

EXPLETIVES, "REPLACEMENT", AND ECONOMY

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This paper examines the *there* construction in English and supports two conclusions: first, in the general case, *there* and its "associate" are not in an A-chain at any level (contra Chomsky 1986b, 1991); second, as a "last resort", however, such an A-chain can be formed just in case it will "save" an LF representation by providing a properly governed A' foot. Thus, it provides support for "Economy" theory (Chomsky 1991) while explaining an apparent contradiction.

0. Introduction

The central aims of this paper are two-fold. First, in critically examining the "expletive replacement" (ER) account of Chomsky (1986b, 1991), it will become clear that, in the general case, *there* and its "associate" NP are not in an A-chain at any level of representation. This conclusion is supported in Section 1 by evidence of three types: first, two arguments will be presented which show that, for technical reasons, ER fails. In these cases, the structures required by ER violate independently required principles of grammar (e.g. Coordinate Structure Constraint, Theta Criterion, X' Theory). Second, three arguments are provided showing that various structures predicted to be possible on the ER account fail to occur. Third, three further arguments will show that ER makes the wrong predictions with respect to a number of LF phenomena. All of these objections can be met by not assuming ER; that is, by not relying on an A-chain relation to hold between *there* and its associate. An alternative to this will be provided, arguing that the special relation is rather between the I(nflection) in *there* sentences and the associate NP. This alternative will account for the problems pointed to above while maintaining the positive properties of ER. It will further be suggested that the base position of the associate is not a properly governed one. This hypothesis will account for the lack of certain LF phenomena and will become important in the second part of the paper.

The second aim of this paper, then, will be to show that under certain circumstances, *there* and its associate NP *must* form an A-chain. This claim is supported in Section 2 with four arguments which are based on the fact that extraction of the associate is more restricted than extraction *out* of the associate. These arguments, which involve *that -t* phenomena and extraction out of islands, will further support the hypothesis that the associate is not in a properly governed position. It will turn out that the only LF representation amenable to extraction of the associate is one in which the trace of the associate and *there* have *reanalyzed* as

an A-chain, the head of which is in a properly governed position. An independent argument will be provided which supports such LF A-chain reanalysis.

The conclusions to these two sections, however, appear to lead to a contradiction: we will see that, generally, *there* and its associate cannot be in an A-chain, while also we will see that, under certain conditions, they *must be*. The overall conclusion, in Section 3, will be that, in the spirit of Chomsky's (1991) "Economy" theory, the A-chain formation, or reanalysis, with *there* must be considered a "last resort" procedure, allowed only in order to "save" an uninterpretable LF representation. Such reanalysis cannot be possible, or required, generally or the problems plaguing ER will still have to be faced.

1. Expletive Replacement

Chomsky (1986b, 1991) argues that an expletive element like English *there*, since it receives no interpretation, must be eliminated at LF. He proposes that *there* is an LF affix which requires its "associate" NP to adjoin to it at LF. Thus, a sentence like (1a) has an LF representation like (1b):¹

- (1) a. There is *a man* in the room.
b. [there-[*a man*]_i] is *t_i* in the room.

Expletive replacement (ER) can explain three salient properties of the *there* construction. First, the local relation between *there* and its associate follows from the locality of NP movement generally, since ER is simply LF NP movement:

- (2) *There seems that John saw *a man*.

Second, assuming that agreement and Case are "checked" at LF, it follows that the associate triggers agreement on the verb, since at LF the associate is in subject position:

- (3) a. There is *a man* in the room.
b. There are *men* in the room.

Third, the alternate form, in which the associate is actually in subject position can be assumed to involve something like S-structure, rather than LF expletive replacement:

¹This is Chomsky's (1991) account. In (1986b) he assumes that the associate moves into the position of the expletive completely replacing it.

- (4) a. There is *a man* in the room.
 b. *A man_i* is *t_i* in the room.

In what follows I will try to show that the ER analysis outlined above is untenable. First, there are constructions in which, for technical reasons, ER cannot be the correct account. Second, there are constructions predicted to be possible on the ER analysis which fail to occur. Third, ER makes incorrect predictions with respect to certain LF phenomena.

1.1. Technical Failures for ER

1.1.1. *I' Coordination.* The first problem involves sentences like the following:²

- (5) a. There were *two cats* and will be *three gerbils* in the living room.
 b. There seem to be *several hypotheses* but appears to be *only one solution* available.

Presumably (5) involves I' coordination:

- (6) [IP there [I' were [VP...two cats]] & [I' will be [VP...three gerbils]]]

The problem for ER is obvious: there are two NP associates but only one expletive. Depending on the motivation for ER, this could break down into two different problems. If ER is required only to eliminate the uninterpretable expletive, as Chomsky (1991) seems to indicate, then one might assume that in (5), only one of the two associates raises. However, this would create a violation of the Coordinate Structure Constraint, a constraint otherwise observed for LF movement; and even if the CSC could be circumvented, there is the problem of agreement. Each NP associate appears to trigger agreement (see (5b)) on its respective verb. If only one associate undergoes ER it is not clear why each verb shows independent agreement.

If ER is required in order to "check" the associate's Case and the verb's agreement, as has been suggested more recently by Chomsky (class lectures 1990, 1991, ms. 1992), then the problem is how to "fit" both associates into Spec,IP such that (a) there is no violation of the Theta Criterion or X-bar theory and (b) each verb agrees with the correct associate, as mentioned above. The Theta Criterion would be violated if two NPs with theta roles occupied one position, here Spec,IP. X-bar theory would be violated if two NPs occupied one Spec position. Note that, of course, both NPs could raise and coordinate, but the resulting

configuration would have a different interpretation: *two cats_i and three gerbils_j were t_i and will be t_j in the living room*. In this case the associates are interpreted as a conjoined subject.³

ER, as it stands, cannot account for the sentences in (5). To do so, some fairly extreme changes would have to be made to the theory in which ER is embedded. Namely, violations of the CSC, under these specific conditions, would have to be allowed. In addition to a weakening of the CSC, adjustments to the Theta Criterion and X-bar theory would have to be made. Short of such extreme amendments to the theory, ER fails in the present cases.⁴

1.1.2. Left Conjoint Agreement. It has been known for quite some time that when the associate of *there* is a coordinate NP, agreement can optionally be triggered by the left conjunct only (Morgan 1972, Milsark 1974, Pullum & Gazdar 1980):⁵

- (7) a. There was/were *a man and two women* in the park.
b. There were/*was *two women and a man* in the park.

These facts are surprising given the ER analysis: at LF the coordinate associate moves to Spec,IP and agreement is checked. Presumably the coordinate structure is plural, since it normally triggers plural agreement:

- (8) *A man and two women* were/*was in the park.

But, as we see above, left conjunct agreement is possible in the *there* construction. Again, this problem could break down into two different problems depending on what ER is; if ER is simply the elimination of an uninterpretable object, then conceivably, just one conjunct of the coordinate structure could move up to replace the expletive. This runs into the same trouble as above: such a movement would violate the CSC. And secondly, why is it the left conjunct which raises and not the right (note the *left* conjunct agreement)?

²The judgments in this paper are those of the author (Northeastern American English); however, they were mostly corroborated by speakers of English from Eastern California, Western Canada, Massachusetts and Scotland.

³Thanks to Hagit Borer for pointing this out to me.

⁴It has been pointed out to me that (5) involves Right Node Raising and an LF such as (i) was suggested: (i) *two cats were, and three gerbils will be, in the waiting room*. While these examples may involve RNR, it is not clear that that fact is relevant to the argument and further, (i) still is not derivable on ER since it presupposes two separate Spec,IP's to which the two associates move: (ii) [IP_{there} were two cats] & [IP_e will be three gerbils...]; unless (5) has an S-structure like (ii) its LF is problematic on ER.

⁵I use past tense to differentiate (7) from (i): *there's NP & NP in the park*. (i) is okay colloquially for many speakers regardless of the plurality of the associate. Notice, however, that ER has no explanation for (i) either.

If, on the other hand, ER is a mechanism for checking Case and agreement, then, even if just the left conjunct raises, how does the right conjunct get Case? Or conversely, if the whole coordinate structure raises to check Case, why doesn't the whole coordinate structure trigger plural verbal agreement as expected?

Again, ER fails to account for the facts. As mentioned above, to do so ER would have to allow particular violations of the CSC, which would otherwise be unmotivated. Such a change in the CSC, without independent motivation, would be an undesirable stipulation required simply to save the ER account.⁶

1.2. Failed Predictions: S-S

1.2.1. *Alternate Forms: English.* It was noted above that ER could explain the fact that (9a) alternates with (9b):

- (9) a. There is *a man* in the room.
 b. *A man_i* is *t_i* in the room.

The implicit assumption seems to be that the fact that ER is possible at S-structure supports the hypothesis that it is possible at LF as well. The problem is raised by the coordinate I's from Section 1.1.1.; the only S-structure possibility has the associates remaining *in situ*:

- (10) a. There were *two cats* and will be *three gerbils* in the living room.
 b. **Two cats_i (and) three gerbils_j* were *t_i* and will be *t_j* in the living room.
 c. **Two cats_i* were *t_i* and will be *three gerbils* in the living room.
 d. **Three gerbils_j* were *two cats* and will be *t_j* in the waiting room.

ER assumes that one or both of the associates raises at LF; if ER is even possible at LF, it is not clear why it should be impossible at S-structure since the alternation in (9) exists. Short of an S-structure filter, the fact that such movement is impossible at S-structure suggests that the

⁶Another argument which I will not develop for space reasons involves sentences like (i); if ER were required in this sentence, whose S-structure is (ii), the LF structure would be (iii):

- (i) How many men did you say (that) there were pictures of at the party last night?
 (ii) $wh_i \dots [CP t_i' [C (that)] [IP there \dots [NP pictures\ of\ t_i] \dots]]$
 (iii) $wh_i \dots [CP t_i' [C (that)] [IP [NP pictures\ of\ t_i]_j \dots t_j \dots]]$

The problem with the LF in (i) is that it results in a configuration exactly like the well-known ungrammatical examples of extraction out of subject position:

- (iv) *How many men did you say (that) [[pictures of *t*] were at the party last night]?

If (iii) is the correct representation for (i), then it is unclear why (i) is grammatical while (iv) is not since their representations are identical.

movement is impossible generally. This further undermines ER since such movement is required on that account.

With respect to alternate forms there is a second problem for ER; in many cases even simple S-structure alternate forms are unavailable:⁷

- (11) a. There is a hole in my pocket.
b. *A hole is in my pocket.

Since movement of the associate to *there* is simply required on ER to occur *by* LF, it is unclear why, as in (11), this can only happen *at* LF.

1.2.2. *Alternate Forms: Mexican Spanish.* The existential construction in Mexican Spanish, formed with the verb *haber*, is interesting because for some speakers it is completely parallel to the English construction except for one point: there are no alternate forms; that is, the associate is never allowed to move to subject position at S-structure (Westphal 1979, Runner 1989, Aissen & Runner 1989):

- (12) a. Había *un gato* afuera.
'There was(sg) a cat outside.'
b. Habían/??había *dos gatos* afuera.
'There were(pl)/??(sg) two cats outside.'
c. Había/??habían *un niño y dos mujeres* afuera.
'There was(sg)/??(pl) a child and two women outside.'
d. Habían/??había *dos mujeres y un niño* afuera.
'There were(pl)/??(sg) two women and a child outside.'
e. *UN GATO* había afuera.
'A CAT there was outside.' (not: 'A cat was outside.')

For the speakers in question, agreement is obligatory with *haber* as shown in (a) and (b); this is parallel to the English cases, as evidenced by the translations. With a coordinate NP associate, left conjunct agreement is found as in (c) and (d); this parallels the English sentences discussed above, as again shown by the translations. However, in contrast to English, there is no alternate form of (a) like (e). (e) is only possible under special focus intonation. The problem, then, is this: given the similarity between the *haber* construction in Spanish and the *there* construction in English, as illustrated in (a)-(d), one would like to have a single account for both languages. However, if ER is this account, then something unusual has to be said for

⁷Thanks to Hotze Rullmann for these examples.

Spanish so that NP movement is *disallowed* at S-structure. ER can only be an LF requirement in Spanish. On the other hand, the fact that NP movement is impossible in the *haber* construction might suggest that such movement is impossible generally in that construction. If this is so, then the ER account is further undermined.

1.3. *Is There a Solution?*

Before continuing to point out further difficulties for the ER account it might be worth speculating, given the previous few subsections, on the nature of an alternative to the ER account. We know that an alternative to ER must at least account for the three salient properties of the *there* construction which ER accounted for; and moreover, it must do so while meeting the objections raised in the preceding subsections.

Recall that three properties of the *there* construction, which ER explained quite naturally, are: (1) the local relation between *there* and its associate NP; (2) that the verb agrees with the NP associate; and (3) that there are alternate forms with no expletive in which the associate is in Spec,IP. On the other hand, sentences with I' coordination (cf. Section 1.1.1.) showed two other properties: (4) in some cases NP movement is impossible at LF for technical reasons; that is, there can be just one expletive "associated" with two NPs and replacement would require violations of otherwise inviolable principles of grammar; and (5) agreement does not appear to be mediated by *there*, but rather, by some property of the I(nflection) associated with *there* sentences; that is, there can be sentences with just one *there* but two I's and two NP associates in which the I's appear to agree *directly* with the NPs. If agreement were mediated by the single expletive, only a single agreement would be expected.

Property (4) strongly suggests that movement is not the answer. Thus, a successful account will not force movement of the associate to replace *there* at S-structure or LF; the associate, then, will be able to remain *in situ*. This conclusion is supported by various other facts pointed out above: the problematic I' coordination sentences and simple sentences like *There is a hole in my pocket*, which have no grammatical "alternate forms" (cf. Section 1.2.1.), no longer pose a problem. This now follows since alternate forms are not even expected; secondly, the Mexican Spanish *haber* sentences, although being otherwise identical to their English counterparts, *never* allow alternate forms with the NP associate in Spec,IP (cf. Section 1.2.2.). This unusual fact now follows since the associate remains *in situ*.

Property (5), that agreement appears to be mediated directly between I and the associate, helps choose between two possible alternatives to ER. Safir (1982) and Chomsky (1986b), for example, have argued that a crucial property of the *there* construction is that an "expletive chain" is formed between the expletive and its associate NP. For Chomsky at least, this chain is what mediates Case and agreement from Spec,IP to the associate in the VP. Now, one can

see immediately that the expletive chain account is going to run into the same trouble that ER does with sentences containing too many associates and not enough expletives, the I' coordination sentences. This is because, if there are two NP associates, and each one must be in an expletive chain to receive Case and assign agreement, there are not going to be enough expletives for these chains. Furthermore, even if two chains could be formed, headed by the single expletive, how the two separate I's trigger different agreement remains mysterious.

On the other hand, a second alternative to ER, which I will support, is one in which the NP associate triggers agreement in a non-Spec-head relation. I will call this the "government" account. This account could perhaps be instantiated as a modification of Borer (1986) (I "needs" an NP subject and coindexes with it at D-S) or Belletti (1988) (I, here, has the special property of being able to govern into the SC). I will assume, following Stowell (1978) and others, that *there* sentences involve a small clause structure like the following:

(15) [there be [SC NP PRED]]

On this account, what is special about the *there* construction is that NP can receive Case and trigger agreement *in situ*. For concreteness, I will follow Belletti (1988) and assume that NP receives partitive Case from the copula (perhaps accounting for the so-called "definiteness effect"). On the other hand, agreement is mediated via government by I(nflection). This dichotomy seems necessary based on the fact that it is not always the case that the verb assigning partitive Case is the verb bearing inflection:⁸

(16) [there is going to be [SC a party at Susan's]]

Here partitive Case is assigned to *a party* by the copula closest to it; inflection, however, is on the higher *be*. As for the label "SC", I use it, instead of e.g. PP in (16), for convenience; I do not take a position on which is correct.

This account is supported by several other facts pointed out above: sentences with left conjunct agreement (cf. Section 1.1.2.), which further weakened arguments in favor of ER as a way to account for agreement, can correctly be attributed to a peculiar property specific to the *there* construction (Runner 1989, Aissen & Runner 1989); that is, however it is ultimately to be accounted for, this unusual form of agreement can be directly linked to the unusual method of agreement found in this construction, the non-Spec-head agreement with I. Secondly, now the fact that both English and Mexican Spanish allow left conjunct agreement in existential

⁸Unless it is the inflected verb which assigns partitive, and not the "existential" copula.

sentences (cf. Section 1.2.2.) can be attributed to the fact that these sentences involve the same special relation between the associate and I in both languages.⁹¹⁰

However, now that we have a tentative account for properties (4) and (5), above, what about properties (1)-(3)? (1) the local relation between *there* and the associate; (2) that the verb agrees with the NP associate; and (3) that there are alternate forms with no expletive in which the associate is in Spec,IP. First off, (2) follows trivially from the government account just described above. Putting aside (1) until later (see section 1.5.1.) we can now account for (3). Here again, I follow Stowell (1978) and assume that copular sentences also derive from underlying small clause constructions. That is, copular sentences are simply "expanded" small clauses (see also Moro 1991 for a thorough discussion of copular sentences):

- (17) a. three men were at the party
b. D-S: [[NP *e*] be [SC [three men] at the party]]
c. S-S: [[three men]_{*i*} were [SC *t_i* at the party]]

If this is the correct analysis of copular sentences, then the fact that these alternate with *there* sentences follows quite straightforwardly: *there* is base-generated in Spec,IP and the small clause subject simply remains *in situ*:

- (18) a. there were three men at the party
b. [[there] were [SC [three men] at the party]]

Thus, property (3) is accounted for straightforwardly.

Summarizing, then, I showed that for technical reasons, ER cannot be correct; also, ER makes a number of predictions for possible S-structures which simply do not occur. I then proposed an account of *there* sentences which overcame these objections: I modified Stowell (1978), taking into account recent work by Belletti (1988), and suggested that *there* sentences are simply copular ("expanded" small clause) sentences in which the expletive occurs in Spec,IP. Agreement is mediated by a special property of I, that it can govern the SC subject. In the following section I will examine further problems faced by ER: incorrect predictions with

⁹Runner (1989) and Aissen & Runner (1989) show that left conjunct agreement appears in constructions other than the existential ones in English and Spanish. In particular, it is found in a wide variety of sentences with postverbal subjects in Spanish. Interestingly, it is argued that every case of left conjunct agreement is a case in which agreement is not assigned in the "normal" fashion, but rather in a way that is analogous to that of expletive constructions.

¹⁰McCloskey (1986) argues that left conjunct agreement, which also occurs in Modern Irish, can be accounted for by the fact that agreement is triggered by government in Irish and that government "skips over" the mother

respect to various LF scope phenomena. A careful look at these will help us to further refine the account of existential sentences proposed above.

1.4. Failed Predictions: LF

Scope is usually assumed to be read off of LF representations (May 1977, 1985). Expletive replacement assigns to sentences with S-structure expletives LF representations in which the NP associate replaces the expletive in Spec,IP. This predicts that at LF there should be no differences in scope between a sentence formerly containing an expletive and one which had the NP in Spec,IP at S-structure and at LF. This prediction turns out to be incorrect and thus, weakens support for ER.¹¹

1.4.1. *A Unicorn.* ER states that the LF representations of sentences like the following should be identical:

- (19) a. There seems to be a unicorn approaching.
b. A unicorn seems to be approaching.

The LF representations of (19) both have the associate NP *a unicorn* in Spec,IP. This makes an interesting prediction: the interpretation of (a) and (b) should be identical since their LF representations are identical. As has been discussed repeatedly in the literature, this prediction turns out to be false (Partee 1977, May 1977, 1985, Safir 1982, and others).¹²

The problem is that (19b) has two readings while (a) has only one. The two readings for (b) are the following: (1) there is something approaching and it could be a unicorn. This reading does not presuppose the existence of a unicorn; and (2) there is a specific unicorn which seems to be approaching. This reading presupposes the existence of a unicorn. (19a) has only the reading in (1), the reading which does not presuppose the existence of a unicorn.

node of a coordinate structure, directly governing the left conjunct. He supports this by showing that this special form of government is evidenced throughout the grammar of Irish coordinate structures.

¹¹Chomsky (1991), realizing some of the problems to be discussed in this section, suggested expletive "adjunction" instead of replacement, as I outlined in the introduction to Section 1:

(i) [[there [NP a man]i] is [ti at the party]].

Since the NP is adjoined to the expletive, it does not have scope over other elements in the sentence, accounting for the scope differences. There are three possible problems with this suggestion: first, it is not clear in what way this is "eliminating an uninterpretable LF object" (one goal of ER); secondly, how agreement and Case are assigned in the adjoined position is not immediately obvious (a second goal of ER); thirdly, and most importantly, if the associate cannot c-command other items from the adjoined position, it is also not clear how it can bind its own trace.

¹²Williams (1984) makes a similar argument based on the nonambiguity of (i):

(i) There must be someone in his house.

To fully account for this difference in readings we need to understand how it is that (19b) receives two interpretations. That is, how does "quantifier lowering" work? Assuming that reading (1) is somehow associated with the base position of the NP (hence its availability in *there* sentences) and reading (2) with the matrix Spec,IP position, it is not clear how both readings can be assigned to (b). The matrix reading ((2)) is computed in the normal fashion, presumably via QR. For the base reading, May (1985) assumes a rule of quantifier lowering (QL) which accounts for the scope ambiguity; for this, sort of the reverse of QR applies, lowering the quantified subject back down into its base position, deriving the base reading ((1)).

However, this raises serious questions about the ECP and quantifier movement at LF. How does the chain "headed" by the quantifier satisfy the ECP after it has lowered? At that point the trace in Spec,IP is not c-commanded by its antecedent. Using comparative evidence from Mandarin Chinese and English, Aoun & Li (1989) argue that scope is determined by the following principle (p.141):

- (20) The Scope Principle: A quantifier A has scope over a quantifier B in case A c-commands a member of the chain containing B.

They show that (20) accounts for sentences analogous to (19) containing two quantifiers:

- (21) a. Someone_i seems [_{t_i} to love everyone].
 b. [_{IP} someone_i [_{IP} x_i [_{seems} [_{IP} everyone_j [_{IP} t_i to love x_j]]]]]]

At LF ((b)), someone c-commands everyone, and everyone c-commands the NP trace t_i of someone; this accounts for the ambiguity and no quantifier lowering is required. What is crucial here about Aoun & Li's Scope Principle is that it claims that quantifier interpretation is sensitive not only to quantifiers and their variables, but also to NP traces.

However, (20) applied directly to (19b) does not obviously predict the ambiguity; (19b) appears to contain only one quantifier and (20) is a principle governing interacting quantifiers. But (19b) shares with (21) a crucial point: the S-structure subject is "raised" by NP movement from the lower clause, leaving an NP trace behind. What seems to unify the two sentences is the fact that the quantifier appears in two NP positions: the two NP positions appear to be associated with different readings for the quantified NP.

We might suppose, then, that in fact the matrix verb seem, or perhaps its tense, has quantificational properties and is in some way interacting with the quantifier. That is, on one

reading, the quantifier has scope over the verb/tense; on the other reading, the "lowered" reading, the verb/tense has scope over the quantifier, actually its trace, as predicted by (20). I will assume this is the case and that the ambiguity of (19b) follows, then, from Aoun & Li's Scope Principle in (20).

Now, we have accounted for the ambiguity of (19b); the question remains as to why (19a) cannot also receive two interpretations. The government account outlined in the preceding section, at least *allows* the associate NP to remain *in situ*, deriving the base reading. But, what blocks QR from applying and deriving the wide scope matrix reading? I will suggest here, and justify fully in Section 2, that the base position of the associate NP is not properly governed; a trace left in this position cannot be a properly governed foot of an A' chain. Thus, QR is blocked from applying to the associate.

What about ER? Clearly ER makes the wrong predictions: at LF, when (20) applies, *a unicorn* is in Spec,IP heading an A chain with a trace in the base position of the associate. Thus, both the matrix reading and the base reading should be readily available. This is not the case, which further weakens support for ER as an account for *there* sentences.

1.4.2. *Negation.* Along the same lines as the preceding argument, ER requires that the following two sentences have the same LF representation:

- (21) a. There is not a unicorn in the garden.
b. A unicorn is not in the garden.

At LF, both sentences have *a unicorn* in Spec,IP. Given these identical LF representations, the sentences should have identical interpretations. This is not the case. (21b) has two readings depending on the scope of negation, while (a) has only one. The two readings (b) has are: (1) it is not the case that there is a unicorn in the garden. Negation has scope over the whole sentence; and (2) a specific unicorn is not in the garden. Negation has scope over the small clause. (21a) has only the reading in (1), where the scope of negation is the whole sentence.

ER predicts that both sentences in (21) should have two A positions in which scope can be determined. This would incorrectly allow a wide scope reading of *a unicorn*. However, the difference in readings follows immediately on the government account: (b) has two readings because it has two A positions in its chain in which the different readings can be computed. (a), on the other hand, has only the base position and QR is not allowed because this position is not properly governed; thus, only the narrow scope reading of *a unicorn* is available. These facts further tip the balance away from ER and towards the government account I am defending here.

1.4.3. *Many/Some Students*. This argument proceeds like the previous two. ER assigns the following two sentences identical LF representations:

- (22) a. There were many/some students at the meeting.
b. Many/some students were at the meeting.

Both sentences have an LF representation in which *many/some students* is in Spec,IP. This predicts that (a) and (b) should have identical interpretations. This also turns out to be an incorrect prediction, as discussed in Milsark (1974, 1977).

As in the preceding examples, the sentence in which the associate is in Spec,IP at S-structure has two readings while the other has only one. The two readings for (22b) are: (1) the "cardinal" reading, where *many/some students* means something like "a large/smallish number of students"; and (2) the "proportion" reading, where *many/some students* means something like "a large/smallish proportion of the students" or "many/some of the students". (22a) has only the reading in (1), the cardinal reading.

If we assume that the two readings correspond to two different positions, as in the preceding subsections, ER again is faced with difficulties. On ER both sentences have an LF representation with an A chain containing two positions conceivably entering into scope relations. The fact that only (b) actually shows these ambiguities further weakens the ER account.

On the other hand, the government account can account for the differences straightforwardly, as above: only (b) has two readings because only (b) contains two positions entering into scope relations. (a) has the associate interpreted only *in situ*.

1.5. *Summary and Some Speculations*

In this section I have provided a number of arguments against expletive replacement; I have also provided an alternative approach, the "government" account according to which *there* sentences are expanded small clauses as in Stowell (1978). Further, I suggested that the base position of the associate NP is not a properly governed one, explaining the lack of QR out of this position; this point will be carefully defended in the next section. In the remainder of this section I will speculate a bit further on the nature of the *there* construction in English, taking as a starting point several observations made in Milsark (1977).

1.5.1. *"There" and the Individual-Level/Stage-Level Distinction.* Milsark (1977) notices several other generalizations with respect to *there* sentences not mentioned above:

- (a) only predicates of a certain semantic type occur
- (b) NPs are never allowed as predicates
- (c) subjects of a certain type of predicate must have "strong" determiners

Starting with (a), he gives the following as examples of predicates allowed in *there* sentences: sick, drunk, stoned, closed/open, clothed/naked, stalled (of cars), etc. Predicates that do not occur in *there* sentences include: tall, intelligent/stupid, cross-eyed, wooden, fat/skinny, heavy/light, four-turreted, etc. (p. 12). He calls the type of predicate allowed, "state" and the type disallowed, "property". This classification, however, immediately brings to mind another semantic distinction in predicates discussed in Carlson (1977) and more recently, Kratzer (1989) and Deising (1988, 1990): the "stage-level" and "individual-level" predicate distinction. If this correlation turns out to be correct, then the only predicates allowed in *there* sentences are stage-level predicates (Milsark's "state" predicates). In fact Kratzer (1989) makes this claim.

As Kratzer and Deising have argued, this predicate type distinction often has syntactic manifestations. Taking Kratzer (1989) for example, she argues that various facts in German support the conclusion that the two types of predicates project different D-structures. Her specific proposal is that individual-level predicates project their subject theta role directly into Spec,IP; on the other hand the subject theta role of a stage-level predicate is projected into a VP-internal position. She argues that the difference stems from a difference in argument structure: stage-level predicates have an extra argument, "e", an event variable (Davidson 1966); e, the "highest" argument, is projected outside the VP, while all the other arguments are projected VP-internally. Individual-level predicates also project their highest argument outside the VP, but in their case this is the subject argument. This can be roughly schematized as follows:

- (23) a. stage-level: [IP "e" [VP/SC subject PRED...]]
b. indiv.-level: [IP subject [VP/SC/? PRED...]]

In the case of (a) at S-structure the subject argument moves to Spec,IP while in (b) no such movement is necessary.

This account, combined with the generalization of Milsark's that only stage-level predicates are allowed in *there* sentences, suggests an interesting possible approach to these sentences. The basic hypothesis is that *there* is actually the overt spell-out of the event variable "e". Thus, in *there* sentences, the NP movement normally associated with stage-level sentences is not possible because "e" has a syntactic manifestation. This hypothesis would straightforwardly

account for the fact that only stage-level predicates are possible with *there*: there is no position for *there* in a sentence with an individual-level predicate:

- (24) a. stage-level: [IP there [VP/SC subject PRED...]]
b. indiv.-level: [IP subject [VP/SC PRED...]]

Another favorable outcome of this hypothesis would be that *there* is inherently associated with the predicate, since it is in effect one of its arguments; this will then account for the observed locality between *there* and the associate. Both will be linked to the predicate in D-structure so at no point can they get "too far" apart; this was property (1) of *there* sentences discussed in Section 1.3:

- (25) *There seems that John saw *a man*.

We are now able to address the other two generalizations Milsark noticed about these sentences:

- (b) NPs are never allowed as predicates
(c) subjects of a certain type of predicate must have "strong" determiners

First, Milsark noticed that NPs, when used as predicates, seem to be the "property" type, not the "state" type. He gives the following sentences to illustrate (p. 14):

- (26) A drunk ambled down the street
(27) a. John was a drunk
b. John was a nude
(28) a. ??John was a drunk at Mary's party
b. ??John was a nude at Mary's party

(26) is ambiguous: *a drunk* can be interpreted as either a property or state. However, if the NP is a predicate only the property reading is available as (27) shows. Forcing the NP to try to be a state results in a very odd sentence as (28) shows. Thus, his second generalization is that NP predicates are only property-type predicates. In the terms we are using that means that NP predicates are always individual-level predicates.

It is easy to see where this argument is going: since NP predicates are always individual-level and individual-level predicates are structurally incompatible with *there* sentences, *there* sentences do not occur with NP predicates. This is true:

- (29) a. *There is a man a drunk.
 b. D-S: [a man is [a drunk]]

As (b) shows, there is no position for *there* in a sentence with an individual-level predicate. Thus, NPs are correctly excluded as predicates in *there* sentences.

This brings us to Milsark's third generalization. He noticed that the interpretation of the subjects of property-type predicates is constrained in a way that the interpretation of the subjects of statives is not. For example (p. 15):

- (30) a. Some/many people were sick.
 b. Some/many people were tall.

What he noticed was that (a) is ambiguous, much like the ambiguity discussed above (Section 1.4.3.): one reading is the proportion reading, that a smallish/large proportion of some group of people were sick; the other reading is the cardinal reading, that a smallish/large number of people were sick. On the other hand, (b) is not ambiguous; it has only the proportion reading: (b) means some/many of the people were tall. It lacks a reading in which we are talking about the number of people.

Recall how these readings were accounted for above. The cardinal reading was the "base" reading, the one assigned to the VP/SC-internal argument position. The proportional reading was the "matrix" reading, the one assigned to the position in Spec,IP. The analysis I have laid out here, then, directly accounts for these facts. On the hypothesis that stage-level predicates base-generate their subjects SC-internally and move them to Spec,IP at S-structure, the sentence in (a) has the following S-structure:

- (31) [[some people]_i were [_{SC} t_i sick]]

According to Aoun & Li's scope principle (in (20) above), the quantified NP can be interpreted in both A positions: Spec,IP and subject of SC. Thus, the two readings are derived: the cardinal reading is associated with the basic position while the proportional reading is associated with the derived subject position.

On the other hand, again following Kratzer's (1989) hypothesis, that individual-level predicates project their subject argument directly to Spec,IP, (b) has the following S-structure:

- (32) [[some people] were [_{SC/VP} tall]]

The A chain containing the quantified NP contains only one position: Spec,IP. This is the position associated with the proportional reading of the quantifier, and also the only reading that results. I take these NP facts to be striking corroboration of the present hypothesis.

Summarizing, then, in this subsection I suggested that some of the generalizations noticed by Milsark (1977) could be instantiated in more current terms following recent work by Kratzer (1989). The hypothesis defended was that only stage-level predicates are structurally compatible with *there* sentences; this accounted for the range of predicates found including the absence of NP predicates in *there* sentences.

2. A Chain Reanalysis

The aim of this section is to show that, contrary to the results of Section 1, under certain circumstances *there* and its associate NP *must* form an A chain. This claim is supported with arguments based on the fact that extraction of the associate is more restricted than extraction *out* of the associate. These arguments, which involve *that-t* phenomena and extraction out of islands, will further support the hypothesis that the associate is not in a properly governed position. It will turn out that the only LF representation amenable to extraction of the associate is one in which the trace of the associate and *there* have *reanalyzed* as an A chain, the head of which is in a properly governed position. An independent argument will be provided which supports such LF A chain reanalysis.

2.1. "That-there" Effects

2.1.1. *QR and WH movement.* In the preceding section it was suggested that the lack of QR of the associate in *there* sentences could be attributed to the lack of proper government for the associate's LF trace. This hypothesis could provide the basis for an explanation of the following contrast (adapted from Moro 1991):

- (35) a. There weren't [*many books*] in the studio.
b. There weren't [copies of *many books*] in the studio.

While *many books* cannot have wide scope over negation in (a), wide scope is possible in (b). The relevant difference between the two examples is that wide scope in (a) would have to involve QR *of* the associate; in (b) it involves QR *out of* the associate. As we know from the preceding section, QR of the associate is impossible generally and this was attributed to lack of proper government for that position. Now, the fact that such extraction is possible in (b) suggests that the position of *many books* in that sentence *is* properly governed. This suggestion is supported by the following contrast:

- (36) a. ?What_i did you wonder whether I saw [copies of *t_i*] in the studio?
 b. *Where_i did you wonder whether I saw John *t_i*?

Generally, extraction out of a *wh* island of an element which is not properly governed results in a strong violation as shown in (b). This contrasts with the milder violation in (a), which suggests that the trace of *what* is properly governed. And thus, by analogy, we can assume that the LF trace of *many books* in (35b) above is also properly governed.

The hypothesis that the associate in the *there* construction is not in a properly governed position leads to further predictions. Like QR, *wh* movement of the associate should be impossible while such movement out of the associate should be fine. This prediction, on the surface, appears to be incorrect:¹³

- (37) a. How many men were there *t* at the party last night?
 b. How many men were there pictures of *t* at the party last night?

Both sentences are perfect indicating that the ECP has been satisfied. However, if the above discussion is correct, that the position of the associate NP is not properly governed, then how does (a) satisfy the ECP? The answer can be found by examining the behavior of (a) in an embedded environment. The following contrast is telling:

- (38) a. How many men did you say [there were at the party last night]?
 b. ??How many men did you say that [there were at the party last night]?

The relevant structures are the following:

- (39) a. wh_i ...say... [CP *t_i'* [C *e*] [IP there ...were *t_i* ...]]
 b. ??wh_i ...say... [CP *t_i'* [C that] [IP there ...were *t_i* ...]]

The contrast stems from the difference in complementizer. In the case of a lexical complementizer, *that*, the sentence is degraded ((b)). While, with a null complementizer, the sentence is fine ((a)). This contrast is reminiscent of the *that-t* effect also found in English:

¹³Moro (1991), however, argues that sentences like (a) are ungrammatical based on his example (i) (p.25, fn. 20):
 (i) *Which girls do you think that there are.

- (40) a. *How many men* did you say [*t* were at the party last night]?
 b. *?*How many men* did you say that [*t* were at the party last night]?

Disregarding for the moment the somewhat harsher character of the degradation found with *that* in (40b) when compared with (39b), I will proceed with the hypothesis that they should receive a common explanation (I have no interesting explanation for their contrast). Examining the structures associated with (40) we can narrow down the differences between (a) and (b):

- (41) a. $wh_i \dots [CP t_i' [C e] [IP t_i \dots]]$
 b. *? $wh_i \dots [CP t_i' [C that] [IP t_i \dots]]$

Again, the contrast stems from the difference in complementizer. The lexical complementizer causes a degradation while a null complementizer allows *wh* extraction. This phenomenon has recently been treated quite successfully by Rizzi (1990). His main idea is that in order for the subject position to be properly governed in English, agreement features in Comp must be triggered by Spec-head agreement with the trace of the subject in Spec,CP. It is these special agreement features in C which serve to properly govern the subject in Spec,IP. These agreement features are inherently incompatible with a lexical complementizer in English and thus, *that* is excluded in this configuration:

- (42) a. $wh_i \dots [CP t_i' [C AGR_i] [IP t_i \dots]]$
 b. *? $wh_i \dots [CP t_i' [C that] [IP t_i \dots]]$

What is important is that when the ECP applies, presumably at LF, the A' chain headed by *how many men* in (40), has a foot in a properly governed position. In (40b) the foot of the A' chain is not properly governed because of the lexical complementizer. In (40a), however, the foot is properly governed by agreement features in C, as shown in (42a).

What can this analysis tell us about the *there* sentences in (39) above, the structures of which are repeated here?

- (43) a. $wh_i \dots [CP t_i' [C e] [IP there \dots t_i \dots]]$
 b. ?? $wh_i \dots [CP t_i' [C that] [IP there \dots t_i \dots]]$

I think, though, that at least part of the ungrammaticality of (i) can be attributed to the "definiteness effect" (cf. Safir 1982, Belletti 1988) associated with *there* sentences and the choice of *wh* phrase, in this case one being in some way too "definite". Also, the lexical complementizer degrades the extraction (see below).

If an explanation analogous to the *that-t* effect is to be found then the following must be true: while t_i is the S-structure position of the foot of the A' chain headed by wh_i (*how many men* in (39)), at LF when the ECP applies, the foot of this chain is the position held by *there*. Thus, at LF, the A' chains associated with the structures in (43) are the following:

- (44) a. $wh_i \dots [CP t_i' [C AGR_i] [IP there_i \dots]]$
 b. $??wh_i \dots [CP t_i' [C that] [IP there_i \dots]]$

If these structures are correct, however they are to be derived, then the account of the *that-t* effect can immediately be extended to this contrast. In both, the foot of the A' chain is *there*. In (a) the trace in Spec,CP triggers agreement in C which in turn serves to properly govern the foot of the chain in Spec,IP. In (b), on the other hand, agreement cannot be triggered because of the presence of the lexical complementizer; the foot of the A' chain (*there*) is not properly governed and the sentence is degraded.

2.1.2. *LF Chains.* As mentioned above, for this account to go through, the position of the *wh* trace at S-structure cannot be the foot of the A' chain at LF or the contrasts above make no sense. It appears then, that the S-structure position of the associate's trace is actually the foot of an A chain headed by *there*. Then at LF, we have two well-formed chains:

- (45) a. A' chain: [*wh, t', there*]
 b. A chain: [*there, t*]

The question then becomes, how is it that *there* and the associate come to form an A chain? There are two possibilities. The first possibility is expletive replacement. However, besides the numerous arguments in the previous section against ER, there is a conceptual problem here: what would ER *be* in this case? It would require the movement of the *wh* trace from the position of the associate to Spec,IP, leaving an A trace. Conceptually, this seems odd. If traces are simply empty positions, how can they move?

On the other hand, a second possibility for forming an A chain between *there* and the associate could be developed. The basic idea would be that at LF, when faced with an uninterpretable representation like (46a), a "reanalysis" occurs such that the associate forms an A chain with the expletive ((46b)). This would basically be a process which results in a configuration like the output of ER without the conceptually unappealing process of movement of traces:

- (46) a. uninterpretable representation: $wh_i \dots [CP t_i [C AGR_i] [IP there \dots t_i]]$
 b. reanalyzed as A chain: $wh_i \dots [CP t_i [C AGR_i] [IP there_i \dots t_i]]$

This reanalysis can be thought of as a coindexing process between the trace of the associate and the expletive. Upon this coindexing, the AGR in C comes to properly govern *there* and the A' chain finds itself a properly governed foot.

A chain reanalysis is reminiscent of the account of *there* sentences in Safir (1982). There he argues that the associate, being a quantified NP, *must* undergo QR; after QR a representation results in which *there* is automatically interpreted as the foot of the A' chain and the original trace of the associate, the foot of the A chain headed by the expletive. In two ways the present account differs from that of Safir (1982): first, since QR is required on his account he loses any natural explanation for the scope contrasts pointed out in Section 1.4; there we saw that the copular sentences ("alternate forms") related to the *there* sentences allowed more interpretations for the NP subject. This contrast is predicted here as a result of the fact that the associate is not allowed to QR due to lack of proper government. Secondly, on Safir's account *there* and the associate *always* form an A chain which, as we saw in Section 1.1., is often technically unfeasible. The present account is to be preferred in that it does not require A chain formation in the general case; A chain reanalysis appears to be needed just in case no otherwise interpretable LF representation exists.

2.1.3. *A Chain Reanalysis.* In the preceding subsection I suggested that there is a process of A chain reanalysis which, in effect, associates an S-structure A' trace with a c-commanding A position such that the resulting configuration is one where the original A' trace is interpreted as the foot of an A chain headed by the original A position at LF; and further, the new head of the A chain is the foot of the original A' chain. Above, this reanalysis was required because the S-structure A' trace was not in a properly governed position; reanalysis allowed it to form an A chain with a position which was properly governed, the result of which was two well-formed LF chains:

- (47) a. A' chain: [*wh*, *t'*, *there*]
b. A chain: [*there*, *t*]

There is another case in which such reanalysis is required if certain current assumptions are correct.

Chomsky (class lectures 1990 and 1991; 1991, 1992¹⁴) suggests that all structural Case is assigned via Spec-head agreement between AGR and NP (DP). Nominative Case is assigned

¹⁴Chomsky (1992) is a manuscript which has circulated without the author's permission. I cite it here for completeness.

in the more or less traditional fashion: DP moves to Spec,AGR_s ("subject" agreement--replaces Inflection); nominative Case and subject agreement are then transferred in the Spec-head relation (as in (48)). However, the innovation in this system is that objective or accusative Case is assigned in an analogous manner: DP moves to Spec,AGR_o ("object" agreement), which immediately dominates VP, and objective Case is assigned to DP by AGR_o (as in (49)):

- (48) a. [AGR_sP *e* [AGR_s]...[VP DP_{*i*} ... b. [AGR_sP DP_{*i*} [AGR_s]...[VP *t_i*...
 (49) a. ...[AGR_oP *e* [AGR_o][VP ... DP_{*j*}... b. ...[AGR_oP DP_{*j*} [AGR_o][VP ...*t_j*...

In the (a) examples we see the D-structure configurations: the subject and object DPs are still in VP. In (b) we see the configurations required for Case assignment: Spec-head agreement with AGR. For English, the difference between subjects and objects has to do with the level at which the Spec-head agreement must be met. For subjects, this is S-structure; thus DP_{*i*} moves to Spec,AGR_s by S-structure. However, for objects, it is LF; so DP_{*j*} moves to Spec,AGR_o at LF. In fact, it appears that movement to Spec,AGR_o is blocked at S-structure.¹⁵

If these assumptions are correct, an interesting problem arises in the case of *wh* extraction of the object. Since *wh* movement is an S-structure phenomenon we can assume that the foot of the A' chain, at S-structure, is in the VP, as has standardly been assumed. However, at LF when the chains are checked for wellformedness, it will be noticed that while the A' chain is well-formed, the A chain at its foot is not: it will not have a Case position and thus will violate the Visibility condition:

- (50) *wh_i* ... [AGR_oP *e* [AGR_o][VP ... *t_i*

In (50), the foot of the A' chain (*t_i*) is not a Case position; this is because, recall from above, objects get Case in Spec,AGR_o. Thus, at LF, for this representation to be well-formed (to satisfy Visibility), a relation must be formed between *t_i* and the empty Spec,AGR_o. I suggest an A chain reanalysis as discussed in the preceding subsection. In this case *t_i* reanalyzes as the foot of the A chain headed by the empty category in Spec,AGR_o and two well-formed LF chains result:

¹⁵Ultimately the difference in levels will probably be related to differences in the features within the AGR's themselves; some will need to be "checked" before PF while others can remain until LF (Chomsky 1992; class lectures 1991).

- (51) a. $wh_i \dots [AGR_{OP} e_i [AGR_O][VP \dots t_i]$
 b. A' chain: $[wh, e]$
 c. A chain $[e, t]$

Notice that this process cannot be considered expletive replacement, as there is no expletive at any level. This supports A chain reanalysis as an independently required process.

2.1.4. *Independent Proper Government.* The whole analogy between the *there-t* and *that-t* effects rests on the assumption that the base position of the associate is not properly governed. This forces the trace of the associate into a relation with *there* such that *there* becomes the foot of the A' chain. This makes a further prediction: extraction out of the associate should not be sensitive to the presence/absence of the lexical complementizer since the trace can be properly governed independently and need not be in a formal relation with *there*. This turns out to be correct:

- (52) a. How many men did you say (that) there were pictures of at the party last night?
 b. $wh_i \dots [CP t_i' [C (that)][IP there \dots [NP pictures of t_i] \dots]]$

This confirms the hypothesis that the problem with extraction of the associate is proper government.

2.1.5. *QR Revisited.* We are now in the position to give a more complete explanation to the contrast noted at the outset of this section:

- (53) a. There weren't [*many books*] in the studio.
 b. There weren't [copies of *many books*] in the studio.

It was noticed above that in (b) a wide scope reading of *many books* is possible, while in (a) negation always takes widest scope. Above I attributed the contrast to the fact that in (a) *many books* is not in a properly governed position. However, as we have seen, *wh* extraction is possible out of that position just in case it is possible for the trace left to form an A chain with *there*. Why is this not a possibility in (53a)? The answer is quite simple and follows directly from the difference in the nature of QR and *wh* extraction. *Wh* extraction involves movement to Spec,CP, while QR adjoins a quantifier phrase to a maximal projection, here perhaps IP or CP. Since QR is not to Spec,CP, AGR in C is not triggered by Spec-head agreement as in the cases of *wh* movement. Without AGR in C to properly govern *there* the special mechanism available to *wh* extraction is not available to QR:

- (54) a. *wh* mvt: [CP *wh*_i [C AGR_i][IP *there*_i ... *t*_i]]
 b. QR: *[IP QP_i [IP *there* ... *t*_i]]

In (a) *t*_i is in a chain that satisfies the ECP because it is able to reanalyze as the foot of the A chain headed by the expletive. In (b), however, *t*_i is not properly governed and has no hope of forming an A chain with something that is properly governed, since the expletive here is not properly governed.

To summarize, in this section we found further support for the hypothesis that the base position of the associate in a *there* sentence is not properly governed. A' extraction is limited to cases in which A chain reanalysis between the expletive and the associate is possible; this is the case for *wh* movement which stops in Spec,CP; if C is empty and can bear agreement features then AGR serves to properly govern *there* in Spec,IP creating a well-formed A' chain. This is impossible for QR by virtue of the fact that QR involves adjunction to XP and not movement to Spec,CP; AGR is not triggered and *there* is not properly governed. Both types of A' movement are perfect *out of* the associate just in case the trace is properly governed independently, further supporting the hypothesis that it is proper government which is causing the problem. In the following section we will see further evidence that it is really proper government of the expletive which is required for extraction of the associate.

2.2. *WH Islands*

In this section I will concentrate on the contrast found between extraction of the associate of *there* and extraction out of the associate; this contrast will become even clearer in cases where A chain reanalysis is impossible. Secondly, the continued parallelism between subject extraction and associate extraction will further support the hypothesis that they should receive an analogous account.

As is well-known (see e.g., Rizzi 1990) extraction out of *wh* islands results in mild violations if the foot of the A' chain is properly governed; on the other hand, if the foot is not properly governed the violation becomes sharper (from Rizzi 1990, p. 4):

- (55) a. ??Which problem do you wonder how John could solve *t t*
 b. *Which student do you wonder how *t* could solve the problem *t*
 c. *How do you wonder which problem John could solve *t t*

In (a), the foot of the A' chain is the object of *solve* and is properly governed by that verb; the violation is mild. However, the subject position in (b) and the adjunct position in (c) are not properly governed and the violation is quite harsh.

I have claimed that in *there* sentences the associate is not properly governed while an NP within the associate can be independently properly governed. This predicts that extraction of the associate out of *wh* islands should be consistently worse than extraction out of the associate of an NP independently properly governed. This is correct, as the following paradigm shows:

- (56) How many men did you wonder ...
- a. *whether there were *t* at the party
 - b. ??whether there were pictures of *t* at the party
 - c. *where there were *t t*
 - d. ??where there were pictures of *t t*
 - e. *if there were *t* at the party
 - f. ??if there were pictures of *t* at the party

This paradigm provides striking confirmation of the hypothesis that the associate is not in a properly governed position.

Secondly, in the case of *wh* islands, A chain reanalysis cannot help in the above sentences. This is because even if reanalysis occurred, the new foot of the A' chain, *there*, would still fail to be properly governed; the features in C are not the features of the associate, but rather the features of the other *wh* phrase and these cannot serve to properly govern the subject position. This fact is shown clearly by examples of extraction directly out of subject position (repeated from (55b)):

- (57) *Which student_{*i*} do you wonder [CP how_{*j*}[C AGR_{*j*}][IP *t_i* could solve the problem *t_j*]]

On the other hand, if the *wh* phrase in C *does* agree with the subject, it can properly govern it; this is true in the case of subject extraction, and analogously in the case of extraction of the associate:

- (58) a. I wonder [CP how many men_{*i*}[C AGR_{*i*}][IP *t_i* were at the party]
b. I wonder [CP how many men_{*i*}[C AGR_{*i*}][IP there_{*i*} were *t_i* at the party]

As the earlier examples in this section showed, wherever extraction of a subject is blocked because the trace cannot be properly governed, for whatever reason, extraction of the associate of *there* is also blocked. As the examples immediately above show, however, wherever extraction of the subject *is* allowed, that is, where its trace can be properly governed, extraction

of the associate of *there* is allowed. This conclusion is further supported by examples like the following:

- (59) a. How many men does John expect [_{IP} t_i to be at the party]
b. How many men does John expect [_{IP} there to be t_i at the party]

In (a), t_i is properly governed ("exceptionally") by *expect*, thus allowing extraction. Analogously, *there* in (b), is properly governed by the matrix verb and extraction of the associate is possible.

The continued parallelism between subject extraction and extraction of the associate supports the idea that it is the subject position which must be properly governed for extraction of the associate to be possible. This requirement would be unexpected if there were not some syntactic link between *there* and the base position of the associate at least in the present cases. On the account presented here, that link is established by A chain reanalysis which results in a configuration completely parallel to the configuration involving extraction *directly* from subject position.

Summarizing, in this section various types of evidence were presented suggesting that the base position of the associate of *there* is not a properly governed one. Extraction from that position is only possible, then, if the associate can form an A chain with a properly governed element, *there*. This was corroborated by comparing associate extraction and subject extraction: in every case, if the subject position could be properly governed the associate could be extracted. Further, QR, which is an adjunction operation rather than a movement to Spec,CP, cannot trigger AGR in C and thus cannot create a configuration in which *there* might be properly governed. Thus, QR of the associate is always impossible.

3. Reanalysis and Economy

In Section 1, I presented evidence that showed that expletive replacement is not the correct account of *there* sentences in English. First, I showed that ER cannot be *required* because in a number of cases it would force violations of otherwise respected principles of grammar (Section 1.1). Secondly, I showed that ER cannot even be *possible* in a number of cases because it would predict structures not attested; in fact establishing *any* A chain between *there* and the associate was shown to be incorrect (Sections 1.2, 1.3). I then provided an account of *there* sentences which neither *requires* nor *allows* something like ER in such sentences. In Section 2, on the other hand, I presented evidence that in certain specific cases, A chain formation between *there* and the associate was *necessary* (and thus must be *possible*). I

suggested a mechanism of A chain reanalysis to account for this A relation; this process was noticed to be needed just in case there was no other way to "save" the representation involving *there*.

However, the conclusions from Sections 1 and 2 appear to lead to a contradiction: on the one hand, in the general case there can be no A chain between *there* and the associate. On the other hand, in certain cases, such an A chain relation is required. How is this contradiction to be reconciled? If A chain reanalysis is sometimes possible (as suggested by Section 2), why is it *not* possible in the general case (as suggested by Section 1)?

It seems, then, that A chain reanalysis must be viewed as a sort of "last resort" process, not generally possible unless absolutely necessary to save an uninterpretable LF representation. This type of restriction on a rule of grammar is reminiscent of Chomsky's recent discussion of "economy" principles, one type of which allows rules to apply only in case they will create an interpretable LF object; if an object is already a properly interpretable at LF, no rule can apply to it (Chomsky 1991).

I take this tack with some trepidation since these "principles" of Economy have yet to be fully worked out and formalized, as they are still fairly ill-understood; however, intuitively, they seem to be on the right track since they reduce the amount of "gratuitous" rule application. Thus, I submit the present account of *there* sentences, with its "last resort" mechanism of A chain reanalysis, as another case supporting some form of Economy theory.

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