

On the syntax of ‘TH/EX’

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1. Introduction

Chomsky (1999) proposes that arguments can be displaced by an operation called ‘Thematization/Extraction’ (TH/EX), which applies in the phonological component and which adjoins the argument to the left or to the right of ν P. I argue in this paper that the cases of displacement that Chomsky refers to are truly syntactic operations.

I start the discussion, in section 2, by giving a brief overview of the proposal in Chomsky (1999). Then in section 3, I turn to the so-called leftward ‘TH/EX’, the operation whereby an underlying object is moved to the left of a (passive) participle. Svenonius (2000) and Holmberg (2001) have argued, on the basis of Scandinavian, that this is a syntactic operation. I add some more arguments to that effect, and I demonstrate that while it seems to be true, as Chomsky claims, that leftward ‘TH/EX’ is obligatory in English, rightward ‘TH/EX’, which puts a subject in clause-final position, is in fact dispreferred by many speakers. Hence, rightward ‘TH/EX’ should get a different analysis than leftward ‘TH/EX’.

In the remaining sections of the paper I deal with the syntax of rightward ‘TH/EX’. In section 4 I show that clause-final subjects are found in many languages outside of English, and they generally have a marked discourse function. My proposal is that constructions with clause-final subjects result from moving the subject to a position in the CP-domain and then raising the rest of the clause to an even higher position. In non-prodrop languages like English and Scandinavian such constructions require an expletive in Spec-IP. However, I argue in section 5 that while the Scandinavian expletive *det* is a pronominal element that is coindexed with the lexical subject, the English expletive *there* in presentational constructions is the spellout of a copy of the subject. The absence of definiteness effect in English clause-final subject constructions then follows. Another consequence is that unlike their Italian counterparts, English clause-final subjects cannot get a generic interpretation. I also look briefly at the English locative inversion construction, where the expletive is absent.

In section 6 I address the interaction between ‘TH/EX’ and *wh*-movement, and I conclude that contrary to the claim in Chomsky (1999), this interaction can be explained without resorting to the assumption that ‘TH/EX’ applies in the phonology. The topic of section 7 is the so-called ‘transitive’ expletive construction, which Chomsky (1999) sees as another

instantiation of ‘TH/EX’. I show that the construction in question can be straightforwardly analysed without any reference to argument displacement. My conclusions are summed up in section 8.

2. On ‘Thematization/Extraction’ in Chomsky (1999)

According to Chomsky (1999), it is ungrammatical in English to leave the underlying object of an unaccusative or passive verb in place (and insert an expletive in the surface subject position). He illustrates this claim with the following examples (Chomsky’s (22i-iii)):

- (1) a. * There came several angry men into the room.
 b. * There arrived a strange package in the mail.
 c. * There was placed a large book on the table.

While constructions corresponding to those in (1) are perfectly grammatical in e.g. Italian, Dutch, and Scandinavian, we will find one of the following alternatives in English in the case of a passive:

- (2)a. There were several packages placed on the table.
 b. ? There were placed on the table several packages.

We see here that the object has moved to the left of the passive participle in (2a) and, as it appears, to the right periphery of the clause in (2a). These movement operations are subsumed by Chomsky under the label ‘Thematization/Extraction’ (‘TH/EX’).

Chomsky further suggests that the marginal English construction exemplified in (3), which could be characterized as a transitive expletive construction with the subject displaced to the right, is another instance of the ‘TH/EX’ operation.

- (3)a. There entered the room a strange man.
 b. There hit the stands a new journal.

Chomsky goes on to argue that ‘TH/EX’ is an essentially phonological operation, moving an argument to the edge of vP , which is a weak phase when the verb is unaccusative or passive. One of his arguments in favour of a phonological analysis of ‘TH/EX’ is that this operation does not yield the surface-semantic effects, having to do with specificity etc., that

are seen elsewhere when subjects or objects are displaced. Another argument is that ‘TH/EX’ is apparently incompatible with other movement operations that might apply to the nominal that is displaced by ‘TH/EX’. For example, the displaced nominal cannot subsequently undergo *wh*-movement, according to Chomsky. He gives the examples in (4) as an illustration of this claim.

- (4)a. * How many packages did there arrive in the mail?
 b. * How many packages were there placed on the table?
 c. * How many men did there enter the room?
 d. * How many journals did there hit the stands?

Following this line of reasoning, he also concludes that since (5a) does not easily allow *wh*-movement, as shown in (5b), (5a) is formed by ‘TH/EX’.

- (5)a. ? There arrived three men.
 b. * How many men did there arrive?

Moreover, it appears that not only is *wh*-movement of the constituent displaced by ‘TH/EX’ barred, it is also not possible to extract a part of the displaced nominal—hence the contrast in (6).

- (6)a. What are they selling books about *t* in Boston these days?
 b. * What are there books about *t* being sold in Boston these days?

However, ‘TH/EX’ and *wh*-movement may be combined in one single clause if they do not apply to the same phrase. This is shown in (7).

- (7)a. To whom was there a present given?
 b. ? At which airport did there arrive three strange men?

Chomsky’s conclusion is that both the input to and the output of the ‘TH/EX’ operation are inaccessible to syntactic rules entirely. Consequently, ‘TH/EX’ must be an operation of the phonological component. This conclusion is what I will argue against here.

3. Leftward ‘TH/EX’

In this section I address the so-called leftward ‘TH/EX’, where an object moves to the left of a (passive) participle. First, in 3.1, I deal with leftward ‘TH/EX’ in certain varieties of Scandinavian, where the operation appears to be optional. I show that bare singular nominals are disfavoured in preparticipial position, although they are fine in postparticipial position. This suggests that leftward ‘TH/EX’ takes place in syntax, at least in Scandinavian.

In 3.2 I look at ‘TH/EX’ in English. I argue that contrary to the claim put forward in Chomsky (1999), many speakers of English would rather leave the argument in place than move it to the right periphery in unaccusative expletive constructions. In addition, if an auxiliary is present we see that leftward ‘TH/EX’ is not possible at all. In expletive passive constructions, by contrast, leftward ‘TH/EX’ appears to be obligatory. My conclusion is that leftward ‘TH/EX’ is a syntactic operation triggered by the passive participle. As for rightward ‘TH/EX’, it is not simply an alternative to leftward ‘TH/EX’—it has a different status altogether. The details of rightward ‘TH/EX’ will be dealt with in the sections that follow.

3.1 Leftward ‘TH/EX’ in Scandinavian

Svenonius (2000) and Holmberg (2001) both argue that the leftward variety of ‘TH/EX’ is an operation that takes place in narrow syntax (see also Lasnik 1999). In the following, I present another argument that leads to the same conclusion.

In Swedish and in some varieties of Norwegian, both the order participle > object and the order object > participle is possible in expletive passive constructions (other varieties of Norwegian allow only the participle > object order). This is illustrated in (8), the examples being Norwegian. One can also note here that while the participle agrees with the object in gender and number in the object > participle order, the participle has the neuter singular form in the participle > object order.¹

(8)a. Det blei skot-i /*skot-ne fem ulvar her sist vinter.
EXPL became shoot-PTC.NEUT.SG/shoot-PTC.PL five wolves herelast winter
 ‘Five wolves were shot here last winter.’

b. Det blei fem ulvar skot-ne /*skot-i her sist vinter.
EXPL became five wolves shoot-PTC.PL/shoot-PTC.NEUT.SG herelast winter
 ‘Five wolves were shot here last winter.’

Now recall that an argument put forward by Chomsky (1999) as support for the phonological analysis of ‘TH/EX’ is that it has no semantic effect. This argument is rejected by Holmberg (2001), who states that in Swedish, an (underlying) object that precedes the participle should preferably be quantified, and in particular it should not be a bare plural. That is, according to him the following pattern is found:

- (9)a. Det blev skriv-et böcker/några böcker.
EXPL became write-PTC.NEUT.SG books/some books
 ‘Some books were written.’
- b. ?? Det blev böcker skriv-na.
EXPL became books write-PTC.PL
 ‘Books were written.’
- c. Det blev några böcker skriv-na.
EXPL became some books write-PTC.PL
 ‘Some books were written.’

However, it appears that not all speakers of Swedish share Holmberg’s intuitions in this respect. For some, a bare plural is just as good in preparticipial position as in postparticipial position. Speaking a Norwegian dialect with the same participial syntax as in Swedish, I tend to share this view. Moreover, as far as I have been able to establish, bare plurals are quite acceptable in preparticipial position in English as well, contrary to what Holmberg (2001) claims. Thus, the requirement that preparticipial nominals should not be bare plurals apparently does not hold in general.

In Mainland Scandinavian there is however one type of nominal whose position relative to the participle makes a difference. In these languages, nouns that are normally countable may appear in the singular form unaccompanied by any determiner or quantifier, even in argument positions. I will refer to nominal phrases of this type as bare singular nominals (BSN). A Swedish example of a BSN in object position is given in (10a). Notably, this example is just as good as (10b), where the object is a singular noun with an indefinite determiner.

- (10)a. Det blev skjut-et varg här i vintras.
EXPL became shoot-PTC.NEUT.SG wolf herelast winter
 Närmare bestämd, en.
more precisely one.
 ‘(One or more) wolves were shot here last winter. More precisely, one.’
- b. Det blev skjut-et en varg här i vintras.
EXPL became shoot-PTC.NEUT.SG a wolf here last winter
 # Närmare bestämd, en.
more precisely one.
 ‘A wolf was shot here last winter. # More precisely, one.’

There is a meaning difference, though, between (10a) and (10b). Whereas (10b) means that exactly one wolf was shot, the number of wolves is not specified in (10a), where the object is a BSN. Accordingly, a continuation that contributes this specification is felicitous only in (10a), as indicated. What (10a) asserts when this continuation is absent is that at least one individual belonging to the reference of the noun *varg* ‘wolf’ was shot.²

Now while the examples in (10), with the object in postparticipial position, are both uncontroversially grammatical, a clear difference in grammaticality arises if the object is moved to preparticipial position, as in (11). (11a), with a preparticipial singular nominal with an article, is judged as fine by every speaker who accepts the order nominal > participle at all. Constructions with a BSN in preparticipial position, on the other hand, are rejected by most of these speakers. Their judgement is indicated in (11b). A few speakers can marginally accept preparticipial BSNs, as in (11c). As we see, there is then no agreement between the participle and the preparticipial BSN.

- (11)a. Det blev en varg skjut-en /*skjut-et här i vintras.
EXPL became a wolf shoot-PTC.SG/shoot-PTC.NEUT.SG here last winter
- b. *Det blev varg skjut-en /skjut-et här i vintras.
EXPL became wolf shoot-PTC.SG/shoot-PTC.NEUT.SG here last winter
- c. %Det blev varg *skjut-en /??skjut-et här i vintras.
EXPL became wolf shoot-PTC.SG/shoot-PTC.NEUT.SG herelast winter

It is interesting in this connection to note that the speakers who reject preparticipial BSNs also refuse to have a BSN as the surface subject of the auxiliary. That is, they get the acceptability pattern shown in (12ab), which exactly parallels that in (11ab).

- (12)a. En varg blev skjut-en /*skjut-et här i vintras.
a wolf became shoot-PTC.SG/shoot-PTC.NEUT.SG here last winter
- b. *Varg blev skjut-en /skjut-et här i vintras.
wolf became shoot-PTC.SG/shoot-PTC.NEUT.SG here last winter

These facts suggest that the position where *en varg/varg* appears in (11a) has something in common with the position where *en varg/varg* appears in (12a). A proposal that would capture this is found in Svenonius (2000). According to Svenonius, the relation between the underlying object and the participle in the object > participle order is a subject–predicate relation. That is, on the assumption that the passive participle suffix represents a passive *v* head, he proposes that the passive *v*P is a predicate which gets saturated by moving the object to spec-*v*P. On this account, *en varg* is in a subject position in (11a) as well as in (12a) (irrelevantly, in (12a) *en varg* is affected by additional movements leading to V2 order).

In other words, the reason why a BSN is relatively bad in preparticipial position is that nominals in this position have certain subject properties, in contrast with the postparticipial position, where we find nominals with object properties only. But this means that in Mainland Scandinavian, movement from postparticipial to preparticipial position is syntactic movement.

As for the question of why BSNs are not good in subject positions, Kallulli (1999) proposes that BSNs, as found in Scandinavian and Balkan languages, denote properties and not individuals, and that they function semantically as predicates. Because of this, the distribution of these nominals is fairly restricted.

It should be noted that despite the claim that there is a subject–predicate relation between the participle and the preceding nominal in constructions like (11a), the construction involves a fully verbal passive; it is not an adjectival passive. I will use some Norwegian examples to show this, but recall that the syntax of the DP > participle order is the same in Swedish. First, consider (13), where I give examples of adjectival passives in attributive and predicative position. As we see, in each case elements like *ny* ‘new(ly)’ and *ihel* ‘to death’ can be attached in front of the participle.

- (13)a. ein {ny-skot-en /ihel-skot-en } ulv
a new-shoot-PTC.SG/to.death-shoot-PTC.SG wolf
 ‘a newly shot wolf/a wolf shot to death’
- b. ulv-en var {ny-skot-en /ihel-skot-en }
wolf-DEF was new-shoot-PTC.SG/to.death-shoot-PTC.SG
 ‘The wolf was newly shot/shot do death’

But when a passive participle is combined with the auxiliary *bli* ‘become’, which is also the case in (8)–(12), *ihel* is still acceptable as the first element of the participial word, while *ny* is not—see (14a). It appears that *ihel* but not *ny* has the syntactic behaviour of a verbal participle. It can attach to the front of the verb, as in (14a), or follow the verb as a separate word, as in (14b). The element *ny*, on the other hand, is an adjective, and it may form a compound with an adjectival passive participle, as in (13), but it cannot combine with a verbal participle, neither as a part of the participial word nor as a separate word.

- (14)a. Det blei {ihel-skot-en /*ny-skot-en } ein ulv.
EXPL became to.death-shoot-PTC.SG/new-shoot-PTC.SG a wolf
- b. Det blei skot-en {ihel /*ny} ein ulv.
EXPL became shoot-PTC.SG to.death/new a wolf
- c. Det blei ein ulv {ihel-skot-en /*ny-skot-en }.
EXPL became a wolf to.death-shoot-PTC.SG/new-shoot-PTC.SG

Thus, the impossibility of compounding the passive participle with a non-participle element like *ny* is an indication that we have a verbal passive and not an adjectival passive. As (14c) shows, when the underlying object precedes the participle, the compounding possibilities are the same as when the underlying object follows the participle, as long as the auxiliary is *bli*. That is, we have a verbal passive regardless of whether the underlying object precedes or follows the participle.³

3.2 Leftward (and rightward) ‘TH/EX’ in English

According to Chomsky (1999), applying either leftward or rightward ‘TH/EX’ is obligatory in English expletive constructions with a passive or an unaccusative verb. He suggests that

this is due to a language-specific prohibition of the structure [V DO] in unaccusative and passive constructions.

In English expletive constructions with unaccusative verbs, leftward ‘TH/EX’ is not an option in the past and present tenses, which involve only one verb. The position to the left of this verb is occupied by the expletive, if there is one. It is therefore no surprise that (15a) is unacceptable if *there* is an expletive. However, Chomsky (1999) states that it is also ungrammatical to leave the associate of the expletive in situ, as in (15b). The only (partially) acceptable option in English unaccusative expletive constructions is to move the associate to the right, as in (15c). In other words, rightward ‘TH/EX’ is obligatory when the nominal argument does not move to the surface subject position.⁴

- (15)a. *There several angry men came into the room.
 b. *There came several angry men into the room.
 c. ? There came into the room several angry men.

However, when native speakers of English are asked to judge the grammaticality of the constructions in (15), it appears that not all of them share Chomsky’s intuitions. Of nine British and American native speakers of English that I have consulted, only two reject (15b) completely. These two also reject the rightward shifted version in (15c). In other words, they do not accept the expletive construction at all. Five of the seven who accept (15b) give (15c) exactly the same score as (15b). The remaining two of my respondents have more problems with (15c) than with (15b). Thus, for none of my respondents is (15c) better than (15b). If the judgements that these informants give are seen together, the acceptability of the constructions in (15bc) can be summed up as follows:

- (15)'b. ? There came several angry men into the room.
 c. ?(?) There came into the room several angry men.

As we see, the preferences go in the opposite direction of what Chomsky (1999) suggested. In general, it is not so bad for the argument of an unaccusative verb to stay inside VP, compared to the alternative of having it in clause-final position. In other words, rightward shifting of the argument should not be characterized as a way to save expletive constructions with unaccusative verbs in English. As it appears, the best solution is to leave the argument in place.

Actually, there are also other cases in English where the argument of an unaccusative verb apparently stays in VP. Consider the examples in (16), with an unaccusative verb and a temporal and modal auxiliary, respectively. As we see, it is perfectly fine to leave the single argument of the main verb in its base position, as in (16a), while moving the argument to the left of the verb, as in (16b), leads to strong ungrammaticality. This suggests that contrary to Chomsky's claim, there is no ban on the structure [V DO] in unaccusative constructions in English.

- (16)a. There will/might come several angry men into the room.
 b. *There will/might several angry men come into the room.

Interestingly, for the majority of the English speakers that I have consulted, having the argument of an unaccusative verb in postverbal position, as in (15b), is clearly better than leaving the underlying object of a passive verb in postverbal position, as in (17a). Others judge the two constructions to have the same status. Two of my informants agree with Chomsky (1999) that they are both ungrammatical, while two find them both acceptable. The average judgement of (17a) seems to be as indicated.

- (17)a. *?There was placed a large book on the table.
 b. ? There was placed on the table a large book.

In the case of expletive passives, most speakers prefer having the argument in clause-final position, as in (17b), over leaving it in situ, as in (17a). That is, their preferences with respect to expletive passives are the opposite of their preferences with respect to unaccusative expletive constructions.

These results suggest that the positioning of the argument in expletive unaccusative constructions is not subject to the same requirements as the positioning of the argument in expletive passive constructions. Of particular relevance in this matter is the fact that in passive constructions, there is always the option of moving the argument to the left of the participle. This movement, shown in (18), gives a result that is accepted by everyone.

- (18) There was a large book placed on the table.

Hence, it appears that the associate in an expletive passive construction obligatorily moves to the left of the participle. However, in the light of the evidence presented above, it does not seem likely that the obligatoriness of this movement is due to a ban on leaving the argument inside VP. And as Svenonius (2000) points out, objects remain in VP in ditransitive passives, as in *People were sent credit cards in the mail*. One might therefore want to propose that the argument movement that takes place in expletive passives is due to some property of the passive participle.

It can be shown that English object > participle order is similar to Mainland Scandinavian object > participle order, and different from e.g. Icelandic object > participle order (see, e.g., Vangsnes 1999, Holmberg 2001). In Icelandic, the fronted object must precede all non-finite auxiliaries, as demonstrated in (19), while in Swedish, shown in (20), and in English, shown in (21), the fronted object must immediately precede the participle (examples from Holmberg 2001).

- (19) Það munu þrjár bækur hafa (*þrjár bækur) verið (*þrjár bækur) skrifaðar.
EXPL will three books have been written
 ‘Three books will have been written.’

- (20) Det borde (*tre böcker) ha (*tre böcker) blivit tre böcker skrivna.
EXPL should three books have become written
 ‘There ought to have been three books written.’

- (21) There should (*three books) have (*three books) been three books written.

Now if the English object > participle order is like the Mainland Scandinavian object > participle order, and the latter is derived by syntactic movement, the former is also likely to be derived by syntactic movement. Then the claim put forth in Chomsky (1999) that the English object > participle order is derived by PF-movement is not correct.

A proposal that takes movement of the argument to the left of the participle to be syntactic movement having to do with properties of the participle is put forth e.g. in Svenonius (2000). According to Svenonius, in languages that have participle > object order in expletive passives, the object has its Case checked inside VP. Svenonius also assumes that the derivation goes to Spell-Out as soon as it is complete, i.e. when it has no uninterpretable features. It follows that when the object has its Case checked inside VP, the VP goes to Spell-

Out before any feature can be inserted in the derivation that would draw the object out of VP. In languages with object > participle order, on the other hand, the object does not have its Case checked inside VP. Hence, after the VP is built, it will contain uninterpretable Case features, which prevents it from going to Spell-Out directly. Then v is added on top of VP before VP gets spelled out. Svenonius assumes that v is a predicative head, so that vP is a predicate, and it will not be complete until it has a subject. Movement of the object to the Spec of the participial v is a way to saturate the predicate vP . Since VP is not yet spelled out, the object will be available for extraction, and we get the object-participle order. (Recall that the data shown in (11) and (12) above appeared to confirm the idea that the object in the object-participle order occupies a position with subject properties).

It might be of some relevance here to compare the passive participle to the progressive. Arguably, both the passive participle and the progressive have predicate-like properties, as the following indicates:

- (22)a. the infamous letter [written by the prime minister]
 b. the prime minister [writing an infamous letter]

And just like the passive participle, the progressive triggers movement of its argument to its left when it appears in expletive constructions:

- (23)a. *There were coming several angry men into the room.
 b. There were several angry men coming into the room.

Thus, it appears that there is a connection between having predicate-like properties and triggering leftward movement of the argument in expletive constructions.

4. Rightward ‘TH/EX’ outside of English

Constructions with rightward displaced subjects, as exemplified in (24), are assumed by Chomsky (1999) to be the result of the so-called rightward ‘TH/EX’, which he takes to be an alternative to leftward ‘TH/EX’ whenever an argument needs to get out of its base position. And just like in the case of leftward ‘TH/EX’, Chomsky suggests that rightward ‘TH/EX’ applies in the phonological component, outside the domain of syntax proper.

- (24)a. There was placed on the table a large book.
 b. There appeared before her a creature she had never seen before.
 c. There entered the room the new professor from Sweden.

However, I will argue in the following that rightward displacement of the subject is not really an alternative to moving the argument to the left of a passive participle. Rather, the derivation of constructions like those in (24) probably also involves movement of the argument to the Spec of the participle at some stage of the derivation. Moreover, the rightward displacement that we see here results from syntactic operations, just like the so-called leftward ‘TH/EX’. I will deal with rightward ‘TH/EX’ in English in more detail later on, but in this section, the focus will be on corresponding constructions in some other languages.

I will start, in 4.1, by taking a look at Longobardi’s (2000) observations concerning postverbal subjects in Italian. According to Longobardi, these subjects are either inside *vP*, or else they are in the CP-domain, where they have become postverbal, and in fact clause-final, because the IP has moved even higher.

In 4.2 I return to Scandinavian BSNs. I show that having a BSN subject in clause-final position is very similar to moving it to a focus position at the left periphery, which might be taken to mean that Scandinavian clause-final subjects are located in the CP-domain, just like one class of Italian postverbal subjects.

In 4.3 I address the discourse function of clause-final subjects in Scandinavian and in SOV languages like Turkish. It appears that the clause-final position is invariably associated with marked discourse functions. More precisely, a clause-final subject is either focused or backgrounded.

In 4.4 I put forward my proposal concerning the syntax of clause-final subjects. The essence of my proposal is that Longobardi’s analysis of Italian clause-final subjects should probably be extended to clause-final subjects in other languages. That is, clause-final subjects are in the Spec of a focus or topic head in the CP-domain.

Finally, in 4.5 I note that even though the opposite has been claimed, it appears that clause-final subject constructions in Italian has much in common with the constructions traditionally referred to as ‘right dislocation’. This strengthens the conclusion reached in 4.4.

- b. Telefonanospessomedici del reparto dipronto intervento. EX/GEN
telephone often doctors of.the department offirst aid

This fact leads Longobardi to conclude that unmodified BN subjects are truly postverbal, as one can also see from their ability to allow *ne*-extraction. By contrast, all subjects that get a generic reading are in reality preverbal, in the sense that they have moved to a position above *v*P. Notably, they do not allow *ne*-extraction. When they are nevertheless preceded by the predicate, this order is the result of subsequent movement of the predicate across the subject.

Longobardi further points out that the generalization just mentioned holds for subjects of unergative verbs as well as for subjects of unaccusative and passive verbs. This must mean that the verb always moves across the position where the external argument is generated. Movement of the subject across the verb again is only permitted under certain conditions—for example, a BN subject must be modified, as we have seen. In addition, only a subject that has undergone this movement can get a generic reading.

As for constructions where subjects have become postverbal as a result of the predicate having moved over a subject that has raised out of *v*P, Longobardi's specific proposal is that the (generic) subject raises to the CP-domain, and that the IP minus the subject moves to an even higher position in that domain. This means that the syntactic structure of (26b), on the generic reading, is as shown in (27).

(27) $[[_{IP} \textit{pro} \textit{telefonano} \textit{spessi} \textit{t}_{DP}] [[_{DP} \textit{medici} \textit{del} \textit{reparto} \textit{di} \textit{pronto} \textit{intervento}] \textit{C} \textit{t}_{IP}]]$

An indication that this is on the right track is the fact that postverbal generic subjects are always set off from the preceding predicate by a detectable intonational break. Postverbal subjects with an existential interpretation, by contrast, do not require this intonational break. This suggests that postverbal generic subjects are structurally detached from the predicate in a way that existential postverbal subjects are not.

Longobardi also gives some motivation for his proposal that the CP-domain is involved. In the inverted order, where the subject follows the predicate, the predicate is always understood to have a marked discourse function: it is either the topic or the focus of the sentence. If it is true that these discourse functions are connected to the CP-domain, as proposed by Rizzi (1997) and Platzack (1998), among others, it seems likely that the fronted predicate is located somewhere in the CP-domain.

Moreover, it appears that certain facts concerning adverbial placement corroborate Longobardi's analysis of the two classes of postverbal subjects. Existential postverbal subjects can be followed by adverbials, but generic postverbal subjects cannot. Thus, the subject in (28a) can only get an existential reading. The postverbal subject in (28b), which is modified and therefore only allows a generic reading, can be followed by an adverbial only if the adverbial is set off by a clear break and has afterthought intonation (Giuseppe Longobardi, p. c.)

(28)a. Qui, telefonano medici continuamente.
here telephone doctors continuously

b. ?Telefonano medici del reparto di pronto intervento...continuamente.
telephone doctors of.the department offirst aid continuously

This would follow if the subject in (28a) is inside vP , while the subject in (28b) is in the CP-domain and preceded by the raised IP. In the latter case, IP-internal adverbials would also move to the front of the subject, and the subject would be truly clause-final, in contrast to the subject in (28a).

Concerning non-prodrop languages like English, Longobardi notes that constructions exactly parallel to the Italian inversion structures are ungrammatical—see (29).

(29)a. *Often arrive late doctors.
 b. *Often call up doctors.

To explain this, Longobardi points to the fact that the raised IP must contain the canonical surface subject position. In Italian, this position is filled by *pro*, as indicated in (27). In a non-prodrop language, on the other hand, there would be an unlicensed trace in the highest Spec of IP in a structure like (27). Because of this, constructions like those in (29) are not possible in non-prodrop languages, according to Longobardi.

However, one might wonder if the English constructions shown in (24), with clause-final subjects, are not rather similar to (27) after all. It might be the case that the expletive in (24) corresponds to *pro* in (27), and that the clause-final position of the lexical subject is the result of raising the subject out of IP and then moving IP across the subject, exactly as in (27). It is in this light I now will go on to consider in more detail Germanic expletive constructions with clause-final subjects, starting with a look at Scandinavian.

4.2 More on Bare Singular Nominals

Clause-final subjects in Scandinavian and English expletive constructions have a number of properties in common with the Italian postverbal subjects discussed by Longobardi (2000). However, there are also certain differences, as we shall see.

I would first like to draw attention once more to the bare singular nominals (BSNs) that we find in Scandinavian. As we have already seen, moving a BSN to the left of a participle leads to ungrammaticality for most speakers. Having a BSN in the canonical subject position, which I for the sake of simplicity and ignoring the effects of V2 will refer to as Spec-IP, is not very acceptable either. The relevant (Swedish) examples are repeated in (30).

- (30)a. *Det blev varg skjut-en /skjut-et här i vintras.
 EXPL became wolf shoot-PTC.SG/shoot-PTC.NEUT.SG here last winter
- b. *Varg blev skjut-en /skjut-et här i vintras.
 wolf became shoot-PTC.SG/shoot-PTC.NEUT.SG here last winter

The clause-initial BSN in (31) is much better, though. Here the BSN has crossed the expletive in Spec-IP, which indicates that the BSN has undergone A'-movement. The movement in question can be characterized either as focus movement or as topic movement.

- (31) Varg blev det skjutet i Sveg i vintras.
 wolf became EXPL shot in Sveg last winter

For a precise understanding of the notions ‘focus’ and ‘topic’, I will adopt the definitions given in Lambrecht (1994), according to which focus is “the semantic component of a pragmatically structured proposition whereby the assertion differs from the presupposition” (p.213) and ‘topic’ is a referent such that the proposition “is relevant to and increases the addressee’s knowledge of this referent” (p.131).

The construction in (31) can either be intended to increase the addressee’s knowledge about the referent of *varg*, or it can be used to fill in *varg* in the presupposition that ‘something was shot in Sveg this winter’. Hence, the BSN *varg* is either focus or topic.

Interestingly, putting the BSN in clause-final position is also quite acceptable, in particular if the BSN is made heavier by adding a modifier to it, as indicated in (32).

- (32) Det blev skjutet i Sveg i vintras varg (från Ryssland).
EXPL became shot in Sveg last winter wolf (from Russia)

Making the BSN heavier would not rescue the constructions in (30), however. Hence, the basic contrast between (30) and (32) remains in spite of the heaviness effect that takes effect in (32). Moreover, this heaviness effect, which is well known from rightward displacement constructions in English, for example, and also reminiscent of the modification requirement on Italian preverbal bare plurals, would remain if the BSN *varg* ‘wolf’ in (32) were replaced by a determined nominal such as *en varg* ‘a wolf’. The heaviness effect seen in (32) should therefore not be taken to mean that BSNs have more problems in clause-final position than other nominals. Thus, we can therefore abstract away from the heaviness restriction, which is not particular to BSNs, and conclude that BSNs can appear in clause-final position.

In this case, the BSN will most naturally be interpreted as focus. That is, (32) can be used to convey that contrary to (implicit or explicit) presuppositions, among the things shot in Sveg this winter was in fact one or several wolves from Russia. More marginally, it is also possible to utter (32) in a context where *varg från Ryssland* ‘wolf from Russia’ is already an established topic. In that case, a preceding constituent must be focused, and *varg från Ryssland* will be deaccented.

Thus, we see that as far as BSNs are concerned, rightward displacement—the ‘rightward TH/EX’ of Chomsky (1999)—is more similar to leftward focus and topic movement than to leftward shift across the participle. The similarity between rightward displacement and leftward focus/topic movement might be taken to suggest that rightward displacement structures result from moving the displaced element to a position in the CP-domain, just as in the case of leftward focus/topic movement, and then moving the remainder of the clause across that element.

4.3 *The discourse function of clause-final subjects*

Just like their Italian counterparts, clause-final subjects in general correlate with marked discourse functions in Scandinavian. That is, although rightward ‘TH/EX’ does not affect truth conditions, it has an effect on discourse functions. This is another indication that the movement is not purely phonological.

To see more clearly what goes on in Scandinavian, I will make use of the fact that negation, like other operators, target the focus of the clause. Consider the Norwegian examples in (33).

- (33)a. Eg *ÅT* ikkje eplet.
I ate not apple.DEF
 ‘I didn’t EAT the apple’
- b. Eg *åt* ikkje EPLET.
I ate not apple.DEF
 ‘I didn’t eat THE APPLE’

Both in (33a) and (33b), it is the negation of the accentuated constituent that distinguishes the assertion from the presupposition. That is, the focus is the accented constituent with the negation applied to it.

Now consider the example in (34a), which is a negated clause with a clause-final subject. The most natural reading is one where the negation applies to the subject, so that the negated subject represents the focus of the clause. It is however possible to force other constituents to be interpreted as focus. In (34b), accentuation falls within the locational phrase, and accordingly, the focus is taken to be the negation of this phrase. The subject must then be an established topic, and it will receive a characteristic flat intonation. That is, the two varieties in (34) are exactly parallel to the two options that were noted with respect to discourse functions in (31).

- (34)a. Det kom ikkje inn på kontoret ein misnøgd student.
EXPL came not in at office.DEF a dissatisfied student
 ‘There didn’t come into the office a dissatisfied student’
- b. Det kom ikkje inn på KONTORET ein misnøgd student.
EXPL came not in at office.DEF a dissatisfied student
 ‘There didn’t come a dissatisfied student into the OFFICE’

The discourse function that is assigned to a clause-final subject that follows a focused constituent is characterized by Lambrecht (1994) as an ‘antitopic’. For Lambrecht, an antitopic is partly recognized by its position, which is clause-final, but in addition, it can be characterized as an unaccented lexical topic. Further, the referent of the antitopic must be highly accessible to the speaker and to the listener, and it cannot have a contrasting function or mark a new topic or a topic shift.

Such antitopics are arguably found in many languages. For example, in numerous languages where the unmarked word order is verb-final, it is nevertheless possible to have constituents, even subjects, in postverbal position. An example from Turkish is given in (35) (from Kornfilt 1997:206).

- (35) Ali-ye kitab-ı ver-di Hasan.
Ali-DAT book-ACC give-PAST Hasan
 He gave the book to Ali, Hasan'

As we see, the postverbal subject has a marked status in the discourse. Kornfilt (1997) states that postverbal constituents in Turkish represent the shared presuppositions of the speaker and the hearer, while Erguvanlı (1984) and Kural (1997) characterize their discourse function as background. For Japanese, Shimojo (1995) says that postverbal elements in this language represent active information, i.e. information that is focused in the consciousness of the discourse participants. This seems to amount to the same thing—antitopic.

4.4 *The syntax of clause-final subjects*

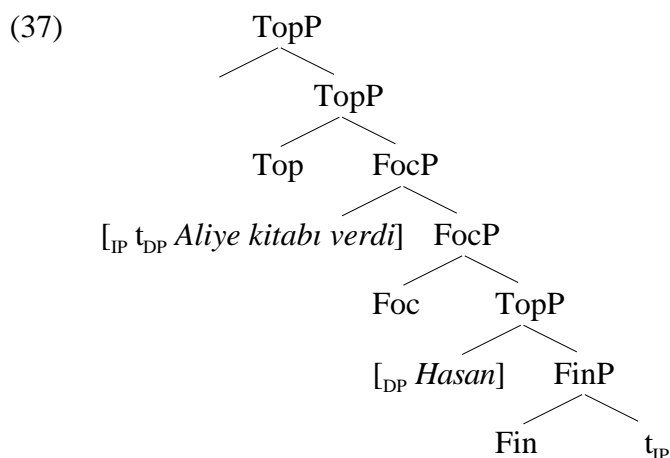
As for the syntax of postverbal subjects, Kural (1997) argues for Turkish that they must have moved, since they are islands for overt and covert movement. He further observes that postverbal constituents apparently take scope over preverbal constituents. One of his examples is the following (Kural 1997:505).

- (36) Herkes dün ara-mış üç kişi-yi
everyone.NOM yesterday call-PAST.3SG three person-ACC
 'Everyone called three people yesterday'
 (3y x [x called y yesterday]; * x 3y [x called y yesterday])

Given that scope relations in Turkish are normally determined by the c-command relations in the surface syntax, Kural concludes that since the object in this example takes scope over the subject, the object must have moved to a position where it c-commands the subject. More generally, his proposal is, contra Kayne (1994), that postverbal constituents in Turkish are right-adjoined to CP.

Kural's analysis can be disputed, though. An alternative analysis of postverbal constituents in verb-final languages is put forth in Julien (2002). On the basis of the analysis of the CP-domain found in Rizzi (1997), according to which the CP-domain contains a focus projection which is sandwiched between topic projections, Julien proposes that the lower topic positions are actually where backgrounded material is found. She also proposes that constructions with postverbal constituents in verb-final languages are derived by movement

of a constituent to a lower Spec-TopP followed by movement of the remnant IP to Spec-FocP, as sketched in (37).



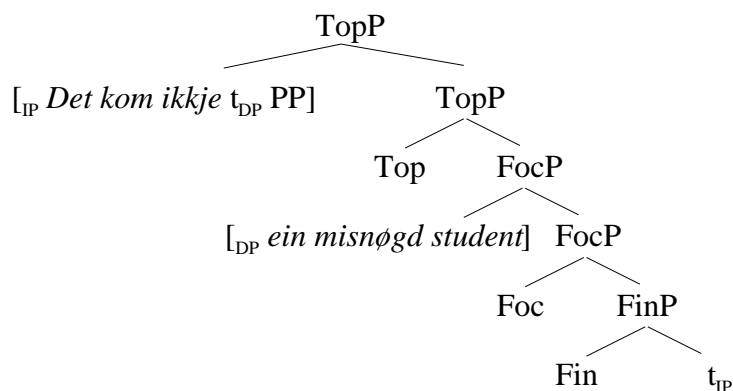
The opacity of the postverbal constituent is expected also on this analysis. If the constituent in the lower Spec-TopP is backgrounded in the discourse, elements from within this constituent cannot move to higher Spec positions. In order to do so, they would have to be either focus or ordinary topics.

The ability of postverbal constituents to take scope over preverbal constituents is not expected, however. But as Haider (1997) notes, the background status of postverbal elements can explain the scope effect. Belonging to the fixed background of the discourse, the postverbal phrases necessarily get a specific interpretation, which forces them to be outside the nuclear scope of a preverbal quantifier. This, and not the structural relation between the involved phrases, determines the scope relation between the subject and the object in (36). Hence, I conclude that constructions like (35) and (36) can have the syntactic structure shown in (37).⁵

The parallel between postverbal subjects in verb-final languages and the clause-final subject in (34b) is now obvious. I take (34b) to be derived by moving the subject to the lower Spec-TopP and the remnant IP to Spec-FocP, in a parallel fashion to (35) and (36).

Following a similar line of reasoning, the construction in (34a), where the clause-final subject is focused, could be derived by moving the subject to Spec-FocP and raising the remnant IP to the higher topic position. The syntactic structure of (34a) is then as in (38).

(38)



A possible objection to this structure is that the focused constituent is not within the scope of the negation here. However, it is easy to show that a focus expression is allowed to move out of the scope of the negation in the syntax while still be interpreted within that scope. Consider (39), where the negation clearly targets the fronted focus phrase. This is not very surprising given that the movement that the focus phrase has undergone is A'-movement, which allows reconstruction. Thus, at the semantic interface the focus phrase is within the scope of the negation.

(39) [_{DP} MISNØGD-E STUDENT-AR] har eg ikkje møtt t_{DP}.
dissatisfied-PL student-PL have I not met

The structure in (38) is admittedly more complicated, however. Not only has the focus expression been extracted out of IP, but IP has also moved across the extracted phrase. Hence, interpreting the focused element as being inside the scope of the negation would require not only the focused phrase but in fact the whole IP to reconstruct, that is, to be interpreted in the position where it appeared before movement.

In this connection it is of some interest that similar reconstruction phenomena are arguably found in Turkish. As Kural (1997) notes, it is possible for an anaphor or pronoun in a post-verbal constituent in Turkish to be bound from a preverbal position. This is shown in (40) (Kural 1997:506).

(40)a. Herkes_i dün ara-mış [_{pro_i} anne-sin-i].
everyone yesterday call-PAST mother-3SG-ACC
 'Everyone_i called his_i mother yesterday'

- b. Herkes_i dün ara-mış birbir-in-i_j.
everyone yesterday call-PAST each.other-3SG-ACC
 ‘Everyone called each other yesterday’

According to Kural (1997), the postverbal constituents undergo reconstruction in these cases. He claims that postverbal constituents reconstruct at LF whenever it is required by the binding relations, but not otherwise. We would then expect there to be no reconstruction if appropriate binding relations can be established without reconstruction. This means that if Kural’s proposal is correct, a postverbal object should be able to bind into a preverbal subject. But as (41) demonstrates, this is not possible (Murat Kural p.c.).

- (41) * Birbir-ler-in-in anne-ler-i ara-dı adam-lar-ı.
each.other-PL-3-GEN mother-PL-3SG call-PAST man-PL-ACC
 ‘Each other’s mothers called the men’

Whereas the ungrammaticality of (41) requires some additional stipulation if Kural’s (1997) analysis is adopted, it follows naturally from the analysis I am proposing. After the object and the IP have moved separately to the CP-domain, there is no c-command relation between the subject and the object. A binding relation between these arguments must therefore be established before movement to the CP-domain. But at that stage, the object is lower than the subject, and consequently, binding into the subject by the object is impossible whether or not there is reconstruction.

In (40ab), on the other hand, the binding relations that we see are compatible with the structural relations before movement to the CP-domain. Hence, if the word order at Spell-Out is derived as indicated in (37), it must be the case that at the semantic interface, both the fronted IP and the postverbal constituent are read off in the positions where they appeared before they moved to the CP-domain. That is, at the semantic interface the IP is back in its position below the CP-domain, and the object is back inside IP. Now if this is possible in Turkish, it should be possible in Norwegian as well, and accordingly, I maintain that (34a) is derived as shown in (38).

On my analysis, a construction like (42) must also involve reconstruction, since at Spell-Out, the subject is below IP, which contains a constituent that is bound by the subject.

- (42) Det låg t_i på teppet sitt_i [ein søt liten katt]_i.
EXPL lay on blanket.DEF REFL.POSS a cute little cat
 ‘A cute little cat was lying on its blanket’

Thus, at the semantic interface the subject must be read off in its IP-internal position. My conclusion is therefore that the syntactic structure of constructions with postverbal subjects can be as in (37) and (38), and that binding relations that are not in accordance with these structures are made possible by reconstruction at the semantic interface.

4.5 A note on Italian

If we now go back to the data discussed by Longobardi (2000), we recall that when a generic subject follows the predicate in Italian, the predicate is either the topic or the focus of the sentence. The postverbal subject represents, in Cinque’s terms, either ‘new’ or ‘given’ information, respectively. That is, the situation is either that the predicate is focus and the subject (anti)topic, or else the predicate is topic and the subject focus. This suggests that the configurations shown in (37) and (38) are also found in Italian.

Longobardi mentions the possibility that the constructions with postverbal generic subjects could be identified with right dislocation. He rejects it, however, on the grounds that in Italian, the constructions traditionally analysed as right dislocation structures involve a clause-final object doubled by a resumptive clitic. As demonstrated in (43), the right dislocated object cannot then be focused.

- (43)a. Li individuano facilmente, insetti di grandi dimensioni.
them identify.3PL easily, insects of great dimensions
- b. *Li individuano facilmente, INSETTI DI GRANDI DIMENSIONI.
them identify.3PL easily, insects of great dimensions

Thus, the clitic doubling right dislocation structure has only one of the two discourse function patterns that are found in constructions with postverbal generic subjects. Because of this difference, Longobardi refuses to treat the two on a par.

However, it holds in general in Italian that while a constituent that is moved to a topic position can be doubled by a clitic, clitic doubling is not possible for a constituent that is undergone moved to a focus position. This is demonstrated e.g. by the following examples, from Cinque (1990:14):

- (44)a. Gianni_{TOP}, *(lo) ho visto.
Gianni him have.1SG seen
- b. GIANNI_{FOC} (*lo) ho visto.
Gianni him have.1SG seen

Hence, if (43b) is derived by moving the subject to Spec-FocP and the IP to (a higher) Spec-TopP, we would not expect the clitic to appear anyway. In other words, the ungrammaticality of having a clitic in (43b) is no evidence that similar constructions without clitics are not derived as sketched in (38).

More generally, it appears that the patterns involving clause-final subjects that are attested in various languages are remarkably similar. This is an indication that movement of the subject to the CP-domain followed by raising of IP across the subject is a rather common phenomenon cross-linguistically.⁶

5. Clause-final subject constructions in Scandinavian and English

Having established that constructions with clause-final subjects can be derived by moving the subject to a position in the CP-domain, I will now deal in more detail with the syntax of the relevant constructions in Scandinavian and English. Scandinavian clause-final subjects is the topic of 5.1. In 5.2 I discuss the relation between the subject and the expletive in English clause-final subject constructions, and in 5.3, I show how it follows from this relation that clause-final subjects are not generic. Finally, in 5.4 I briefly compare the English expletive clause-final subject construction to the locative inversion construction, and I show that although the two constructions are similar in some ways, there are also important differences.

5.1 Clause-final subject constructions in Scandinavian

Let us start by considering the Norwegian paradigm given in (45), which is representative of Scandinavian more generally. We see that in Norwegian, an indefinite plural subject in Spec-IP, as in (45a), can get a generic reading or an existential reading. But with an expletive in Spec-IP, the lexical subject can only get an existential reading, regardless of whether it appears in its IP-internal position, as in (45b), in a focus position at the left periphery, as in (45c), or in clause-final position, as in (45d).

- (45)a. Dårleg motiverte studentar kjem sjeldan på forelesningane. GEN/EX
poorly motivated students come seldom on lectures.DEF
 ‘Poorly motivated students rarely come to the lectures’
- b. Det kjem sjeldan dårleg motiverte studentar på forelesningane. EX
EXPL come seldom poorly motivated students on lectures.DEF
- c. Dårleg motiverte studentar kjem det sjeldan på forelesningane. EX
poorly motivated students come EXPL seldom on lectures.DEF
- d. Det kjem sjeldan på forelesningane dårleg motiverte studentar. EX
EXPL come seldom on lectures.DEF poorly motivated students

This means that clause-final subject constructions in Scandinavian differ from the corresponding Italian constructions in two important respects. Firstly, clause-final subject constructions obligatory have an expletive in Spec-IP in Scandinavian, while in Italian, there is no overt expletive. Secondly, clause-final subjects in Scandinavian are never generic, whereas in Italian, they may well be generic.

The syntactic properties demonstrated in (45) can be explained as follows. Generic indefinite subjects in Scandinavian must move to Spec-IP, as in (45a). Existential indefinite subjects can also move to this position, or alternatively appear in a lower (possibly *vP*-internal) position (cf. Diesing 1992). When the lexical subject appears in the lower position, Spec-IP is obligatorily filled by an expletive, as in (45b). Moreover, a subject in the lower position can be fronted across the expletive, as in (45c), in which case the existential reading is retained. Finally, the IP can be fronted across a subject that has been so extracted. This gives constructions like (45d).⁷

In Scandinavian, the IP can move across an extracted subject only if there is an expletive in Spec-IP. But the expletive appears in Spec-IP only if the lexical subject itself has not moved to Spec-IP. Hence, a clause-final subject must have been extracted from a position below Spec-IP. This is reflected in the fact that unlike a subject in Spec-IP, but like a subject in the lower IP-internal position, a clause-final subject must be indefinite—compare the examples in (45) to (46a), (46b), and (46d). The same holds for a subject that has been fronted across an expletive—compare (45c) and (46c).

- (46)a. Dei dårlegast motiverte studentane kjem sjeldan på forelesningane.
the poorly.SUP motivated students.DEF come seldom on lectures.DEF
 ‘The most poorly motivated students rarely come to the lectures’
- b. *Det kjem sjeldan dei dårlegast motiverte studentane på forelesningane
EXPL come seldom the poorly.SUP motivated students on lectures.DEF
- c. *Dei dårlegast motiverte studentane kjem det sjeldan på forelesningane.
the poorly.SUP motivated students.DEF come EXPL seldom on lectures.DEF
- d. * Det kjem sjeldan på forelesningane dei dårlegast motiverte studentane.
EXPL come seldom on lectures.DEF the poorly.SUP motivated students.DEF

But note that it is arguably not the case that there must be an expletive in Spec-IP whenever the lexical subject is not in that position. In the following example the clause-initial focused subject is probably in Spec-FocP. And just like in (45a), it can have a generic or an existential reading. That is, either reading is allowed as long as the subject has touched down in Spec-IP, which is where the generic reading arises.

- (47) DÅRLEG MOTIVERTE STUDENTAR kjem sjeldan på forelesningane. GEN/EX
poorly motivated students come seldom on lectures.DEF
 ‘Poorly motivated students rarely come to the lectures’

If the subject in (47) is in Spec-FocP, there must be a trace in Spec-IP. This is expected to be possible as long as the trace is c-commanded by the moved subject. The contrast between (47) and the examples in (45d) and (46d), where the subject is also in the CP-domain, according to my analysis, is that in the latter cases, the IP is shifted leftwards over the subject. The result is that the subject does not c-command Spec-IP, and consequently, the expletive becomes obligatory.

To be more explicit, raising of IP to Spec-XP is allowed in the configuration in (48a), but not in (48b). In (48a), the IP-internal subject trace is c-commanded by the expletive in Spec-IP. Hence, the structure is legitimate even after raising of IP to Spec-XP. In (48b), on the other hand, raising of IP will result in an unlicensed trace in Spec-IP, since this trace will then end up in sentence-initial position.

- (48)a. [_{XP} X [_{YP} Subj Y [_{IP} EXPL ... t_{Subj} ...]
 b. [_{XP} X [_{YP} Subj Y [_{IP} t_{Subj} ...]

Now recall that Longobardi (2000) assumes that Germanic languages do not allow raising of IP across an extracted subject. According to him, the reason is that this movement would give an unlicensed trace in Spec-IP in non-prodrop languages. We see that Longobardi's reasoning holds to a certain extent in Norwegian: raising of IP is not allowed in a structure like (48b). However, we have discovered that there is a way to front IP across an extracted subject without creating an illicit structure, namely, by extracting the subject from a lower position and having an expletive in Spec-IP.

5.2 Expletive constructions and clause-final subjects in English

In English, clause-final subjects are normally associated with focus—see e.g. Rochemont & Culicover (1990). Thus, there is a clear contrast between the sentences in (49a) and (49b).

- (49)a. There came to my office a horde of angry students after the meeting.
 b. There came to my office after the meeting A HORDE OF ANGRY STUDENTS.

In (49a), no particular presuppositions need be invoked, and the focus domain may extend over the whole proposition. In (49b), the displaced subject phrase stands out as where the assertion differs from the presupposition. That is, the subject is unambiguously focused. This indicates that the structure in (38) but not the structure in (37) is available in English.

A more remarkable property of English clause-final subject constructions is that there is no definiteness effect. In (50), the definite subject is acceptable (Rochemont & Culicover 1990:29). By contrast, when the subject is in a low IP-internal position, as in (51), it must be indefinite.

(50) There walked into the room the man she had no desire to see.

- (51)a. There was a man walking into the room.
 b. *There was the man walking into the room.

The absence of definiteness effect in (50) is clearly a problem for the analysis given in Chomsky (1999), according to which (50) is derived from (52a) by an essentially phono-

logical operation. As we see, (52a) is completely ungrammatical, and the reason is that the lexical subject is definite and appears in a position where definite DPs are not allowed. If the definiteness effect has to do with licensing conditions for DPs (see, e.g., Belletti 1988), it is rather unlikely that a non-syntactic operation can make the subject escape the requirement that it should be indefinite.

- (52)a. *There walked the man she had no desire to see into the room.
 b. The man she had no desire to see walked into the room.

I would propose instead that (50) is derived from (52b). In (52b), the subject is in Spec-IP, which is the only IP-internal position where definite subjects can appear. When a definite subject is extracted from within IP, as in (50), it is therefore probably extracted from Spec-IP.

The facts are similar for expletive passive constructions. If the stative reading is ignored, the argument in an expletive passive construction cannot be definite if it is spelled out internally to IP, as in (53a). But if it is in Spec-IP, as in (53b), or in clause-final position, as in (53c), it can be definite.

- (53)a. *There was the book placed on the table.
 b. The book that Mary wanted everyone to see was placed on the table.
 c. There was placed on the table the book that Mary wanted everyone to see.

The contrast between (53a) and (53c) is another indication that contrary to what Chomsky (1999) suggests, movement to the left of the participle does not have the same status as movement to clause-final position. Movement to clause-final position has more profound consequences than movement to the left of the participle.

My proposal is that a clause-final subject first moves to Spec-IP and then out of IP to a position related to a marked discourse function, after which IP raises to another discourse-related position. This means that (53c) is actually derived from (53b).

If a clause-final subject in English has moved via Spec-IP, the question is how there can be an expletive in Spec-IP in constructions like (50) and (53c). I will sketch a proposal. First, note that the expletive *there* in English appears in two main classes of expletive constructions; namely, in *presentational* expletive constructions and in *existential* expletive constructions. That these two classes differ from each other has been known since Aissen (1975) and Milsark (1979). One difference is that existential expletive constructions allow rightward

displacement of the associate less readily than presentational expletive constructions—compare the existential construction in (54) with the presentational construction in (55).

(54)a. There were two strange men in the room.

b. ??There were in the room two strange men.

(55)a. There came two strange men into the room.

b. There came into the room two strange men.

In both types of constructions, the expletive *there* is coindexed with the associate DP. In fact, when there is no associate DP, *there* cannot fill the subject position in English. Thus, we find *it* and not *there* as the subject of weather verbs, as in (56a), and where the lexical subject is a clause, as in (56b).

(56)a. {It/*there} is raining.

b. {It/*there} was said that he was guilty.

The impossibility of having expletive *there* in (56ab) follows from the assumption that *there* does not have a full set of phi-features but only a person feature (Chomsky 1999). The number feature must then be filled in by a fully specified DP. A well-known consequence is that the verb shows number agreement with the associate in constructions with expletive *there*. In other words, expletive *there* does not have an existence outside of the domain of a fully specified DP.

However, I would like to follow Rochemont & Culicover (1990) and assume that the relation between the expletive and the associate is different in presentational constructions than in existential constructions. In the terms of Rochemont & Culicover, *there* in existential constructions represents a pronominal category. That is, *there* fills the Spec-IP position because the associate never gets there. In presentational constructions, by contrast, which are the constructions we are dealing with in this paper, Rochemont & Culicover suggest that *there* replaces a trace. I will adopt this idea and propose that *there* in presentational constructions is the spellout of a copy of the associate.

Now consider the English paradigm in (57), which parallels the Scandinavian paradigm given in (46). My analysis of (57) is as follows. In (57a), the lexical subject has moved to Spec-IP, where it gets an existential or a generic reading, as expected. In (57b), the subject is

spelled out (and read off by the semantic interface) in a low position within IP. However, there is a copy of the subject in Spec-IP, which is spelled out as *there*. In (57c) the subject has moved to a position above IP. But since Spec-IP is now c-commanded by the moved subject, it is OK to have a subject trace in Spec-IP. In other words, it is not necessary to spell out the element in Spec-IP as *there*. On the assumption that expletive *there* appears only when required, it follows that *there* cannot appear here, and the construction is therefore ungrammatical. In (57d), we have the now familiar case where IP has raised across the extracted subject. Here the subject, which has raised from Spec-IP, does not c-command its copy in that position. Consequently, it becomes obligatory to spell out the copy in Spec-IP as the expletive *there*. The syntactic configurations corresponding to the constructions in (57) are shown in (58).

- | | | |
|--------|--|--------|
| (57)a. | Poorly motivated students rarely come to my lectures. | GEN/EX |
| b. | There rarely come poorly motivated students to my lectures. | EX |
| c. | *Poorly motivated students there rarely come to my lectures. | |
| d. | There rarely come to my lectures poorly motivated students. | EX |

- | | |
|--------|---|
| (58)a. | [_{IP} Subj ...] |
| b. | [_{IP} <i>there</i> ... Subj ...] |
| c. | *[_{XP} Subj X [_{IP} <i>there</i> ... t _{Subj} ...] |
| d. | [_{YP} [_{IP} <i>there</i> ... t _{Subj} ...] Y [_{XP} Subj X t _{IP}] |

Constructions like (57c)/(58c) become grammatical if the subject copy in Spec-IP is not spelled out, as in (59).

- | | | |
|--------|--|--------|
| (59)a. | POORLY MOTIVATED STUDENTS rarely come to my lectures. | GEN/EX |
| b. | [_{XP} Subj X [_{IP} t _{Subj} ...] | |

It can be shown that many properties of English presentational *there*-constructions follow if the expletive *there* in these constructions is the spellout of a copy of the associate, as I have proposed. One of these properties is the lack of generic reading on the part of the subject, which is what I deal with in the next subsection.

5.3 English clause-final subjects and genericity

Intuitively, it is unexpected that the subject in a construction like (57d) should have only an existential reading and not a generic reading, if my analysis is correct. Consider once more the syntactic structure of (57d), which is repeated in (60).

(60) $[_{YP} [_{IP} \textit{there} \dots t_{\textit{Subj}} \dots] Y [_{XP} \textit{Subj} X t_{IP}]]$

If the subject has moved via Spec-IP, so that *there* is a spellout of a subject copy, we would expect the subject to retain a possible generic reading when it raises to Spec-XP, just like it does in (59). We would also expect the raising of IP across the extracted subject to have no influence on the interpretation of the subject. Recall that in Italian, a subject that has become clause-final as the result of IP-raising is always generic (see 4.1). So what is the relevant difference between English and Italian?

Concerning English, it has been observed before that the presentational *there*-construction only goes with stage level predicates. It is noted, for example, by Chierchia (1995), who proposes that individual level predicates involve a generic operator which competes with the existential operator supplied by the *there*-construction in such a way that the two are not compatible. He also points out that individual level predicates, but not stage level predicates, assign a generic reading to bare plural subjects. It would follow from this that bare plural subjects in presentational *there*-constructions cannot get a generic reading.⁸

However, it is not true that presentational *there*-constructions disallow genericity in general. If we take (57d) as an example, we see that this sentence can be interpreted generically as long as the subject is not the restrictor. That is, while we do not get the reading ‘for poorly motivated students it holds that they rarely come to my lectures’, there are no problems with taking *my lectures* as the restrictor, for example, which gives a reading that can be rendered informally as ‘for my lectures it holds that poorly motivated students rarely come to them’. I believe that this contrast follows from the analysis of the expletive *there* that I have just proposed.

Let us first consider the semantic structure of (57d) on the reading where *my lectures* is the restrictor. This structure is shown in (61a), following the dyadic generic operator model proposed in Krifka et al. (1995). As we see, I take the adverbial *rarely* to be the operator, and it finds one variable in the restrictor and another one in the matrix. Moreover, the relation between these two variables is specified, as required for a coherent reading to occur.

- (61)a. Rarely [x;y] (x are my lectures; y are poorly motivated students & y come to x)
 b. *Rarely [x;y] (x are poorly motivated students; y are my lectures & there (=poorly motivated students) come to y)

If we then try to construct a reading where *poorly motivated students* is the restrictor, as in (61b), we run into problems. Since the expletive *there* also represents an occurrence of the subject, the constituent *poorly motivated students* is present both in the restrictor and in the matrix. The result is that the *x* variable from the restrictor is not related to the matrix at all, since *there*, or in reality an occurrence of *poorly motivated students*, fills the position where the variable *x* should show up in the matrix. Consequently, what we get is comparable to vacuous quantification, and the expression finds no coherent reading.

Let us now go back to the Italian construction that corresponds most closely to (57d), which was given in (26b) and which is repeated below as (62a). The semantic structure of (62a) is given in (62b). As we see, the empty element in Spec-IP provides the variable that is needed in the matrix if it is to combine successfully with the restrictor formed by the clause-final subject.

- (62)a. [[*e* telefonano spesso] [medici del reparto dipronto intervento]]
 telephone often doctors of.the department offirst aid
 b. Often [x;s] (x are doctors & x are in the dept. of first aid; s are relevant situations & x telephone in s)

While the English construction in (57d) cannot get a reading corresponding to (62b), due to the presence of the expletive *there*, the construction in (59), where the focused subject is clause-initial, does allow a reading that is similar to (62b). With the subject interpreted generically, (59) has the semantic structure shown in (63).

- (63) Rarely [x;y] (x are poorly motivated students; y are my lectures & x come to y)

In this case, there is only one occurrence of the subject in the semantic structure. The trace in Spec-IP in (59) is interpreted as a variable, just like the empty element in Spec-IP in (62). The result is again a coherent reading where the restrictor is related to the matrix, as required.

To sum up, it appears that the impossibility of interpreting an English clause-final subject generically is a consequence of the presence of the expletive *there*. The expletive *there*, which

represents the subject in the semantic structure, makes subject-final clauses in English different from their counterparts in pro-drop languages like Italian.

5.4 Presentational *there* and locative inversion

Given the analysis I have proposed of the expletive *there* in presentational constructions, a question arises concerning constructions with locative inversion, as exemplified in (64).

(64) Into the room walked John.

Locative inversion is known to have several properties in common with presentational *there*-constructions. For example, Rochemont & Culicover (1990) point out that in both constructions the subject is postverbal and focused, and moreover, neither construction allows *wh*-movement of the subject or out of the subject (see Rochemont & Culicover 1990 for examples). Furthermore, locative inversion allows the subject to be definite, as (64) demonstrates. The same holds of a clause-final subject in the presentational *there*-construction, as we have seen. The similarities between presentational *there* and locative inversion might be taken to suggest that the two construction types are derived in a parallel fashion.

Now if my analysis of presentational *there*-constructions were to be extended to locative inversion constructions, it would mean that locative inversion is the result of raising the subject out of IP and then raising the IP, with an initial PP, to a position above the landing site of the subject. The problem is then that the subject would not c-command its copy in Spec-IP, but nevertheless the copy would not be spelled out as *there*. In the light of my analysis of the expletive *there* in presentational construction, this would be unexpected and problematic.

However, in spite of the observed similarities there are also differences between the presentational *there*-construction and the locative inversion construction. Firstly, unlike clause-final subjects in presentational *there*-constructions, the subject in locative inversion constructions shows no heaviness effect. This is also demonstrated in (64). Secondly, while a rightward displaced subject in the presentational *there*-construction is strictly clause-final, as shown in (65), the subject in the locative inversion construction is not necessarily clause-final. It can be followed by a secondary predicate, as in (66a) (the examples in (65) and (66) are from Rochemont & Culicover 1990:76–77).

- (65)a. There walked into the room nude a man no one knew.
 b. *There walked into the room a man no one knew nude.

- (66)a. Into the room walked John nude.
 b. *Into the room walked nude John.

These differences indicate that the two constructions are rather different after all. In particular, it appears that the right-dislocated constituent in locative inversion is not just the subject; it is a larger phrase containing the subject.

Moreover, it is not necessarily the case that the subject in locative inversion constructions is in Spec-IP at any point of the derivation. It has been proposed, by Hoekstra & Mulder (1990), Bresnan (1994), and others, that the locative PP fills the canonical subject position in locative inversion constructions. That such PPs can indeed fill the subject position is also indicated by examples like (67a), where the expletive *there* is optional (cf. Rochemont & Culicover 1990:104).

- (67)a. In front of her (there) sat knitting a woman she didn't know.
 b. *In front of her (there) sat knitting Mary.

The fact that the construction is ungrammatical with a definite subject, as in (67b), tells us that (67a) is different from locative inversion (which is also seen from the position of secondary predicates). In (67a), the subject must be in an IP-internal position, while in locative inversion constructions, the subject is probably above IP, since it is focused and can be definite. Hence, (67a) shows that when the subject does not move to Spec-IP, the EPP feature can be satisfied by a locative PP. Alternatively, the expletive *there* may be inserted.

A significant property of the true locative inversion construction is however that the fronted constituent in locative inversion can be larger than a PP. Another characteristic of the construction is that the main verb can be accompanied by auxiliaries. The following examples, from Rochemont & Culicover (1990), demonstrate these facts.

- (68)a. Into the room nude walked John.
 b. Quickly into the room went Bill.
 c. Into the room to fix the sink came the plumber.

- (69)a. Into the room has walked John.
 b. Into the room will walk John.
 c. Across from him should sit Mary.

Given examples like those in (68), Rochemont & Culicover (1990) conclude that the fronted constituent in the locative inversion construction is a VP which has been vacated by the verb. It seems clear that something along this line must be true. I would like to suggest an analysis based on the proposal in Adger & Tsoulas (2001) that manner adverbials and locative adverbials are sitting in Spec positions in VP, below where the subject is merged. The base structure of VP is then as in (70a), if we make the slight modification that the manner adverbial and the subject is in the Spec of different ν heads, and not, as Adger & Tsoulas assume, specifiers of one and the same ν . A locative inversion construction like (68b) could now be derived as follows. First, as Adger & Tsoulas also propose, the verbal root moves all the way up to the highest head of VP. Then ν P2, which contains the manner adverbial and the locative adverbial, moves to Spec-IP and satisfies the EPP feature of I (I is shorthand for whatever projections are relevant here). Since the subject stays behind, it is crucial here that there is a ν P which contains the adverbials but excludes the subject. Note, by the way, that ν P2 does not check all the features of I; at least the number feature of I must be checked through agreement with the subject. While this agreement suffices to case-license the subject, a definite subject cannot stay in its IP-internal position for semantic reasons.

The next step is therefore to merge a Focus head over IP, and the ν P containing the subject raises to Spec-FocP. Finally, a Topic head is merged, and IP, which now contains the manner and locative adverbials plus all verbal elements, raises to Spec-TopP. The derivation is shown in (70). Note that for ease of exposition I do not indicate traces, I only show the positions of visible elements.⁹

- (70)a. [_{IP} I [_{VP} V [_{ν P1} Subj ν [_{ν P2} Manner ν [_{AspP} Loc Asp [_{RootP} Root]]]]]] (Root to V)
 b. [_{IP} I [_{VP} Root+V [_{ν P1} Subj ν [_{ν P2} Manner Loc]]]] (ν P2 to Spec-IP)
 c. [_{IP} [_{ν P2} Manner Loc] I [_{VP} Root+V [_{ν P1} Subj ν]]] (merge Foc; ν P1 to Spec-FocP)
 d. [_{FocP} [_{ν P1} Subj ν] Foc [_{IP} [_{ν P2} Manner Loc] I [_{VP} Root+V]]]
 (merge Top; IP to Spec-TopP)
 e. [_{TopP} [_{IP} [_{ν P2} Manner Loc] I [_{VP} Root+V] Top [_{FocP} [_{ν P1} Subj ν] Foc]]]

As for the secondary predicate, it can sit below the locative adverbial, as in (71a), or above it, as in (71b). In the latter case, I take it to sit below the base position of the subject. Hence, the position of the secondary predicate in (71a) corresponds to (68a), while the position in (71b) corresponds to (66a).

- (71)a. John walked into the room nude.
 b. John walked nude into the room.

The analysis of locative inversion sketched here explains the order of elements in the construction as well as their discourse functions. It also follows that it is impossible to form a question by *wh*-moving the subject to a position above the fronted locative phrase, as in (72a). On my analysis, there is no landing site for questioned elements above the fronted IP. The relevant positions are found below TopP (cf. Rizzi 1997). Some speakers do however accept *wh*-questions with locative inversion, as long as the questioned element stays in place, as in (72b), (72c), and (72d).

- (72)a. *Which horse out of the barn ran?
 b. Out of which barn ran the black horse?
 c. Out of the barn ran which horse?
 d. Out of which barn ran which horse?

Finally, the locative inversion construction can be compared to (73a), which is an example of ordinary VP-topicalization without inversion. In the second clause of (73a), it is possible that the topicalized constituent is again *v*P2—see the sketch in (73b). The focused element in the clause at hand is the polarity feature associated with the verb. I take this feature to originate in a Polarity head into which the verb moves (cf. Holmberg 2002). And crucially, the subject and not *v*P2 has satisfied the EPP feature of I. Hence, when the polarity feature pied-pipes IP to Spec-FocP, the subject moves along. The *v*P2 moves directly to Spec-TopP, without touching down in Spec-IP. If it did, it would apparently have to pied-pipe IP, and we would have a locative inversion construction.

- (73)a. They said John would walk into the room nude, and into the room nude he walked.
 b. [_{TopP} [_{vP2} Loc *v* Pred] Top [_{FocP} [_{IP} Subj I/Pol Root+V] Foc]]

Although there might be questions concerning locative inversion that are left unanswered by the present account, I think we can conclude that locative inversion is different from the presentational *there*-construction, and that the absence of expletive in the locative inversion construction is not a problem for my analysis of the expletive *there* in presentational constructions.

6. ‘TH/EX’ and *wh*-movement

We will now return to the discussion of ‘TH/EX’ in presentational constructions. More precisely, the topic of this section is the interaction between ‘TH/EX’ and *wh*-movement. In 6.1 I give an analysis of constructions where ‘TH/EX’ and *wh*-movement are combined in one single clause, while in 6.2 I explain why ‘TH/EX’ and *wh*-movement cannot apply to one and the same constituent. In either case, my account is based on syntax alone, thus dispensing with the assumption that ‘TH/EX’ is a phonological operation. In 6.3 I show that my analysis finds further support when Scandinavian is taken into consideration.

6.1 ‘TH/EX’ and *wh*-movement combined in one single clause

An interesting fact pointed out by Chomsky (1999) is that *wh*-movement and ‘TH/EX’ are compatible if the two operations apply to different constituents. This is shown for English in (74) and for Norwegian in (75). In each example, there is a *wh*-moved locative phrase (in italics) in clause-initial position and a displaced subject (in boldface) in clause-final position.

(74) *At which airport* did there arrive yesterday **three strange men**?

(75)a. *Kvar* blir det selt for tida **mange bøker** om Svalbard?
wherebecome EXPL soldthese days many books about Svalbard

b. *Til kva for flyplass* kom det i går **tre underlegekarar**?
to which airport came EXPL yesterday three strange guys

If the postverbal subjects in these examples are in a Spec position in the CP-domain, as I am claiming, more precisely in Spec-FocP, they must nevertheless be in a different position from where the *wh*-phrases are located. This is unexpected on the common assumption that *wh*-movement and focus movement is to the same position. However, Tsimpli (1998) shows that in Greek, focus movement and *wh*-movement may co-occur in one single embedded clause. The following example is from Tsimpli (1998:204).¹⁰

- (76) Me-rotisan O JANIS pjon sinandise.
me-asked.3PL the.NOM Janis who.ACC met.3SG
 ‘They asked me who JANIS met.’

In Greek, a focused phrase and a *wh*-phrase may not co-occur at the left periphery of a matrix clause, though. The explanation that Tsimpli (1998) suggests is that matrix clauses are smaller than embedded clauses, so that in matrix clauses, focused phrases and *wh*-phrases compete for one single position. But there appears to be another possible explanation for the observed fact. As Tsimpli also notes, when focus fronting and *wh*-movement co-occur, the focused phrase must precede and take scope over the *wh*-phrase. On the other hand, she assumes that interrogative type-marking of a matrix clause depends on the movement of the *wh*-operator. An embedded interrogative clause, by contrast, is type-marked by selection. This must mean that having a focused phrase in front of a *wh*-phrase does not interfere with the type-marking of an embedded clause. For matrix clauses, however, it is likely that the *wh*-operator must be the highest operator if the clause is to count as interrogative. Hence, a fronted *wh*-phrase cannot be preceded by a focused phrase in a matrix clause. But since a phrase that has undergone focus movement cannot follow the *wh*-phrase either, it follows that focus movement and *wh*-movement cannot both apply in one single matrix clause.¹¹

Nevertheless, I will hypothesize that the positions for focused phrases and for *wh*-phrases that we see in (76) are in principle available in all clauses. If so, it should be possible to derive (77b) from (77a) by moving *three strange men* to a focus position above the position where the fronted *wh*-phrase is located. However, (77b) is not well formed, since the *wh*-operator is not the highest operator. But since the *wh*-operator cannot take scope over the focus operator, it is not possible to move the *wh*-phrase across the focused constituent, for example to Spec-ForceP. The only way to save (77b) is by moving the constituent containing the *wh*-phrase and the remainder of IP—that is, QP—to Spec-ForceP, as sketched in (77c). In this configuration, the *wh*-operator is higher than the focus operator, but the *wh*-phrase does not c-command the focused phrase. Thus, the structure in (77c) is licit. Moreover, the constituent in Spec-IP can now be spelled out as *there*, since it is no longer c-commanded by the raised associate.

- (77)a. [_{QP} at which airport did three strange men arrive ~~at which airport~~ yesterday] (focus movement)
- b. [_{[FocP] [three strange men] Foc} [_{QP} at which airport did ~~three strange men~~ arrive yesterday]] (raising of QP to Spec-ForceP)
- c. [_{ForceP} [_{QP} at which airport did ~~three strange men~~ arrive yesterday] Force [_{[FocP] [three strange men] Foc} *t*_{QP}]] *there*

My proposal is therefore that (74) is derived as indicated in (77), and that the constructions in (75) are derived in a parallel fashion.

For some speakers, it is also possible to have polarity questions with clause-final subjects, as in (78).¹² We now see that this can be derived as sketched in (79), on the assumption that the fronted auxiliary in English polarity questions raises to the head of QP, the projection that also hosts fronted *wh*-phrases in its Spec.

(78) Did there run into the room several overexcited fans?

- (79)a. [_{IP} several overexcited fans did run into the room] (question movement)
- b. [_{QP} did [_{IP} several overexcited fans ~~did~~ run into the room]] (focus movement)
- c. [_{[FocP] [several overexcited fans] Foc} [_{QP} did [_{IP} ~~several overexcited fans~~ did run into the room]]] (raising of QP to Spec-ForceP)
- there*
- d. [_{ForceP} [_{QP} did [_{IP} ~~several overexcited fans~~ did run into the room] Force [_{[FocP] [several overexcited fans] Foc} *t*_{QP}]]

While *wh*-movement and focus movement are combined in the examples we have just considered, ungrammaticality results if we try to *wh*-move an element belonging to a focused clause-final subject. This is illustrated in (80), where we see that (80a) and (80c), with clause-final subjects, are relatively acceptable, but *wh*-moving phrases out of these subjects is not possible—see (80b) and (80d). A parallel pair from Norwegian is given in (81).

- (80)a. ? There was delivered to my office a picture of Chomsky.
- b. *Who_i was there delivered to your office a picture of *t*_i ?
- c. ? There arrived in the mail some books about global warming.
- d. *What_i did there arrive in the mail some books about *t*_i ?

- (81)a. Det blir selt i Tromsø for tida mange bøker om Svalbard.
EXPL become sold inTromsø these days many books about Svalbard
- b. *Kva_i blir det selt i Tromsø for tida mange bøker om *t_i*?
what become EXPL sold inTromsø these days many books about

Now consider how the derivation of (80b) would proceed, if the suggestions in (77) are correct. The derivation is shown in (82). For ease of exposition, I represent the constituent in Spec-IP as *there* throughout. First *who* is raised by *wh*-movement, and then the DP containing the trace of *who* is raised across the *wh*-phrase to a focus position. The final step is raising of the constituent containing the *wh*-phrase and the rest of IP to Spec-ForceP, across the focused phrase.

- (82)a. [_{IP} there was a picture of who delivered to your office] (*wh*-movement)
- b. [_{QP} who was [_{IP} there a picture of ~~who~~ delivered to your office]] (focus movement)
- c. * [_{FocP} [a picture of ~~who~~] Foc [_{QP} who was there a picture of ~~who~~ delivered to your office]] (raising of QP to Spec-ForceP)
- d. * [_{ForceP} [_{QP} who was there a picture of ~~who~~ delivered to your office] Force [_{FocP} [a picture of ~~who~~] Foc *t_{QP}*]]

As indicated, a fatal problem arises in (82c). After focus movement of the subject DP, which contains a trace of *who*, *who* is involved in two operator dependencies simultaneously: in the focus dependency and in the *wh*-dependency. This leads the derivation to crash at the semantic interface. The Norwegian construction in (81b) is also ungrammatical, presumably for the same reason.

Hence, the ungrammaticality of examples like (80b), (80d), and (81b) does not necessarily mean that ‘TH/EX’ is a phonological operation. And as we will see in a moment, other aspects of the relation between ‘TH/EX’ and *wh*-movement can also be explained without any reference to phonology.

6.2 ‘TH/EX’ and *wh*-movement applying to one and the same constituent

Although ‘TH/EX’ and *wh*-movement can be combined in the way we have just seen, the two operations cannot apply to one and the same constituent. This is demonstrated in (83).

- (83)a. *How many packages did there arrive in the mail?
 b. *How many packages were there placed on the table?
 c. *How many men did there enter the room?
 d. *How many journals did there hit the stands?

Chomsky (1999) takes the ungrammaticality of the constructions in (83) as evidence that ‘TH/EX’ is a phonological operation. If it is a phonological operation, it follows that a syntactic operation like *wh*-movement cannot apply to a constituent that has already undergone ‘TH/EX’. But notably, it is not necessarily the case that the *wh*-phrase in (83a), for example, has been extracted from clause-final position. It could have been extracted from the position where it was originally merged. In other words, the position of the *wh*-trace could be as in (84a) instead of as in (84b). Recall that having the lexical subject of an unergative verb in immediate postverbal position is relatively acceptable for many speakers of English—see 3.2. Chomsky’s explanation of why *wh*-movement is not possible would then not go through.

- (84)a. *How many packages did there arrive *t* in the mail?
 b. *How many packages did there arrive in the mail *t* ?

What I would like to suggest is that the ungrammaticality of the constructions in (83) has nothing to do with ‘TH/EX’. It is a consequence of the presence of the expletive *there* in a position that is c-commanded by the *wh*-moved associate. Since Spec-IP is c-commanded by and coindexed with the *wh*-phrase, it is licit to have a phonologically empty constituent in Spec-IP. Accordingly, Spec-IP cannot be realized as *there*.

The analysis I have just suggested of expletive *there* can also explain the contrast shown in (85). In (85a) as well as in (85b) there is *wh*-extraction out of a complement in an indefinite DP. However, the active (85a) is grammatical but the passive (85b) is not.

- (85)a. What_{*t*} are they selling books about *t*₁ in Boston these days?
 b. *What_{*t*} are there books about *t*₁ being sold in Boston these days?

On an analysis along the lines of Chomsky (1999) the reason for this must be that the DP that the *wh*-phrase is extracted from is in its base position in (85a) whereas it has undergone leftward ‘TH/EX’ in (85b). This leaves open the question of why *wh*-movement from within

the DP cannot apply before the DP is moved by ‘TH/EX’. This would be expected if ‘TH/EX’ is a phonological operation, and it would derive a grammatical (85b).

However, if the expletive *there* in reality is in reality an alternative spellout of a DP-copy, then the syntactic structure of (85b) is as sketched in (86).

(86) [_{QP} what [_Q are] [_{IP} [~~books about what~~] [_{t_{are}}] [_{XP} [books about ~~what~~] being sold ...]]]
there

We see here that the whole associate of the expletive is present in Spec-IP before Spell-Out. That is, the *wh*-phrase is underlyingly present not only in the position from where it appears to be extracted, but also in the constituent in Spec-IP. Hence, if the constituent in Spec-IP is spelled out as *there*, *there* will be c-commanded by a constituent (the fronted *wh*-phrase) which is also included in the constituent that is spelled out as *there*. On the assumption that *there* resists being c-commanded by any element from its underlying representation, it follows that (83b) is ungrammatical. In other words, presentational *there* resists being c-commanded by its associate or by a part of its associate. Note, by the way, that (5b) would be ungrammatical for the same reason, whether or not ‘TH/EX’ has applied.

It is of some interest in this connection that *existential* expletive constructions allow *wh*-movement to apply so that *there* ends up being c-commanded by its associate, as in (87).¹³

(87) What is there left in the fridge?

This would follow if *there* in existential constructions is not the spellout of a copy of the associate, but an independent element coindexed by the associate.

6.3 ‘TH/EX’ and *wh*-movement in Scandinavian

Further support for my analysis of the constructions in (83) is found in Scandinavian. In Norwegian, for example, the counterparts to (83a) and (83b), and to (85b), are perfectly grammatical, as shown in (88) and (89). (I will put aside the transitive constructions in (83c) and (83d) for the time being).

(88)a. Kor mange pakkar kom det i posten?
how many packages came EXPL in mail.DEF

- b. Kor mange pakkar vart det sett på bordet?
how many packages became EXPL put on table.DEF

- (89) Kva_i blir det kjøpt (mange) bøker om *t_i* i Tromsø for tida?
what become EXPL bought many books about in Tromsø these days

I take the grammaticality of (88ab) and (89) to be the consequence of the expletive *det* being different from the English presentational *there*. Unlike *there*, *det* is never the spellout of a DP-copy. *Det* is an independent element, specified as neuter singular, which can be the subject of weather verbs and also fill the canonical subject position when the lexical subject is a clause, as shown in (90ab).

- (90)a. Det regnar.
it rains

- b. Det blir sagt at Veronica var skuldig.
it becomes said that Veronica was guilty

In expletive constructions, *det* can fill the canonical subject position and be coindexed with the lexical subject irrespective of what structural relation obtains between the two elements. For example, the structures shown in (91) are all licit.

- (91)a. [_{IP} *det* ... Subj ...]
 b. [_{XP} Subj X [_{IP} *det* ... *t_{Subj}* ...]]
 c. [_{YP} [_{IP} *det* ... *t_{Subj}* ...] Y [_{XP} Subj X *t_{IP}*]]

In (91a), *det* fills Spec-IP and the lexical subject stays lower down. In (91b), the lexical subject has raised from the low position to a position in the CP-domain, across *det* in Spec-IP. In (91c) the whole IP, with *det* in the highest Spec, is fronted over the extracted subject. That is, (91a), (91b), and (91c) correspond to (45b), (45c), and (45d), respectively.

The constructions in (88a) and (88b) are like (91b), and hence grammatical. And in (89), the fact that the fronted question word *kva* ‘what’ c-commands the expletive does not lead to problems, since *kva* is not a part of the underlying representation of *det*.¹⁴

One might object here that the Norwegian constructions in (88) and (89) do not involve ‘TH/EX’, and that *wh*-movement of the associate is therefore expected to be possible. One could also point to examples like (92), which show that in the case of an expletive passive construction, the participle does not normally agree with the object when the object is extracted by *wh*-movement (cf. Holmberg 2001). This fact indicates that *wh*-extraction of the object is only possible from the postparticipial position, not from the preparticipial position, and that leftward ‘TH/EX’ is incompatible with *wh*-movement even in Norwegian.

- (92) Kor mange ulvar vart det skot-i /*skot-ne?
how many wolves became EXPL shoot-PTC.NEUT.SG/shoot-PTC.PL

However, for some speakers of Swedish, a postparticipial object can marginally agree with the participle. The examples in (93) are supplied by Christer Platzack (p.c.). As we see, he likes (93b) much better than (93a), even though both examples involve a passive participle that agrees with a postparticipial argument.

- (93)a. ??Det blev skrivna tre böcker om detta.
EXPL became written.PL three books about this
 ‘There were three books written about this.’

- b. Det har blivit häktade en massa studenter den senaste tiden.
EXPL has become arrested.PL a lot students the latest time.DEF
 ‘There have been arrested lots of students lately’

Although it is unclear what factors lie behind the grammaticality difference between (93a) and (93b), it is a striking fact that Platzack finds (94a) fully acceptable. This must mean either that (93a) gets better if the argument is *wh*-moved, or else that (94a) is derived from a structure where the argument is in preparticipial position, as in (94b).

- (94)a. Hur många böcker blev det skrivna om detta?
How many books became EXPL written.PL about this
- b. det blev hur många böcker skrivna om detta
EXPL became how many books written.PL about this

If the latter is true, *wh*-extraction is sometimes possible from the preparticipial position. In that case, displacement of an argument to the preparticipial position is compatible with subsequent *wh*-movement of that argument after all.

7. 'TH/EX' and 'transitive' expletive constructions

We will now take a look at apparently transitive expletive constructions found in English and Scandinavian. Chomsky (1999) argues, for English, that these constructions display obligatory 'TH/EX'. However, we will see that the word order in question does not necessarily involve displacement of arguments, neither in English, which is discussed in 7.1, nor in Norwegian, which is addressed in 7.2. Instead, the two arguments in these expletive constructions are both internal, and they show up in their base-generated order.

7.1 'Transitive' expletive constructions in English

The English 'transitive expletive' construction is exemplified in (95). As we see, the argument that seems to be the subject must follow what appears to be the object. Because of this, Chomsky (1999) concludes that 'TH/EX' is obligatory even here.

- (95)a. There hit the stands a new journal.
 b. *There hit a new journal the stands.
 c. There entered the room a strange man.
 d. *There entered a strange man the room.

However, the ordering restrictions illustrated in (95) should not necessarily be taken to mean that there is a subject which is obligatorily displaced. Rather, I would claim that the verbs that appear in the English 'transitive expletive' construction are not really transitive; that is, they have no external argument. As demonstrated in (96), verbs with external arguments cannot appear in the 'transitive expletive' frame.

- (96)a. *There hit the stands a juvenile delinquent.
 b. *There boiled the eggs a new chef.
 c. *There boiled a new chef some eggs.

What we see in the grammatical (95a) and (95c) is a verb with two internal arguments appearing in their base-generated order; that is, with the goal argument or indirect object

preceding the theme argument or direct object. Notably, it is possible, at least for some speakers, to have an adverbial following the two arguments in the ‘transitive expletive’ construction, as in (97a). In this case, the direct object must be indefinite, hence the ungrammaticality of (97b).

- (97)a. There entered the classroom a strange man yesterday.
 b. *There entered the room the Russian student the next minute.

Both the fact that the second argument in the English ‘transitive expletive’ construction can be followed by an adverbial and the fact that it must then be indefinite suggest that the second argument, as well as the first, is in fact licensed within ν P, or at least lower than Spec-IP. In other words, there is no indication that ‘TH/EX’ is obligatory in these constructions, and the claim to this effect put forward by Chomsky (1999) does not seem to hold.

However, displacing the associate of the expletive to clause-final position is an *option* in (97a) and (97b), in the same way as it is an option in unaccusative expletive constructions and passive expletive constructions. Strikingly, the definiteness effect then disappears:

- (98)a. ? There entered the classroom yesterday a strange man.
 b. ? There entered the room the next minute the Russian student.

My proposal is therefore that the constructions in (98a) and (98b) are derived by raising of the underlying direct object to the canonical surface subject position Spec-IP, followed by raising of that argument to Spec-FocP and subsequent topicalization of IP. That is, my analysis of clause-final surface subjects of verbs with two internal arguments is similar to my analysis of clause-final subjects of unaccusative and passive verbs.

It follows that the reason why *wh*-movement of the associate of the expletive *there* is ungrammatical in the ‘transitive expletive’ construction, as was demonstrated in (83c) and (83d), is again that if the associate raises above *there*, it ends up c-commanding *there*, which is not allowed.

Given the analysis of (98a) and (98b) that I have just sketched, it is perhaps a little surprising that the subject of a true transitive verb cannot appear in clause-final position. In this respect, there is a sharp contrast between verbs with two internal arguments, shown in (99a) and (99b), and true transitive verbs, having an external and an internal argument, shown in (99c) and (99d).

- (99)a. There hit the stands the new journal that Peter is editing.
 b. There entered the room the man she had no desire to see.
 c. *There hit the stands the gang that is terrorizing the neighbourhood.
 d. *There boiled some eggs the new chef (who has just arrived from France).

On my analysis, in every clause in (99) the associate of *there* is raised from Spec-IP to Spec-FocP at one stage of the derivation. The ungrammaticality of (99c) and (99d) must then be taken to mean that an IP containing a true transitive verb cannot be topicalized across a focused subject, at least not in English. It is not immediately obvious why this is so—if the expletive *there* can be the spellout of a subject trace in Spec-IP, we would expect all the examples in (99) to have the same status.

Let us consider the derivation of (99a), which is shown in (100), and compare it to the derivation of (99d), shown in (101). In both these cases, the subject moves to Spec-IP and is subsequently moved from that position to a focus position in the CP-domain; that is, to Spec-FocP. Following the raising of the subject, the remnant IP raises to a position above Spec-FocP, which I refer to as Spec-TopP.

- (100)a. [_{IP} the new journal that Peter is editing hit the stands] (focus movement)
 b. [_{FocP} [the new journal that Peter is editing] Foc [_{IP} *t* hit the stands]] (IP fronting)
 c. [_{TopP} [_{IP} there hit the stands] Top [_{FocP} [the new journal that Peter is editing] Foc *t*_{IP}]]

- (101)a. [_{IP} the new chef boiled some eggs] (focus movement)
 b. [_{FocP} [the new chef] Foc [_{IP} *t* boiled some eggs]] (IP fronting)
 c. * [_{TopP} [_{IP} there boiled some eggs] Top [_{FocP} [the new chef] Foc *t*_{IP}]]

It appears that the ungrammaticality of (99d) arises when IP is moved across the focused subject—see (101c). The explanation I will offer, which is only tentative at this stage, is based on the proposal in Chomsky (1999) that a transitive *v* defines a strong phase *v**P. I will assume, with Svenonius (2000, 2001) that a strong phase goes to Spell-Out as soon as it is complete, and not at the next strong phase, as Chomsky (1999) suggests. This means that unless there is a constituent inside the *v**P with some feature that forces it to be extracted, a *v**P will go to Spell-Out as soon as it is built. It does not make any difference if the subject has a focus feature, for example, since the subject sits at the left periphery of the *v**P and will

in any case be available for movement to a higher position. That is, the transitive v^*P may well contain a subject that will eventually show up in Spec-IP. The subject can also end up in Spec-FocP, given that Spec-FocP is to the left of v^*P . But I will hypothesize that when v^*P goes to Spell-Out, the relative order between the elements contained in v^*P is fixed once and for all. That is, it will not be possible for the subject to show up to the right of v^*P . Consequently, movement of IP across a subject that has been extracted out of IP altogether is not possible when IP contains v^*P .

7.2 ‘Transitive’ expletive constructions in Norwegian

Interestingly, a ‘transitive expletive’ construction similar to the English one is also found in Norwegian, even though this language does not allow true transitive expletive constructions. The latter fact is shown in (102). Nevertheless, certain verbs, such as *møte* ‘meet’ and *vente* ‘await’ can be followed by two arguments, as demonstrated in (103).

(102)* Det skreiv nokre studentar ei bok om Kotoko i vinter.
EXPL wrote some students a book about Kotoko this winter

(103)a. Det møtte Marit nokre misnøgde studentar utanfor kontoret.
EXPL met Marit some dissatisfied students outside office.DEF

b. *Det møtte nokre misnøgde studentar Marit utanfor kontoret.
EXPL met some dissatisfied students Marit outside office.DEF

c. Det venta Tarald ei utriveleg overrasking etter arbeidet.
EXPL awaited Tarald an unpleasant surprise afterwork-DEF

d. *Det venta ei utriveleg overrasking Tarald etter arbeidet.
EXPL awaited an unpleasant surprise Tarald afterwork-DEF

We also see that the order of the arguments is fixed in these cases, and again, what we get is the order goal/IO > theme/DO (see Lødrup 1995). Note that since the argument sequence can be followed by adverbials, it must be the case that both arguments can be spelled out inside IP.

Just like in English, the underlying object of a two-argument expletive construction can be displaced to clause-final position, as in (104a). However, as demonstrated in (104b), the

clause-final argument does not escape the definiteness effect in Norwegian. Finally, (104c) demonstrates that Norwegian is like English in that true transitive verbs do not allow the subject to be clause-final.

- (104)a. Det møtte Marit utanfor kontoret nokre misnøgde studentar.
EXPL met Marit outside office.DEF some dissatisfied students
- b. *Det møtte Marit utanfor kontoret dei misnøgde studentane.
EXPL met Marit outside office.DEF the dissatisfied students
- c. *Det skreiv ei bok om Kotoko i vinter nokre studentar.
EXPL wrote a book about Kotoko this winter some students

The ungrammaticality of (104b) and (104c) is expected if a displaced subject in Norwegian expletive constructions must have been extracted from a position lower than Spec-IP. That is, the subject cannot have touched down in Spec-IP—it must have been A'-moved across that position. It follows that the subject must be indefinite, and it also follows that transitive verbs never appear in expletive constructions. In constructions with transitive verbs, one argument must be licensed in Spec-IP, and consequently, the expletive *det* cannot appear.

Just like the presentational expletive construction, the ‘transitive’ expletive construction allows *wh*-movement of the associate of the expletive in Norwegian:

- (105) Kor mange studentar møtte det deg utafor kontoret?
how many students met EXPL you outside office.DEF
 ‘How many students met you outside your office?’

Once more, Norwegian differs from English, and again, I take the difference to be due to the relation between the expletive and the associate. As I have argued above, the expletive *det* is not the spellout of a copy of the associate, and accordingly, it may be c-commanded by the raised associate. In English, as we have seen, a similar situation leads to ungrammaticality.

8. Conclusion

The discussion in this paper leads to the conclusion that the displacement operations that Chomsky (1999) terms ‘thematization/extraction’ and takes to be phonological of nature, are

instead truly syntactical operations. Furthermore, it seems clear that leftward ‘TH/EX’ and rightward ‘TH/EX’ should be kept separate.

Concerning leftward ‘TH/EX’, it has been argued before that it operates in the syntax. I have added another argument which points in the same direction, namely, that Mainland Scandinavian bare singular nominals, which are disliked in the canonical subject position, also resist being moved to the left of a participle. That is, they do not undergo leftward ‘TH/EX’, and they do not move to Spec-IP. These facts can both be seen as consequences of the inability of bare singular nominals to appear in subject positions.

In English, the lexical argument of a passive verb will either appear in Spec-IP or move to the left of the participle while an expletive fills Spec-IP. In the latter case, we have an instance of the so-called leftward ‘TH/EX’. Given what was just said about Mainland Scandinavian BSNs, the obvious conclusion is that the lexical argument of an English passive verb preferably appears in a subject position.

In English, rightward ‘TH/EX’, that is displacement to clause-final position, is disliked by many speakers who accept leftward ‘TH/EX’. Moreover, while leftward ‘TH/EX’ has no effect on discourse functions, an argument displaced by rightward ‘TH/EX’ invariably has a marked discourse function. Building on the analysis of Italian postverbal subjects in Longobardi (2000), and with a side-view to postverbal arguments in SOV languages, I have proposed that even in Germanic, constructions with clause-final subjects are derived by moving the subject to a Spec position in the CP domain, and then raising the remainder of the clause across the subject to an even higher CP position.

The constructions derived in this manner do not have exactly the same syntactic properties in all languages, though. For example, in Mainland Scandinavian a clause-final subject is extracted from a position below the expletive in Spec-IP, and consequently, such subjects share some properties with subjects that surface in the lower position: they must be indefinite but not generic. In English, by contrast, clause-final subjects escape the indefiniteness requirement. This suggests that they move to the CP-domain from Spec-IP. Hence, the expletive *there* in presentational constructions must be the spellout of a subject copy. The distribution of the expletive *there* then follows on the (reasonable) assumption that a subject copy is spelled out as *there* only if it is not c-commanded by the moved subject.

It also follows that unlike its Italian counterpart, a clause-final subject in English cannot be generic, and that it is impossible in English to *wh*-move the subject in a construction with expletive *there*. Notably, the corresponding constructions are perfectly grammatical in Mainland Scandinavian. This indicates that the explanation given in Chomsky (1999),

according to which *wh*-movement cannot apply to a rightward displaced subject because that displacement is a phonological operation, cannot be correct. If it were, we would expect the same effect in Scandinavian. However, since it can be shown that the expletive *det* in Scandinavian is different from the expletive *there* in English, it is possible to connect the observed contrast to the different properties of the expletives.

Finally, we have seen that ‘transitive expletive’ constructions, in English and Norwegian, do not obligatorily involve rightward displacement of an argument, which Chomsky (1999) claims they do. Instead, the word order in question displays two internal arguments surfacing in their base generated order.

¹ The following abbreviations are used in the glosses: ACC=accusative, DAT=dative, DEF=definite, EXPL=expletive, GEN=genitive, NEUT=neuter, NOM=nominative, PL=plural, POSS=possessive, PTC=participle, REFL=reflexive, SG=singular, SUP=superlative.

² See Borthen (1999, 2000, 2001) for more details on Scandinavian bare singular nouns.

³ The auxiliary *bli* ‘become’ may well combine with a non-derived adjective, as in *bli gul* ‘become yellow’. It is therefore unexpected that *bli* + participle invariably yields a verbal passive. This is nevertheless a fact, and I have no explanation for it at present.

⁴ Chomsky (1999) does not give an explicit judgement of the construction in (15c), but for the corresponding construction with a participle, he suggests that it is partially acceptable.

⁵ Kayne & Pollock (2001) give a similar analysis for French subject inversion constructions.

⁶ Herring (1994) argues that, in Tamil, postverbal constituents can be either backgrounded or emphasized (in addition to being afterthoughts). This suggests that Tamil is another language where the structures in (37) and (38) are both employed.

⁷ The fact that the order of the expletive and the verb is not the same in (45c) as in (45d) (i.e. the V2 effect) could mean that the expletive moves higher when nothing else precedes the verb.

⁸ However, the line of reasoning based on Milsark (1974) that Chierchia (1995) sketches does not go through. Chierchia suggests that the generic operator supplied by individual level predicates turns the subject into a strong NP. In expressions like *??There is a man tall* we get something very similar to the definiteness effect: since it is bound by the generic operator of the predicate *tall*, the subject *a man* is a strong NP, and consequently, it is not acceptable in *there*-constructions. However, we have seen that clause-final subjects in *there*-constructions can be definite. Hence, on the account based on Milsark, we would expect that clause-final subjects in *there*-constructions could also be generic, contrary to fact.

⁹ Den Dikken & Næss (1994) propose that locative inversion involves movement of the locative phrase to the nominative subject position, followed by topicalization of the same constituent. This is in its essence very close to my analysis.

¹⁰ Benincà (2001) also suggests that the focus position is not necessarily identical to the *wh*-position.

¹¹ Apparent cases of a focused constituent preceding a *wh*-phrase in the left periphery of a matrix clause are probably instances of spurious focalization, as discussed by Benincà (2000). Benincà notes that a constituent that has been moved to the left periphery for some kind of markedness other than focus can nevertheless receive intonational emphasis. For example, in the right context a left dislocated constituent can be emphasized and interpreted contrastively. One of Benincà’s examples is the following, which is felicitous in a context where a parallel sentence concerning someone other than Gianni has been uttered:

- (i) GIANNI_i, suo_i padre l'ha licenziato.
Gianni his father him-hasfired

As we see, GIANNI in (i) does not induce a weak crossover-effect. This shows that it does not have operator properties. In other words, it has not been focus moved, which is also seen from the presence of the resumptive clitic pronoun. Consequently, GIANNI does not interfere with the type marking of the clause. The intonational emphasis must then be understood as spurious focalization.

¹² Rochemont & Culicover (1990) state that questions of this type are ungrammatical. It is clear, though, that not all English speakers agree with them.

¹³ I thank Peter Svenonius for making me aware of this contrast between presentative and existential constructions.

¹⁴ As Knut Tarald Taraldsen points out to me, some questions based on presentational constructions are nevertheless ungrammatical in Norwegian. For example, from (i) one cannot form the question in (ii).

- (i) Det kom nokre studentar tilkontoret mitt.
EXPL comesome students to office.DEF my
'There came some students to my office.'
- (ii) * Kven kom det tilkontoret ditt?
who came EXPL to office.DEF your

I think the problem with (ii) is that *kven* 'who' gets a definite interpretation. As we have already seen, Norwegian does not allow an expletive to have a definite associate. If we use an indefinite *wh*-phrase instead, such as *kor mange* 'how many' it is perfectly fine to form a question from (i). This is demonstrated in (iii). And interestingly, the grammaticality of (iv) indicates that *kva* 'what' is indefinite, unlike *kven* 'who'.

- (iii) Kor mange studentar kom det tilkontoret ditt?
how many students came EXPL to office.DEF your
'How many students came to your office?'
- (iv) Kva kom det ut av møtet?
what came EXPL out of meeting.DEF
'What came out of the meeting?'

The English direct counterparts of (iii) and (iv) are still ungrammatical. I maintain that this has to do with the relation between the expletive and the associate.

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