Why there is(n't) *wh*-movement in *there-constructions**

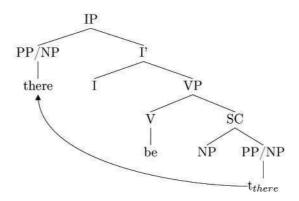Jutta M. Hartmann, Tilburg University

Introduction

The English *there*-construction has always been a major subject of theoretical linguistic research in the generative framework and many different analyses have been proposed. Contrary to the dominant assumption that *there* is a pure expletive that fills the Spec,IP to satisfy the Extended Projection Principle, Moro (1991, 1997) has proposed that *there* is a dummy predicate that originates from a small clause configuration with the postverbal DP. In this way, the *there*-construction parallels the inverse copular construction (e.g. *the cause of the riot is the picture of the wall*). Hoekstra & Mulder (1990) have adopted this analysis with a slight change: they consider *there* as a PP and the structure is predicted to pattern with locative inversion (e.g. *down the hill rolled a baby carriage*). Even though the two analyses have many advantages, they cannot handle the two sets of data that will be discussed in this paper. First, *wh*-extraction out of *there*-constructions with the verb *be* (henceforth: *there*-BE construction) is possible but restricted: it is grammatical with extraction of *what* and *how many X*, but is less grammatical with extraction of *which X*. The second contrast in *wh*-extraction arises between the *there*-BE construction and *there*-constructions with an unaccusative verb (henceforth: *there*-V construction): the latter does not allow for any type of *wh*-extraction. To discuss the problems in detail, I will first present Moro's and Hoekstra & Mulder's analyses (section 1), then proceed with giving the problematic sets of *wh*-extraction data (section 2) and finally, suggest different ways to account for them (section 3 and 4).

1.   Moro's and Hoekstra & Mulder's analyses

Moro (1991, 1997) argues that the English existential construction is a type of inverse copular construction with *there* being a dummy predicate that originates in a small clause structure and that predicates over the postverbal DP. Hoekstra & Mulder (1990) agree with Moro in the main respects, in their analysis, however, *there* is considered a PP. Thus, the *there*-construction patterns with locative inversion. The structure is given in (1).[1]

(1)   Moro style small clause analysis of the *there*-construction

This analysis has several advantages over the traditional one. Taking *there* as a predicate accounts for the following parallelism of the *there*-construction, cf. (2), with the inverse copular construction, cf. (3): in a small clause configuration, *there* and the inversed DP cannot occur before the DP without *be*. This is readily explained in Moro's system: in order to precede the DP, *there* has to move, and the target position is provided by the verb *be* (Moro 1997:119).[2]

(2)   Mary believes there *(to be) a picture of the wall in the room.
(3)   Mary believes the cause of the riot *(to be) John.

A second fact that Moro's analysis can easily handle is the ungrammaticality of (4) (cf. Moro 1997:98).

(4)   *There seems a man to be in the room.

Either the DP *a man* or *there* can move from the base position to the embedded subject position. Locality restrictions on further movement ensure that exactly that item that reaches the embedded subject positions moves further on. Thus, there is no need for stipulating that *there* is inserted in the embedded subject position, as is necessary in the standard analysis.[3]

A third advantage of Moro's system is that *there* and the postverbal DP start off in a local relationship. Thus, they can agree, for example in case, as Hoekstra & Mulder and Moro (1997) argue. In addition, *there* and the postverbal DP can also agree in φ-features, cf. Hazout (2004) and Broekhuis (2005).[4] Then *there* can take these features to the subject position and establish agreement with the verb. This results in long-distance agreement as seen in (5) without a separate mechanism like AGREE (at least not in English).

(5)   there seems/*seem to be a man in the room.

However, there is an important problem with these analyses: they predict that the *there*-construction patterns with inverse copular constructions (Moro's position) or locative inversion (Hoekstra & Mulder's position), however, this is not the case with *wh*-movement as we will see in the next section.

2.   *Wh*-movement in locative inversion, inverse copular and *there*-constructions

2.1   Extraction of the postverbal DP

One discrepancy in terms of *wh*-movement arises with extraction of the postverbal DP: this type of extraction is ungrammatical with the inverse copular construction, cf. (6), and locative inversion, cf. (7). However, it is possible with the *there*-construction cf. (8), even though extraction of *which X* (as opposed *to how many X* and *what*) is highly marked.

(6)   a.   ?*What do you think the cause of the riot was t?
       b.   *Which picture do you think the cause of the riot was t?
             (Moro 1997:123)

(7)   a.   *?What kind of mushrooms do you think on these trails can be found t? (Bresnan 1994:87)

      b.   *Which picture of a politician do you think that on this wall hung t?

(8) a.   ??Which actors were there in the room? (Heim 1987:27)
      b.   What is there in the refrigerator? (Aissen 1975:7)
      c.   How many men do you think that there were t in the room? (Moro 1997:126)

2.2   Extraction from within the postverbal DP

Furthermore, the data in (9) and (10) show that extraction from within the postverbal DP is also prohibited in inverse copular and locative inversion constructions. And again, the same type of movement is possible for the *there*-construction as seen in (11).

(9)   *Which wall do you think the cause of the riot was a picture of? (Moro 1997: 124)

(10)   *Who do you think on this wall hung a picture of?

(11)   Which wall do you think there was a picture of t? (Moro 1997:124)

2.3   Moro's explanation

These facts have not gone unnoticed. In Moro's view on the data, extractions of the postverbal DP in the inverse copular structure like (6) are generally ungrammatical because the extraction of the postverbal DP would need to pass via some escape hatch. (He compares it to the subject going via Spec,CP to escape CP.) As far as I understood Moro's proposal, this escape hatch is Spec,Agr above T. As this position is already filled by the predicative DP, extraction of the full DP is not possible.

Extraction from within the postverbal DP in inverse copular constructions, cf. (9), is ungrammatical for a different reason. The postverbal DP is not selected by the verb *be* and therefore constitutes a barrier. Crossing this barrier causes a Subjacency violation in the sense of Cinque (1990).

Turning to the *there*-construction, Moro argues that it is special: it allows for extraction from within because, as Moro claims, *there* lexicalizes the verb *be* and makes it an L-marker. This is supposed to lift the barrier from the DP subject of

the small clause, and thus, the extraction from within is no longer a violation of Subjacency. In this way, he explains the ungrammaticality of extraction from within the postverbal DP in inverse copular, cf. (9), versus the grammaticality of the same type of movement in the *there*-construction, cf. (11).

This leaves the contrast of *what/ how many X* extraction versus *which X* extraction (8a) vs. (8b-c) open. If this were extraction of the full DP, it would be ruled out in Moro's structure. Moro (1997) claims that what looks like extraction of a full DP is actually extraction from within the DP, and therefore possible. The LF structures of the relevant examples are given here:

(12) a.   How many do you think that there were [t men] in the room?
      b.   What do you think that there was [D t] in the room?

2.4   Arguments against Moro's analysis

Moro's proposal meets several problems. First of all, his analysis predicts that extraction out of a postverbal DP should be possible if the verb is an L-marker. In the *there*-V construction, the verb is an L-marker, and yet, neither extraction of the DP, cf. (13), nor extraction from within the postverbal DP, cf. (14), is possible (cf. Aissen 1975).[5,6]

(13) a.   *Who did there arrive at six o'clock?
      b.   *What bus did there arrive at the station at 9 o'clock?
      c.   *How many buses did there arrive at the station at 9 o'clock?
      d.   *Which teacher did there come to your party last night?

(14) a.   *Who did there appear a picture of t in the Daily Telegraph?
      b.   *Who did there arrive a friend of t at the party?

Thus, we find the same restriction on *wh*-movement with the *there*-V construction as we have already observed with inverse copular and locative inversion. This strongly suggests that these constructions should accounted for in the same way, but different from an analysis of the *there*-BE construction.

Second, Moro's explanation as to why extraction of the postverbal DP is ungrammatical in the inverse copular constructions is not convincing. It is not obvious why a DP should need an agreement position as escape hatch if it *wh*-moves.

Finally, I want to point out that Moro's analysis relies on the notions of barriers and subjacency. In a minimalist analysis, I can see no principled reason why extraction out of the small clause should be ungrammatical, as the following examples show as well:

(15) a.   Who(m) do you consider t intelligent?
      b.   Who(m) did John see leave?
      c.   What did John hammer flat?

Thus, it is possible to work with Moro's basic idea as a starting point for the *there*-BE construction. The internal relationships in the small clause will not concern us here, but I want to point out that there is an alternative small clause analysis by Hazout (2004) implementing Williams' (1994) idea of *there* being the subject and not the predicate in the small clause (for arguments in favour of Williams 1994 analysis see Hartmann 2005). The suggestions in the following sections can be implemented with both proposals. However, I will assume that this analysis cannot be the same for the locative inversion and inverse copular structure. Something more has to be said about them.

The relevant questions are now as follows: why and in which ways is *wh*-movement restricted in the *there*-BE construction? What is the nature of the *there*-V construction and why does it not allow for *wh*-movement (and other processes)?

3.   Small clause *there*-BE and the definiteness effect

As I take *wh*-movement to be generally possible in the *there*-BE construction, I have to deal with the question as to why *wh*-movement of the postverbal DP is restricted. We have seen that extraction of *what X* and *how many X* is allowed whereas extraction of *which X* is highly marked (cf. examples in (8)). From the small clause structure that I assume here, this restriction does not find an immediate syntactic explanation. Intuitively, this contrast has to be linked to another well-known fact about the *there*-construction: the so-called definiteness effect/ restriction. This idea is not new and Heim (1987) has already proposed a semantic analysis for the facts. I will pursue a slightly different approach here.

The definiteness restriction is the observation that universal quantifiers, cf. (16), and definite DPs, cf. (17), cannot occur in the *there*-construction (the examples are taken from Milsark 1977):

(16) a.   *There was everyone in the room.
    b.   *There were all viewpoints considered.
    c.   *There was each package inspected.

(17) a.   *There is the wolf at the door.
    b.   *There were John and Mary cycling along the creek.
    c.   *There was Frank's article mentioned.

Some researchers, following Milsark (1977) and Heim (1987) for example, have argued that the two sets of data reduce to one and the same restriction. This is not necessarily the case and McNally (1998) convincingly argues that the data in (16) can and has to be derived from semantics and that the restriction in (17) has a different, possibly pragmatic source. For further reference, let us call the restriction that accounts for the ungrammaticality of the former the *semantic definiteness effect* and the latter equally descriptive the *pragmatic definiteness effect*. To distinguish the two makes sense concerning the fact that definite DPs restrictedly can occur in the *there*-BE-construction (cf. e.g. Ward & Birner 1995) but universal quantifiers never do.

Assuming that there are indeed two types of the definiteness restriction, the question is whether the extraction facts should be derived from the semantic restriction that accounts for the ungrammaticality of the examples in (16) or from the pragmatic restriction that accounts for the ungrammaticality of the examples in (17).

Data from Catalan seem to support a relationship with the pragmatic restriction. McNally (1998) reports that Catalan is a language in which the pragmatic definiteness effect does not hold, however, it observes the semantic restrictions, cf. (18).

(18) a.   *Hi   havia   cada cotxe   a la cursa.
        there   have   each car   at the race.
        'There was each car at the race.'
    b.   Hi   havia   la   Joana   a la festa
        there   have   the Joana   at the party
        'Joan was at the party.'

Thus, if Catalan also exhibits the same restriction on *wh*-movement as English, we have to assume that we are dealing with a semantic restriction, if not, the restriction is rather on the pragmatic side. Preliminary results suggest that the

latter is the case: there seems to be no difference in extraction of *which-X* vs. *how many X* and *what* in Catalan.[7]

(19) Quin metge   hi   havia   a la festa?
     which doctor   there have   a the party
     'Which doctor was there on the party?'

(20) Quanta gent   hi   havia   a la festa?
     how many people   there have   at the party
     'How many people were there at the party?'

(21) Què hi   havia   a la festa?
     what there have   at the party
     'What was there at the party?

Therefore, I conclude that the contrast in *wh*-movement in the *there*-BE construction can be derived from the pragmatic definiteness effect (whatever its exact definition might be).

The next questions to ask is: what is the restriction that we observe in the *there*-BE construction and how do we link that to the status of *which X* vs. *what* and *how many*? In order to answer the first question, let us consider Ward & Birner's (1995) analysis of the definite restriction. On the basis of about a hundred occurrences of definite DPs in a corpus of 1.3 million words, they argue that definites can occur in the *there*-BE construction if they are hearer-new. They can be hearer-new in the following five contexts:

i.   if they are treated as hearer-new (reminder contexts), that means, when "there are sufficient grounds for the speaker to believe that the entity has been (at least momentarily) forgotten" (Ward & Birner 1995: 730);
ii.   if it is a new token of an discourse-old type;
iii.   if a discourse entity newly instantiates a variable (list readings);
iv.   if they are either uniquely identifiable (e.g. *the guy that I saw last night*) or
v.   if they belong to the class of false definites (eg. *One day last year on a cold, clear, crisp afternoon, I saw this huge sheet of ice in the street*).

Let us for the time being assume that Ward & Birner are on the right track, and try to accommodate the difference between *what* vs. *which-X*. Heim (1987)

argued (following Katz & Postal 1964 and Kuroda 1969) that the two differ in terms of definiteness: *which-X* phrases are definite whereas *what*-phrases are indefinite. This predicts that we expect to find *which-X* phrases to be felicitous in the same contexts as definite DPs. This is clearly an empirical question that is beyond the scope of this paper. Preliminary investigations, however, give reason to believe that the analysis is on the right track. The examples in (22) and (23), which result from a Google-search in the .co.uk domain and are checked with a native speaker, suggest that *which X* extraction can be felicitous in a context where the questioned DP is uniquely identifiable:

(22) Which relationship is there between forms of censorship and forms of society?

(23) Why is there a role and which role is there for new created innovative growth entities in this environment of extremely large operators?

The *which*-phrases in the above examples are uniquely identifiable as their interpretability deteriorates significantly under negation, cf. (24), just as much as uniquely identifiable DPs do generally in declarative contexts, cf. (25).

(24) #Which role isn't there for new created innovative growth entities?

(25) a. In addition, as the review continues, there is always the chance that we'll uncover something additional that is significant.
     b. #In addition, as the review continues, there isn't the chance that we'll uncover something that is significant.
         (Ward & Birner 1995:736)

These preliminary investigations seem promising to me but I will leave a more detailed analysis for future research.

4.   The *there*-V construction as an instance of locative inversion

Until now, we have left open the issue that the *there*-BE construction and the *there*-V construction differ significantly: whereas the former allows for *wh*-extraction, the latter does not.

Aissen (1975) has argued that they are distinct in further respects, and that the *there*-V construction patterns with the locative inversion construction. Although her examples are mainly of the *there V XP DP* type (which I believe to be heavy-

NP shift examples) her basic observation holds. As we will see in the following examples, the *there*-V construction and the locative construction are ungrammatical in various embedding contexts: they do not occur in indirect questions, cf. (26), sentential subject positions, cf. (27) and comparatives, cf. (28). In all these contexts, the *there*-BE construction is grammatical as the c. examples show. [8]

(26)   a.   *The reporter wants to know whether there stands a billboard at the intersection.
       b.   *The reporter wants to know whether at the intersection stands a billboard.
       c.   ✓John wants to know whether there is a billboard at the intersection.

(27)   a.   ??That there stands a Tiffany lamp on his dresser is surprising.
       b.   ??That on his dresser stands a Tiffany lamp is surprising.
       c.   ✓That there is a Tiffany lamp on his dresser is surprising.

(28)   a.   ??There lie more apples on the ground than there grow on the tree.
       b.   *On the ground lie more apples than on the tree grow.
       c.   ✓There are more apples lying on the ground than there are hanging on the tree.

A third difference between the *there*-BE construction and the *there*-V construction is the discourse function of the postverbal DP. The former requires it to be hearer-new information, whereas the latter requires it to be discourse-new information (cf. Birner & Ward 1998:109). And again, the *there*-V construction patterns with the locative inversion, which is also sensitive to the discourse-status of the postverbal DP.

As can be easily seen from the summary of the data in table 1, the *there*-V construction patterns with locative inversion in various contexts. I take this to be reason enough to analyze them in the same way. Delving into the discussion of which analysis is correct for locative inversion would go beyond the scope and possibilities of this paper and I refer the interested reader to the literature (cf. e.g. denDikken & Næss 1993 and Bresnan 1994 for proposals regarding the *wh*-movement data for locatives).

Table 1. : *there*-BE vs. *there*-V and locative inversion (Loc-Inv)

	there-V	Loc-Inv	*there*-BE
***wh*-movement of the postverbal DP**	*	*	✓ (restricted)
***wh*-movement from within the postverbal DP**	*	*	✓
indirect questions	*	*	✓
sentential subject	??	??	✓
Comparatives	*	??	✓
discourse status of the postverbal DP	discourse-new	discourse-new	hearer-new

5. Conclusion

In this article, I have shown that Moro's (1997) and Hoekstra & Mulder's (1990) analyses of the English *there*-construction are not appropriate. Contrary to what they predict, the *there*-BE construction does not pattern with the inverse copular and locative inversion construction. Whereas the former allows for *wh*-movement of and from the postverbal DP, the latter do not. Moro's way to handle this observation runs into another difficulty: it predicts that *there*-V constructions behave like *there*-BE constructions, which again was shown not to be the case.

Alternatively, I argued for taking *wh*-movement in the *there*-BE construction as syntactically unconstrained and showed that the restriction on *which X* extraction can be reduced to what we have called the pragmatic definiteness restriction. From a minimalist point of view, Moro's small clause structure can be taken as the basis for such an analysis as it does not a priori exclude *wh*-movement. Furthermore, I claimed that for handling the parallels between the *there*-V construction and locative construction, the two should find a common analysis that is independent of the *there*-BE construction.

Notes

1. The original idea is Moro's, even though the dates of the references might suggest the opposite.

2. What Moro (1997) does not consider is that the base order of the small clause cannot be produced as a complement of these verbs either: **Mary believes a man there in the room.*

3. Moro's point has been used to argue against Chomsky's (1995) principle of Merge over Move by Broekhuis & Kloosters (2001).

4. Moro (1997) and Hoekstra & Mulder (1991) argue that this agreement relationship is of the same type as in Latin examples like *puella bella est* 'daughter.nom.fem pretty.nom.fem is'). They do not explicitly speak of φ-feature agreement between *there* and the postverbal DP. Broekhuis (2005) argues for this relationship explicitly. Hazout (2004) proposes a detailed analysis of φ-agreement in a different, Williams' (1994) type of small clause structure.

5. Aissen (1975) noted this difference (among others) between what she calls the existential (roughly *there*-BE) and the presentational (roughly *there*-V) *there*-construction. However, she almost exclusively uses examples of the *there V XP DP* type, which seem to me to be heavy NP shift constructions. Furthermore, native speakers seem not to agree on the grammaticality of the *there*-V construction. However, it seems to hold that for those who accept the base structure do not accept *wh*-extraction. I am currently in the process of experimentally testing the grammaticality of these constructions on a broader basis.

6. Although Moro's L-marking account is problematic for English, it seems to work satifactorily for Italian. Note that the L-marking account has also been criticized by Den Dikken & Belvin (1997), who propose alternative explanation for the restriction of extraction from within the postverbal DP. For reasons of space I cannot discuss this proposal here.

7. The data has been checked via email with six Catalan native speakers that all agreed on the data.

8. The examples are adjusted from Aissen (1975) and checked with 5 native speakers. The judgements given reflect the following averages (scale 1 (unacceptable) to 5): 1.0– 1.9: *; 2.0-2.9:??; 3.0-3.9:?; 4.0-5.0: ✓; an anonymous reviewer reports judgements from one native speaker saying that the embedded *there*-V construction in (26) is only weird whereas the locative inversion construction is ungrammatical. One speaker reported a similar judgement for the comparatives in (27). It is not clear to me what exactly gives this variation, and further in-depth analysis of the relevant data is definitely in order here.

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