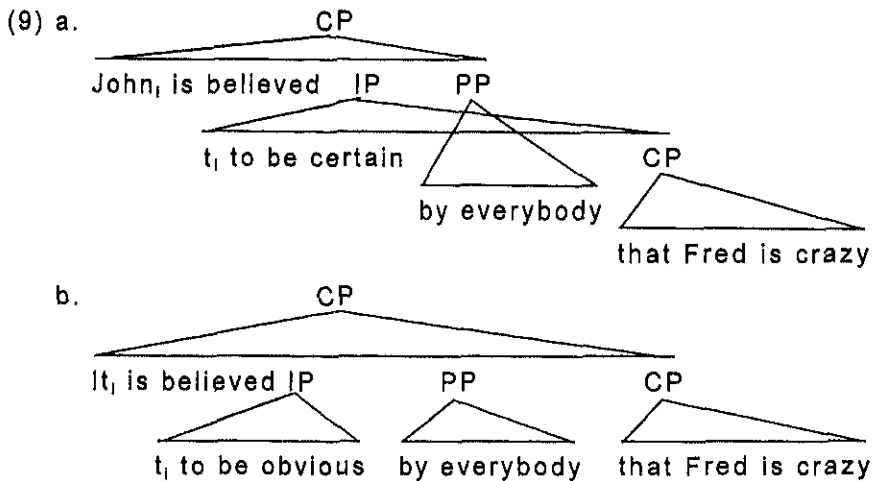
For discussion, see Pesetsky (1982) and references cited therein. On the other hand, from the fact that (5b) is well-formed it follows that that rule is not involved in generating the extraposition construction. This conclusion can be cited as a second argument against the idea that the extraposed CP is in the complement position of a predicate.

The following examples, which are drawn from Baltin (1978:144), further support the conclusion from another point of view:

(8) a. \*John is believed to be certain by everybody that Fred is crazy.

b. It is believed to be obvious by everybody that Fred is crazy.

In each of them the matrix subject has been raised from the intermediate clause which contains *to be obvious/certain*. At first glance, they merely differ in that the intermediate clause has had expletive *it* or a thematic subject, respectively. Their difference in grammaticality suggests a certain structural difference to be detected. I speculate that while the embedded clause in (8a) counts as the complement of the adjective, the one in (8b) cannot be regarded as being in complement position, assuming for them structures like (9a,b), respectively:



In (9a) the embedded CP remains in IP irrespective of whether subject raising has taken place or not, yielding an impermissible structure with respect to CP and PP *by everybody*, the latter of which is generated

within the matrix CP but not within IP. On the other hand, in (9b) the embedded CP need no longer be taken to be within IP; or rather, I speculate that, being an extraposed clause, it should be associated with the raised *it* in the matrix subject position through a certain mechanism, and thus is generated in the matrix clause. If this is indeed the case, it is also concluded that in the extraposition construction, the extraposed clause need not remain within the domain in which the clause should be thematically related to a predicate.

What I have shown above is that in the extraposition construction the embedded clause is not generated in the complement position of the predicate (and thus, is not licensed as a complement). The extraposed clause, not being an argument, might be regarded as an adjunct simply for this reason. Even if so, however, a question remains: by what mechanism is the extraposed clause licensed? Of those which would be called adjuncts, adverbial clauses or phrases are licensed as such by a certain mechanism of adverbial modification, which is well beyond the scope of this paper. By contrast, it is arguably the case that this mechanism is not available for the purpose of licensing the extraposed clause. Moreover, the structural difference between (9a) and (9b) suggests that the extraposed clause and expletive *it* are in a certain local relation. Thus, I will explore in section 2 the mechanism for licensing the extraposed clause by associating it with expletive *it*.

Some linguists have a similar view on the necessity of some mechanism for associating them from a bit different angle. Before proceeding, I review in section 1.2 their proposal for the extraposition construction, which makes use of the predication theory, and argue that this theory is not appropriate for explaining the extraposition construction.

### 1.2 *(Non-)parallelism with depictive secondary predicates*

Jackendoff (1990:205-6) points out a certain distributional similarity between the extraposition construction and the depictive secondary predicate construction. He claims that expletive *it* appears as subject and as the object of a verb or a preposition, and thus the extraposed clause has parallel behavior to depictive secondary predicates, which are predicated of the subject of the main clause, or both kinds of object.

His claim is based on the observation of the following examples:

- (10) a. It bothers everyone that/when/if you sing out of tune.
- b. Sue would prefer it strongly if you would leave.
- c. You can depend on it without a doubt that Bill will be drunk.
- (11) a. Bill bothers everyone even sober.
- b. Sue prefers Bill even drunk.
- c. You can depend on Bill even drunk.

He concludes that some predication relation should hold between expletive *it* and the extraposed clause, as is the case with secondary predicates.

Of course, it is not Jackendoff alone who takes the predication approach to the extraposition construction. Williams (1980) and Rothstein (1995) offer essentially the same proposal, to name a few. Of note is the fact that Rothstein (1995) postulates such a predication theory despite her claim that the extraposed clause is generated in the complement position of a predicate. In that case, her idea would imply that the extraposed clause is a complement and, at the same time, a predicate. I do not have any idea, however, of how these two facets are accommodated to each other.

Even though Jackendoff himself proposes a certain interpretation rule for the extraposition construction, he leaves open the issue as to what the structural condition to be imposed on the rule is like. For the structural condition on a predication relation, it has often been proposed that mutual c-command or its equivalent notion is involved, as in (12):

- (12) SUBJ and PRED must mutually c-command.

See Williams (1980), Roberts (1988), among others for detailed discussion. Similarly, I suspect that the condition to be imposed on the extraposition construction is as follows:

- (13) Ext-*it* and CP must mutually c-command.

Neither the mutual c-command condition nor the predication approach can I discuss in detail, however, for lack of space. Instead, I will point out some of the difficulties that the approach has, conceptual and empirical; a conceptual problem with the predication approach is that it is not at all clear what role such a concept as "predication" plays

in licensing the extraposition construction. Moreover, under minimalist assumptions, mutual c-command relation between maximal projections is not permitted; suppose that expletive *it* and the extraposed CP are maximal projections and they merge into one single node, projecting one or the other. Then, either one of them has to be a projecting category, thus a non-maximal projection. It follows that if one wants to adopt the mutual c-command condition, one cannot maintain both Ex-*it* and CP to be maximal projections. It is not certain whether this line of approach is on the right track, and thus I leave this issue open, noting its potential difficulty.

More problematic to the predication approach is the fact that under some contexts, the two constructions do not behave alike. One such context is the double object construction. As pointed out by Roberts (1988), Williams (1980), among others, in the double object construction, a depictive secondary predicate can be predicated of direct object but not of indirect object. Compare (14) and (15), where the intended predication relations are indicated in italics:

- (14) a. \* We gave *John* a book *happy*.  
 b. \* John baked *Mary* a cake *drunk*. (Roberts 1988:707)
- (15) a. John gave Bill *the dog* *dead*.  
 b. John handed Mary *the baby* *naked*.

(Williams 1980:207)

By contrast, in the case of the extraposition construction, expletive *it* can appear in the indirect object position, but is not allowed in the direct object position, of the double object construction:

- (16) a. He never gave *it* a thought that Bolshies are human beings.  
 (Jespersen 1937:63)  
 b. Alex gave *it* the reverent attention that details of the kind will always command from right-hearted people.  
 (OED<sup>2</sup>: 1908 M. & J. Findlater *Crossriggs* xvii. 346)
- (17) a. She asked me (\**it*) where the plutonium toothpaste was.  
 b. She assured me (\**it*) that the gorilla was healthy.

(Postal 1993:362)

Thus, I conclude that the predication theory is an implausible, if not problematic, approach to the extraposition construction, and will seek



another mechanism for licensing the extraposition construction. In doing so, however, one important thing should be kept in mind: whether the predication approach would be right or not, the general spirit behind this approach is that nothing special should be added to grammatical theory as a mechanism for a particular (in this case the extraposition) construction. In the next section, I will seek to show how some subtheories of grammar, which have been independently motivated, interact to yield the extraposition construction, with some additional, but minimally necessitated, assumptions.

## 2 Deriving the extraposition construction

### 2.1 *On the requirement that CP c-command it*

To begin with, observe the following examples given in Reinhart (1980:623), which show that the extraposed CP and the preceding adjective or verb make up a constituent:

- (18) a. [Unlikely [that she would pass]] though it was \_\_ , Rosa still decided to take the exam.  
 b. I warned you that it would upset Rosa that you smoked, and [upset her [that you smoked]] it certainly did \_\_.

This fact does not necessarily mean that the CP in question would be in complement position, which is in conflict with the conclusion in section 1.1. Or rather, what these examples show is that the extraposed CP is generated within the maximal projection of A or V, which in turn allows us to predict that for the extraposition construction with an adjective as its predicate, there would be two options for the extraposed clause to be adjoined, that is, either a projection of the adjective or of the copular *be*. This prediction is borne out, as the following examples show:

- (19) [Just how obvious to him] was it \_\_ that Fred would lose the race? (Baltin 1978:147)  
 (20) a. [How certain that John will win] is it \_\_ ?  
 b. [How certain] is it \_\_ that John will win? (Williams 1982:293-4)

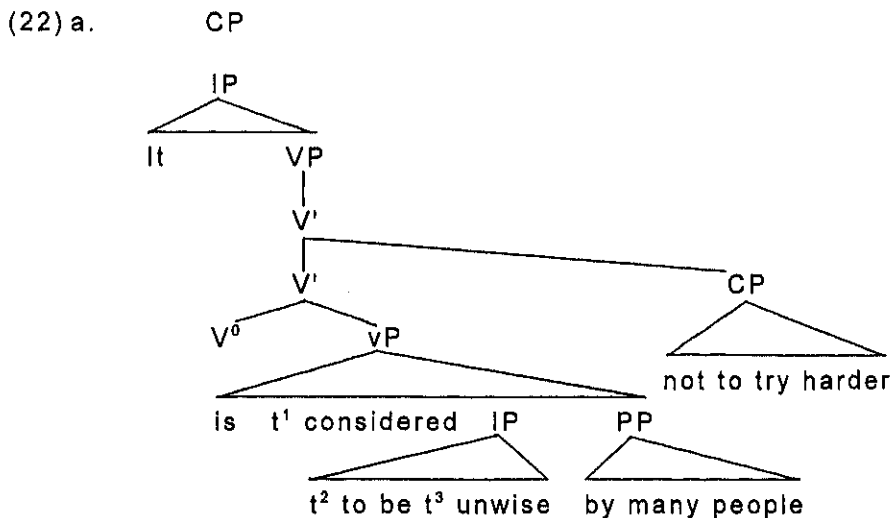
In what follows, however, I ignore cases where the extraposed CP is generated within AP for the time being, and take the adjunction site for the extraposed CP to be restricted to projections of V for simplicity.

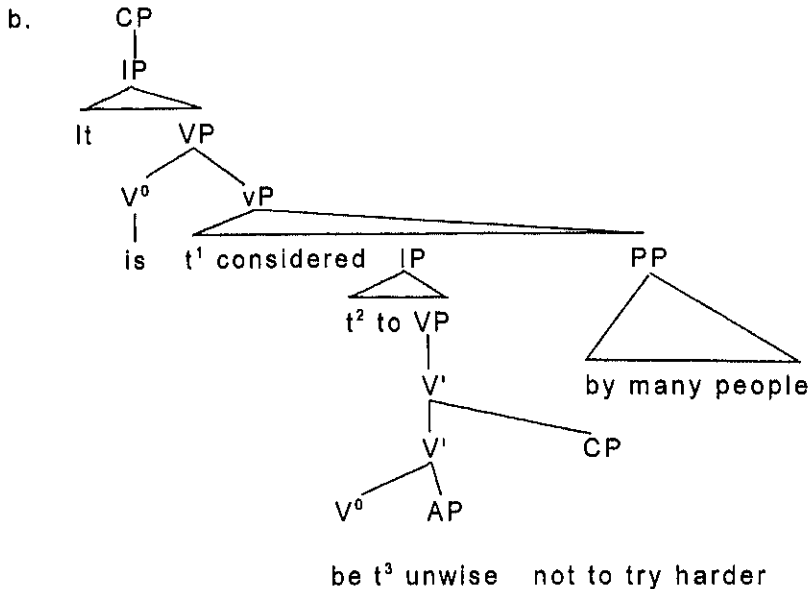
Simplifying discussion in this way might be supposed by the fact that, incidentally, some native speakers regard examples like (20a) as rather degraded. See note 6 for a related issue. In any way, in light of the minimalist assumption that adjunction to a maximal projection is prohibited when it has a semantic role at LF (Chomsky 1995:329), it is concluded that the extraposed CP is adjoined to V' or a projection of the light verb which selects VP (v' or vP).

Returning to the main subject, let us proceed to examine the examples in (21), which are drawn from Jackendoff (1977:100):

- (21) a. It is considered to be unwise [<sub>PP</sub> by many people] [<sub>CP</sub> not to try harder]  
 b. ?\*It is considered to be unwise [<sub>CP</sub> not to try harder][<sub>PP</sub> by many people]

The example in (21a) is analogous to the one in (9b): both of them would have CP licensed as an extraposed clause through a certain mechanism discussed below that associates the CP with the expletive *it* in the matrix subject position. On the other hand, it follows from the unacceptability in (21b) that the embedded CP is neither generated as a complement of the embedded predicate (*be unwise*), nor in a proper relation with expletive *it*. Their structural difference, then, would be expected to reveal what the mechanism in question is like. Here I assume the following structure for (21a,b), respectively:<sup>3</sup>





Of importance is the fact that in (22a) *it* and CP are clausemates, but in (22b) they are not. In other words, it can be said as a descriptive generalization that the extraposed CP is generated in the same cyclic domain where expletive *it* appears at the point of spell-out.

The next task is to formulate the generalization. Of some conceivable mechanisms proposed in the literature, the following seem to be available for this purpose:

- (23) Locality conditions within a sentential domain
- a. Bounding (Subjacency) condition on movement
  - b. Binding condition on an anaphoric relation

I speculate that the relevant locality condition, that which is imposed on the extraposition construction, is binding, and propose, as a first approximation, the following condition:

- (24) Ext-*it* must be bound by the extraposed CP in its local domain D. (D = IP, a cyclic category<sup>4</sup>)

Of course, this proposal is not without reason. To the contrary, it provides us a clearer understanding of the relation between expletive *it* and the extraposed CP by identifying the relation with the one between anaphor and its antecedent. Informally speaking, binding theory ensures that an anaphoric expression and its potential antecedent are coreferential (condition A) or have disjoint reference (condition B or C).

See Chomsky (1981, 1986) for detailed discussion on binding theory. Condition (24), which is analogous to binding condition A,<sup>5</sup> associates *Ext-it* with CP, making sure that both of them have the same semantic contents. To put it differently, if it were not for this process, no other mechanism available would ensure *Ext-it* an appropriate interpretation that an argument is supposed to have. (For discussion on the argument status of *Ext-it*, see Morita 1995, 1996).

Condition (24) does not go without a modification, however. The trouble is that apparently, even (22a) does not have CP c-commanding the *it* in the matrix subject position, failing to satisfy (24). This is not so problematic as one might suppose at first glance. Suppose that along the lines of Chomsky (1991), it is not DP alone that acts as an argument, or rather, what looks like an argument is indeed an argument-chain, which consists of the DP as the head of the chain and its traces. Thus, the relevant chain and CP in (22a) can be shown schematically as the following:

$$(25) \quad [\text{IP } \underset{\text{Cycle 1}}{\textit{it}, \textit{t}^1} \quad [\text{IP } \underset{\text{Cycle 2}}{\textit{t}^2, \textit{t}^3}] \text{ CP}]$$

In (25) even though CP does not c-command *it*, it c-commands the three traces of *it*. Of these,  $\textit{t}^2$  and  $\textit{t}^3$  are not in the same cyclic domain as CP, and thus cannot be associated with CP through binding. On the other hand,  $\textit{t}^1$  can satisfy (24) instead of *it*. The condition should be modified in such a way that not only expletive *it* but also its trace in the same cyclic domain can be the relevant target for the c-command by the extraposed CP. This modification can be formalized by making use of the concept of chain-binding proposed in Barss (1986). I propose the following condition as a modified version:

$$(26) \quad \textit{Ext-it} \text{ must be chain-bound by the extraposed CP in its local domain } D. \quad (D = \text{IP})$$

By contrast, condition (26) is not satisfied in (22b), in which, although CP c-commands one of the traces, namely  $\textit{t}^3$ , this trace is not in the same cyclic domain as *it* in the matrix subject position.

To sum up, I have argued that the mechanism for associating expletive *it* with the extraposed clause is condition (26). It should be noted again that the condition works as a locality condition on the

extraposition construction due to being essentially analogous to binding condition A. Recall that the extraposition construction was considered to involve rightward movement of the extraposed clause, whose locality effect, as well as that of other rightward movement phenomena, was generalized into the so-called right roof constraint, that is, there should be no more than one DP or IP boundary. This generalization is now stated in terms of binding. In this respect, condition (26) has much in common with the proposal made in Nakajima (1989) that bounding of rightward movements should be determined by binding condition A.

On reflecting the discussion so far, however, it would be turned out that condition (26) as such is not sufficient for licensing the extraposition construction. As I have argued in the previous section, the extraposed CP cannot be taken as the complement of a predicate. If so, then, some mechanism other than this condition should be called for that would license the presence of the CP in question; condition (26) does not serve for such a purpose, since this is a condition for ensuring that *it* has an appropriate interpretation through binding. Thus, I will devote section 2.2 to exploring this issue.

## 2.2 *Reanalysis and c-command*

Here I begin with the discussion made in Safir (1985) on the reanalysis operation which plays an important role in licensing the expletive *it* that appears as the object of prepositions. He observes a certain parallelism between extraposition and pseudo-passive constructions. Compare the following pairs of example, which are given in Safir (1985:88):

- (27) a. We counted (\*merely/\*crucially) on it that John would leave early.  
 b. We had thought (\*merely) about it that John might be guilty.
- (28) a. John's presence was counted (\*merely/\*crucially) on.  
 a'. We counted merely/crucially on John's nerve.  
 b. John's guilt was thought (\*merely) about.  
 b'. We had thought merely about John's guilt.

As shown in (28a,b), the sentences in the passive cannot have an adverb intervening between V and P, whereas their active counterparts

do allow such intervention. This active/passive contrast is often cited as the evidence for reanalysis of V and P as a single verb. Similarly, the fact that an adverb cannot appear between V and P in (27) suggests involvement of such a reanalysis operation. The following contrast given in Gelderen (1985:149), which shows that the "P it CP" sequence is not a constituent, would also confirm this view:

(29) a. John promised that he would insist upon it that she go, and  
[insist upon it that she go] John did.

b. \* It is [upon it that Bill pay his rent] that I insist.

Note that the example in (29b) shows that CP cannot be adjoined to P'. I have no explanation for this fact, and I suspect that projections that can be an adjunction site for the extraposed clause are mainly restricted to projections of a [+V] head.<sup>6</sup>

I agree with Safir (1985) that some kind of "reanalysis" is crucial for generating the extraposition construction. In assuming such an operation, however, careful consideration must be given as to the nature of that operation. The questions to be addressed should include:

- (30) a. i. On what grounds reanalysis is necessary; and  
ii. what mechanism is involved in such an operation?  
b. In what way(s) is the relationship between expletive *it* and the extraposed CP affected by "reanalysis"?

Keeping these questions in mind, let us review several proposals for reanalysis which have been offered in the literature.

First, Safir (1985:87) postulates a mechanism which would yield from (31a) the structure in (31b), in which the resultant verbal complex *count-on-it* is regarded as having the extraposed CP as its complement:

Reanalysis I:

- (31) a. We [<sub>VP</sub> count [<sub>PP</sub> on it][<sub>CP</sub> that John would leave]]  
b. We [<sub>VP</sub> count-on-it [<sub>CP</sub> that John would leave]]

There are some difficulties with his idea. First, this is indeed so strong an operation that it radically changes the configurational relation in phrase structure, which, unless some independent motivations are given, would not be justifiable. What is more problematic that is relevant to the discussion here is that how the relationship between *it* and CP is affected after this reanalysis operation is totally unclear. Thus, I have

to conclude that Safir's own theory of reanalysis is not tenable.

A more familiar kind of reanalysis operation may be the one shown in (32), in which V and P are reanalyzed as a single verb, which takes *it* as its complement:

Reanalysis II:

- (32) We [<sub>VP</sub> [<sub>V</sub> count-on] [<sub>it</sub>] [<sub>CP</sub> that John would leave]]

This reanalysis is not immune from difficulties either. For one thing, the relationship between *it* and CP seems to be affected little in crucial respects, failing to provide a convincing reason for the necessity of reanalysis in the extraposition construction. Moreover, Baltin and Postal (1996) discuss other problems which this kind of reanalysis has in a wider context. Thus, this reanalysis operation should also be concluded as an Implausible one.

A third kind of reanalysis, which I will adopt in this paper, is that proposed in Branigan (1992), which is an elaboration of the idea originally given in Uriagereka (1988). According to his proposal, the operation yields the following structure at LF:

Reanalysis III:

- (33) We [<sub>AgrP</sub> it [<sub>VP</sub> [<sub>V</sub> on-count] [<sub>PP</sub> t<sub>P</sub> t<sub>it</sub>] [<sub>CP</sub> that John would leave]]]

Among others, what makes the reanalysis operation conceptually plausible is that it makes no use of anything other than independently motivated mechanisms: movement of P is an instance of P to V incorporation, which in turn induces movement of DP to the spec position of Agr for Case-assignment. Moreover, this operation has an interesting consequence that seems to be of much relevance in analyzing the extraposition construction. Of note is the fact that movement of *it* makes it possible for expletive *it* to c-command the extraposed CP at LF. This is not a happy coincidence; or rather, this c-command relation, in addition to that involved in condition (26), plays a crucial role in licensing the extraposition construction. Thus, I propose the following condition:

- (34) The extraposed CP must be c-commanded by Ext-*it*.

It should also be noted that the c-command relation stated in (34) is in a sense the reverse of the one in condition (26), to which I will return

shortly.

Now the question to be addressed is why *it* should c-command CP. I suppose that this is not a stipulation. On the contrary, what condition (34) would capture is analogous to that which has already been found in *there* constructions. In other words, the relationship in question that Ext-*it* and CP have at LF is in parallel with that of expletive *there* and its DP associate in overt syntax, and both of them end with a similar configuration at LF. Recall that details aside, in *there* constructions expletive *there* has to c-command its associate, for, otherwise, covert movement of DP would not take place without yielding a proper binding condition violation. The movement turns (35a) to (35b) at LF:

(35) a. There is a man in the room.

b. [there, a man] is \_\_\_ in the room

(Chomsky and Lasnik 1993:533-4)

See also Chomsky (1991), Lasnik (1992), among others for discussion. With basic ideas somewhat modified,<sup>7</sup> in a more recent approach to *there* constructions is assumed attraction by expletive *there* of the N-feature that the DP associate (*a man* in (35a)) has, but not movement of a whole DP to expletive *there* (Chomsky 1995:364). Along these lines, I propose that in the extraposition constructions as well, expletive *it* has to c-command the extraposed CP in order to attract the relevant formal feature that (the head of) the extraposed CP has.

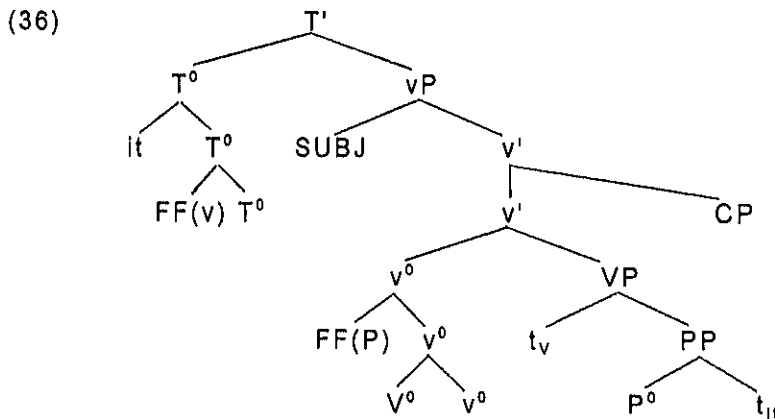
For concreteness, let us tentatively assume the feature in question to be  $F_C$ , a [-Interpretable] feature which is carried by both complement and extraposed clauses. In virtue of this feature, a complement clause is generated in the complement or spec position of a head, checking the feature off by feature movement to the head or the spec-to-head relation involved. Subsequently, the complement clause moves to A-bar position, if the Case resistance principle (Stowell 1981) or its counterpart is valid. On the other hand,  $F_C$  in the extraposed clause is not licensed in either way since the clause is generated in A-bar position. In order for  $F_C$  to be checked off, I propose that it has to be adjoined to Ext-*it* in a parallel way that expletive *there* attracts the N-feature that its DP associate has. With respect to  $F_C$ , complement and extraposed clauses are identical, and I further speculate that nothing inherent in



them makes them distinguished; their difference in the way of checking  $F_C$  off stems from which type of position they are generated in.

At present, it is totally uncertain whether the feature responsible for CP licensing, which I have tentatively assumed to be  $F_C$ , is identified with N-feature is totally uncertain, and I will leave this issue for further research. In any case, this feature attraction (or movement) licenses the presence of the extraposed CP by identifying CP as an associate for expletive *it*. I conclude that in addition to condition (26) the mechanism for licensing the extraposition should include condition (34), which ensures the presence of the extraposed CP.

Under minimalist assumptions, however, the structure postulated in (33) cannot be maintained. There is no longer Agr available, and instead, the position for Case-checking is either the spec position of TP in the case of overt movement, or the  $T^0$  adjoined position when the checking takes place in covert syntax. Moreover, in the latter case, it is not a category as a whole but formal features (FF) that the category has which are relevant for the checking in question that would move. I assume, taking these ideas into consideration, that a further modified version of reanalysis yields the following structure, in which irrelevant details are omitted :



In (36) formal features of  $v^0$  and  $P^0$  is adjoined to the  $V^0$ - $v^0$  complex and  $T^0$ , respectively. I further assume that *it*, being a non-projecting category, has also a status as a head, and moves to the upper  $T^0$  adjoined position as a whole head category, but not features of it.

Finally, let us consider the question that might arise with respect to

covert movement of expletive *it*. Chomsky (1995) assumes that unless necessary, what moves (or, is attracted) is not a category as a whole and its landing site is not spec but head position. If this is the case with expletive *it*, the idea that *it* should c-command CP cannot be maintained any longer. I suppose, however, that even after spell-out *It* can move as a whole. It is not when movement takes place that determines whether a category as a whole or only relevant features of it would move; overt and covert operations are not distinct from each other. To be sure, in the case of overt movement, a category as a whole moves for PF convergence. At the point of the movement in question taking place, nothing forces a category as a whole to move. If the whole category had not moved, however, the structure would crash at PF and not survive. In the same vein, the choice is itself free between whether *it* as a whole or features of it moves. In principle it is possible that only Case and  $\phi$ -features of expletive *it* would move in covert syntax. This choice, however, will lead to an illicit representation with  $F_c$  of the extraposed CP remaining, which crashes at LF.

### 2.3 Summarizing section 2: reciprocal c-command condition

Before summarizing the discussion so far, let us return to the double object construction, and seek to solve the puzzle the construction raises. I have pointed out above that expletive *it* can appear as the indirect but not direct object of the double object construction. I repeat here some of the examples showing this fact:

(16) a. He never gave it a thought that Bolshies are human beings.

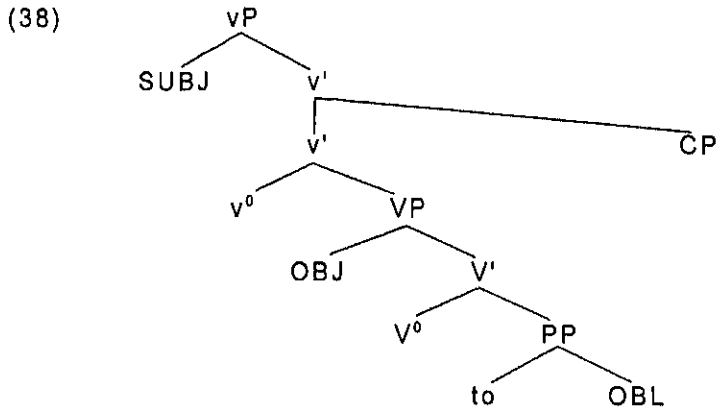
(17) a. She asked me (\*it) where the plutonium toothpaste was.

Moreover, the following examples show that the restriction on direct object should not be semantic (or thematic) but structural:

(37) a. You owe it to yourself to take a vacation.

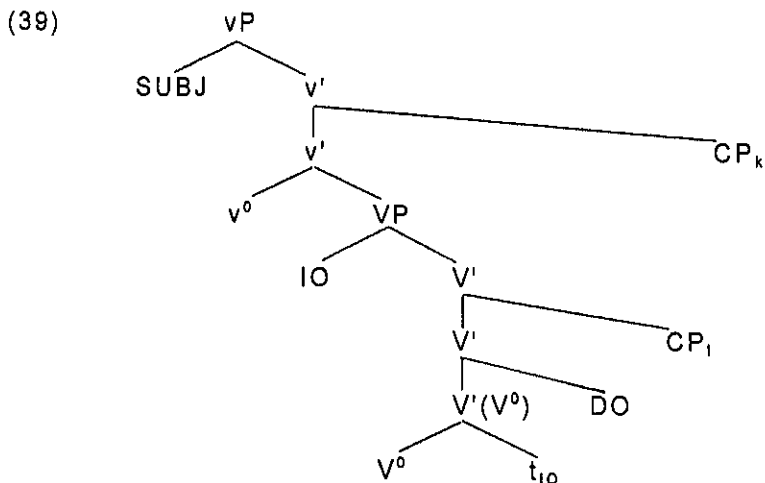
b. \* You owe yourself it to take a vacation.

For concreteness, I assume a certain theory of dative alternation along the lines of Larson (1988), adopting Chomsky's (1995) idea that the upper V of the shell structure is indeed a light verb (*v*). To begin with, let us consider the *to*-dative construction. I take the structure for (37a) as follows:



For CP and *Ext-it* to satisfy both of conditions (26) and (34), CP must be adjoined to  $v'$ : from this position CP c-commands *Ext-it* in OBJ position, and covert movement of the latter makes it to c-command the former.

In the case of the double object construction, a process that Larson (1988) compares to passive takes place within VP: direct object (DO) corresponding to OBJ in (38) is adjoined to  $V'$ , and indirect object (IO) is raised to the VP spec position that DO would occupy in the *to*-dative construction, as shown in (39):



There are two possible adjunction sites for CP, namely  $v'$  and  $V'$ , as is exemplified by  $CP_k$  and  $CP_1$ , respectively. In examples like (16), which have *Ext-it* in indirect object position, nothing seems to go wrong with the extraposed CP taking the place of  $CP_k$ :  $CP_k$  c-commands IO and, when raised to the  $T^0$  adjoined position for Case-checking, IO in turn

c-commands  $CP_k$ . By contrast, when *Ext-it* appears in direct object position, as in examples like (17), the question is whether these CPs go along with *Ext-it* in this position. To be sure, both of them c-command DO. Thus, the answer depends on where DO is Case-checked. Would this checking take place in the VP spec position or somewhere above, *Ext-it* would c-command one of CPs at LF and thus be allowed to appear as DO, contrary to the fact. For DO to be Case-assigned, Larson (1988:359) proposes that the lowest  $V'$ , which is sister to DO, undergoes  $V^0$  reanalysis under the condition that "the lowest  $V'$  has exactly one unsaturated  $\theta$ -role, that corresponding to the direct object (theme)." Assuming his proposal is on the right track, I suggest that *Ext-it* in DO is Case-checked by adjunction to the  $V^0$  that has been reanalysed from the lowest  $V'$ . Thus, even after *Ext-it* in direct object position undergoes LF movement for Case-checking, it is c-commanded neither by  $CP_k$  nor  $CP_l$ , failing to satisfy (34).

Now, let us summarize what I have discussed in this section. In the first place, I have proposed condition (26), which requires that CP should c-command *it*, and argued that this condition is to satisfy the requirement of binding theory. Here binding condition is responsible for ensuring that *Ext-it*, which is selected by a predicate, has an appropriate interpretation as an argument by coindexing it with the extraposed CP, and plays an important role in constraining the locality between them. The second condition, which I have proposed in (34), is that *it* should c-command CP, which is responsible for licensing CP's status as the associate of an expletive-associate pair. Since the extraposed CP is not generated in complement position, if the condition were not satisfied, its presence would not be licensed.

It should be noted again that each of the two conditions is in a sense reverse to the other. Thus, I further speculate that they can be generalized as follows:

- (40) Reciprocal c-command condition  
 In the extraposition construction (which contains the PF configuration [ ${}_iP \dots it \dots CP \dots$ ]),
- a. *it* or one of its traces must be c-commanded by CP; and
  - b. CP must be c-commanded by *it*.

One might wonder if this condition is not distinct from the mutual c-command condition discussed in section 1.2. This is not the case, however. Recall that mutual c-command is originally a condition imposed on the relation between subject and predicate, which has been assumed to be one of the most local relations in syntactic configurations. Furthermore, such a locality seems to have been regarded as a sister relation between two nodes in phrase structure. Mutual c-command is no more than what is stated about such a relation in configurational terms. I have little to say about the plausibility of the mutual c-command condition on the predication relation. What I would like to point out here is the dubious status of mutual c-command as a licensing condition for the extraposition construction. The relation between expletive *it* and the extraposed CP is not so strict as that which subject and predicate hold, which would in turn suggest the implausibility of the mutual c-command condition on the extraposition construction.

### 3 Conclusion

In the residue of this paper, I would like to discuss the dual nature of expletive *it* of the kind discussed in this paper, namely, Ext-*it* (extraposition *it*) and what it implies for grammatical theory. As mentioned in introduction, I argued in Morita (1995, 1996) that expletive *it* should be divided into three subtypes: RsV-*it* (the *it* which goes with raising verbs), and Amb-*it* (ambient *it*), as well as Ext-*it*, concluding that, of the three only RsV-*it* should be regarded as a genuine expletive, and the latter two act as an argument. That conclusion, however, seems to be insufficient, if not wrong, in light of the discussion in this paper. In particular, the view of Ext-*it* being an argument needs a slight modification.

On the one hand, I have proposed in section 2.1 the mechanism that ensures Ext-*it* an appropriate interpretation as an argument, namely condition (26). On the other, in section 2.2 the relation between Ext-*it* and the extraposed CP is assumed to be on par with that which expletive *there* and its DP associate holds, and condition (34) is responsible for this relation. In this respect Ext-*it* is similar to expletive *there*, and thus, has behavior as an expletive. It follows that Ext-*it* has two

seemingly conflicting properties, simultaneously: one as an argument and the other as an expletive.

This conclusion is not surprising, however. Or rather, it is a natural consequence from minimalist assumptions, under which what has been regarded as a single category is now considered to be a bundle of features. It is possible that what would characterize an expletive is not a single feature but a combination of relevant features. Of the several properties that expletives seemingly assume (which include the role to satisfy the Extended Projection Principle (EPP)), the function to check certain formal features that the associate of an expletive-associate pair has is not necessarily in conflict with the status of the given expletive as an argument. In this connection, comparing some expletives yields an interesting generalization:

(41)		$\theta$ -role	Associate	EPP
a.	RsV- <i>it</i>	-	-	+
b.	<i>there</i>	-	+	+
c.	Ext- <i>it</i>	+	+	+

The term *associate* is mnemonic; it refers simply to the fact that both *there* and Ext-*it* have a DP and a CP associate, respectively, and these expletive-associate pairs are similar in the LF configuration. Their licensing feature however could be different, though I have left this issue open. It may be or may not be that one and the same feature is responsible for both kinds of expletive-associate pair. At any rate, what I would like to stress by (40) is that these expletives do not constitute a homogeneous set, and of the three, RsV-*it* is most expletive-like in that it plays no role except to fulfil the EPP. In this sense RsV-*it* deserves to be referred to as a "pure" or "genuine" expletive. To the other extreme stands Ext-*it*; it fulfils the EPP and receives a  $\theta$ -role. In these respects, Ext-*it* is not distinguished from arguments. What makes Ext-*it* distinct from them is that it licenses its associate, a property which Ext-*it* and *there* have in common. The third kind of expletive, *there*, comes in between. It is concluded then that RsV-*it*, *there*, and Ext-*it* degrade their expletive status in this order.

Of course, one cannot miss another kind of expletive *it*, namely Amb-*it*, which appears as the subject of weather verbs, as in (41):

(42) It will rain itself out tomorrow.

Some of the properties that *Amb-it* has are shown as follows:

(41)		$\theta$ -role	Associate	EPP
d.	<i>Amb-it</i>	+	-	+

In view of (41d) one might wonder if *Amb-it* should be regarded as an argument; it receives a  $\theta$ -role and has no associate.<sup>8</sup> It is possible to argue that *Amb-it* is characterized as such not by whether or not it has certain properties as an expletive in itself, but by what kind of predicate it is selected by. This issue is not easy to solve, which I will leave for further research besides many unsolved issues.

Finally I would like to point out that (41a-d) can be further generalized with respect to the two properties mentioned, yielding a typology of expletives in English as follows:

(42)		+ $\theta$ -role	- $\theta$ -role
	+Associate	<i>Ext-it</i>	<i>there</i>
	-Associate	<i>Amb-it</i>	<i>RsV-it</i>

Though I have just pointed out that expletives are not homogeneous, the generalization indicates that the diversity that the set of expletives in English has is not without limit and is constrained by principles of Universal Grammar. Indeed, it is concluded from the discussion in this paper that there is no single principle of Universal Grammar that would characterize *expletive*, just as no single principle is responsible for generating the extraposition construction.

#### NOTES

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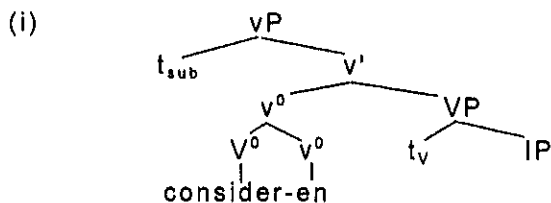
1. There is another kind of raising predicate, namely raising adjectives. Even though raising verbs and adjectives have a property in common, that is, both of them allow subject raising, they differ when they take expletive *it* as their subject. In that case, raising adjectives

behave not like raising verbs, but like other predicates that appear in the extraposition construction. The following pairs of example show that the *it* which goes with raising adjectives has parallel behavior to Ext-*it*:

- (i) a. \* Everyone believes it to seem that Hanrahan is guilty.  
 b. Everyone believes it to be likely that Hanrahan is guilty.  
 (Perlmutter and Soams 1979:208-9)
- (ii) a. \* John had it seem that Bill was guilty.  
 b. Have it be certain that John lied before you haul him into court.

2. With respect to alignment of internal arguments of *seem*, Chomsky (1995:304-5) postulates the underlying structure that corresponds to "V PP CP" though he also takes CP as an internal argument. He cites French data that would support his idea. As far as English is concerned, however, there seems to be little evidence in favor of that underlying sequence. Moreover, the sequence does not accommodate to the thematic hierarchy that Larson (1988) postulates, under the assumption that PP and CP receive a goal role and a theme role, respectively.

3. I tentatively assume that the past participle morpheme *-en* is a kind of light verb, and projects up to vP with its spec position filled with the trace that the matrix subject has left, as shown in (i):



The idea that the trace and *-en* are in a spec-head relation in (22) would be supported by the examples given in Kayne (1989) that are concerned with French past participle agreement.

4. Here the cyclic category in question is identified with governing category in the sense of Chomsky (1981). Of the two governing categories, namely, IP and DP (= S and NP, in Chomsky's 1981 terminology), the latter is irrelevant to the discussion here and I ignore it in this paper. This is because in the case of the extraposition



construction, the configuration which involves a binding relation across a DP boundary is ruled out independently. For illustration, consider the following hypothetical structures:

- (i) a. [DP D<sup>0</sup> NP P<sup>0</sup> it] CP
- b. [DP It's N<sup>0</sup> ] CP

Suppose that in (ia,b) CP is generated in some appropriate adjunction site and there is no other DP or IP boundary intervening. Even if so, these structures are ruled out, since they fail to satisfy condition (34), which is proposed in section 2.2.

Notice that the fact that the structure in (ia) is ruled out in this way partially accounts for the generalization given in Postal and Pullum (1988:637) which states that expletives do not appear in nominalization of-phrases. Here are some of the examples that they cite:

- (ii) a. my estimate of it (to be impossible (\*to fly))
- b. her resentment of it (\*that he won)
- c. your demonstration of it to him (\*that she was sick)

5. Since the extraposed CP is in A-bar position, the binding relation involved is A-bar binding. I assume along the lines of Aoun (1985) and Nakajima (1989) that condition A can be extended to A-bar binding.

6. There are several issues which seem to be related to the [+V] restriction. One is an observation made in Williams (1982). He points out that there is a certain difference between adjectives and nouns when they appear in the extraposition construction, as shown by the following pairs of example:

- (i) a. How certain that John will win is it? (= (20a))
- b. How certain is it that John will win? (= (20b))
- (ii) a. \* How much of a certainty that John will win is it?
- b. How much of a certainty is it that John will win?

(Williams 1982:293-4)

As I have argued in section 2.1, it is possible for the extraposed CP to be generated within the maximal projection of either A or V. The examples in (ia) and in (ib) show these possibilities, respectively. It should be noted that in the former case the adjunction site for CP is not A', but a projection of the functional category that selects AP and goes

along with it when A moves. For if it were adjoined to A', the extraposed CP would not satisfy condition (24). On the other hand, the contrast between (iia) and (iib) indicates that while CP can be generated as a V' adjunct, there is no adjunction site for CP within DP and thus they cannot be fronted together. These facts are just what the [+V] restriction predicts.

Another (less directly) related issue is that there are several (but not many) instances of the "V P it CP" or "A P it CP" sequence. Here are some examples that involve an adjective head:

(iii) a. We all are aware (of it) that it was necessary for Stanley  
to eat the cheese. (Lakoff 1968:46)

b. We were sure of it that John would win.  
(Abney 1987:172)

The acceptability of the "A P it CP" sequence varies among native speakers, subject to lexical variation. For example, Bolinger (1977:87-8) states that "the *about* on top of the *it* is rather awkward, and while *I'm sorry about it that those things went wrong* is not unacceptable we would tend to choose another verb (*I hate it that*) or omit *about it*."

On the other hand, as the examples given in note 4 would show, the sequence "N P it CP" is generally unacceptable. Besides the explanation given above, the [+V] restriction predicts that there is no relevant adjunction site for CP within DP. Notice, however, that the phrase *word (for it) that* seems to go against this prediction:

(iv) a. I take his word for it that he would make an effort.

b. I give you my word (for it) that I wasn't there.  
(Curme 1931:254)

c. has the doctor's word for it that no operation is needed  
(Webster)

I suspect that this phrase is an idiomatic expression and should not be regarded as a real counterexample.

7. In particular, the idea that Case and  $\phi$ -features of the DP associate are not attracted to expletive *there*, but to  $I^0$  has much theoretical importance. See Chomsky (1995) for discussion.

8. There are some kinds of evidence that show that *Amb-it* should be distinguished from pronominal *it*. Observe:

- (i) my observation/description of it falling/\*raining  
(Postal and Pullum 1988:637)
- (ii) a. \* I estimate it to be six inches long.  
b. I estimate it to be raining about two inches per hour.  
(Postal 1974:299)

I have no explanation for these facts.

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